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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD

Proceeding	91239006
Party	Defendant Apple Inc.
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE THE
TRADEMARK TRIAL AND APPEAL BOARD

GANG CAO,

Opposer,

v.

APPLE INC.,

Applicant.

Opposition No. 91239006

APPLICANT APPLE INC.'S NOTICE OF RELIANCE

Pursuant to 37 C.F.R. §§ 2.120, 2.122 and TBMP § 704 et seq., Applicant Apple Inc. (“Apple”), by counsel, hereby gives notice that it may rely on any or all of the materials attached hereto or referenced herein in the trial of this matter as described below.

1. Apple Trial Exhibits 3–5,¹ previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao,² are printouts from the following publicly available websites:

a. Exhibit 3: “Prestigio”, printed on January 30, 2020 from the URL

<https://prestigio.com/use>, which shows that there are no Prestigio service centers in the United States;

¹ The gaps in the numbering of exhibits in Apple’s Notice of Reliance are due to the fact that Apple is submitting certain of its trial exhibits solely via testimony from Opposer Gang Cao or Apple’s witness Thomas La Perle.

² Apple submitted Exhibits 3–5, 7–9, 11–13, 16, and 19–24 to the Board with the Cross Examination by Written Questions of Mr. Cao. (48 TTABVUE 350–55, 378–441, 445–83, 487, 490–98.) To avoid overburdening the Board, Apple has not attached hereto additional copies of these exhibits, but will submit additional copies at the Board’s request.

- b. Exhibit 4: “Prestigio: Where to Buy”, printed on January 30, 2020 from the URL <https://prestigio.com/where-to-buy>, which shows that there are no locations in the United States where consumers can purchase Prestigio products.
- c. Exhibit 5: “Symphony Mobile (A Sister of Concern of Edison Group)” from LinkedIn, printed on January 29, 2020 from the URL <https://www.linkedin.com/company/symphony-mobile-a-sister-concern-of-edison-group-/about/>, which shows that the Symphony Mobile Phone is a product for the Bangladesh market.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that the LIVE PHOTOS mark is not generic or descriptive, as they show that the evidence Mr. Cao introduced concerning Prestigio and Symphony Mobile is irrelevant because it comes from foreign sources and concerns products that are not for the U.S. market. These materials were used during the cross-examination by written questions of Gang Cao and were provided to the Board with the transcript from that exam. (48 TTABVUE 350–55.)

2. Apple Trial Exhibit 7, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, is a collection of printouts from the websites of the following publicly available online dictionaries and thesauruses showing the results of searches for the phrase “live photos”:

- a. Pages 1 - 3: *babylon*, printed on October 25, 2018 from the URLs <https://dictionary.babylon-software.com/live%20photos/> and <https://thesaurus.babylon-software.com/>;

- b. Pages 2 - 4: *babylon*, printed July 13, 2018 from the URLs
<https://dictionary.babylon-software.com/live%20photo/> and
<https://thesaurus.babylon-software.com/>;
- c. Page 5: *Cambridge Dictionary*, printed October 25, 2018 from the URL
[https://dictionary.cambridge.org/us/spellcheck/english/?q=live%2Bphotos](https://dictionary.cambridge.org/us/spellcheck/english/?q=live%2Bphotos;);
- d. Page 6: *Cambridge Dictionary*, printed July 13, 2018 from the URL
[https://dictionary.cambridge.org/us/spellcheck/english/?q=live%2Bphoto](https://dictionary.cambridge.org/us/spellcheck/english/?q=live%2Bphoto;);
- e. Page 7: *Collins Dictionary*, printed October 25, 2018 from the URL
[https://www.collinsdictionary.com/us/spellcheck/english?q=live+photos](https://www.collinsdictionary.com/us/spellcheck/english?q=live+photos;);
- f. Page 8: *Collins Dictionary*, printed July 13, 2018 from the URL
[https://www.collinsdictionary.com/us/spellcheck/english?q=live+photo](https://www.collinsdictionary.com/us/spellcheck/english?q=live+photo;);
- g. Page 9: *Collins Thesaurus*, printed October 25, 2018 from the URL
[https://www.collinsdictionary.com/us/spellcheck/english-thesaurus?q=live+photos](https://www.collinsdictionary.com/us/spellcheck/english-thesaurus?q=live+photos;);
- h. Page 10: *Collins Thesaurus*, printed July 13, 2018 from the URL
[https://www.collinsdictionary.com/us/spellcheck/english-thesaurus?q=live+photo](https://www.collinsdictionary.com/us/spellcheck/english-thesaurus?q=live+photo;);
- i. Page 11: *Dictionary.com*, printed October 25, 2018 from the URL
<https://www.dictionary.com/misspelling?term=live%20photos>,
- j. Page 12: *Dictionary.com*, printed July 13, 2018 from the URL
<http://www.dictionary.com/misspelling?term=live%20photo&s=t>;
- k. Pages 13 - 14: *Fact Monster*, printed October 25, 2018 from the URL
<https://www.factmonster.com/dictionary/live%20photos>;

- l. Pages 15 - 16: *Fact Monster*, printed July 13, 2018 from the URL
<https://www.factmonster.com/dictionary/live%20photos>;
- m. Page 17: *The Free Dictionary*, printed October 25, 2018 from the URL
<https://www.thefreedictionary.com/Live+Photos>;
- n. Page 18: *A Dictionary of the English Language*, printed October 25, 2018 from the URL <https://johnsonsdictionaryonline.com/search-johnsons-dictionary/?SearchValue=live%20photos>;
- o. Page 19: *A Dictionary of the English Language*, printed July 13, 2018 from the URL <https://johnsonsdictionaryonline.com/search-johnsons-dictionary/?SearchValue=live%20photo>;
- p. Pages 20 - 21: *LingvoSoft Online*, printed October 25, 2018 from the URL
http://www.lingvozone.com/main.jsp?action=translation&do=dictionary&language_id_from=23&language_id_to=61&word=live+photo&t.x=0&t.y=0;
- q. Pages 22 - 23: *LingvoSoft Online*, printed July 13, 2018 from the URL
http://www.lingvozone.com/main.jsp?action=translation&do=dictionary&language_id_from=23&language_id_to=61&word=live+photo&t.x=0&t.y=0;
- r. Page 24: *Longman*, printed October 25, 2018 from the URL
<https://www.ldoceonline.com/spellcheck/english/?q=live+photos>;
- s. Page 25: *Longman*, printed July 13, 2018 from the URL
<https://www.ldoceonline.com/spellcheck/english/?q=live+photo>;
- t. Page 26: *Macmillan Dictionary*, printed October 25, 2018 from the URL
<https://www.macmillandictionary.com/us/spellcheck/american/?q=live+photos>;

- u. Page 27: *MacMillan Dictionary*, printed July 13, 2018 from the URL
<https://www.macmillandictionary.com/us/spellcheck/american/?q=live+photo>;
- v. Pages 28 - 29: *Merriam-Webster*, printed October 25, 2018 from the URLs
<https://www.merriam-webster.com/dictionary/live%20photos> and
<https://www.merriam-webster.com/thesaurus/live%20photos>;
- w. Pages 30 - 31: *Merriam-Webster*, printed July 13, 2018 from the URLs
<https://www.merriam-webster.com/dictionary/live%20photo> and
<https://www.merriam-webster.com/thesaurus/live%20photo>;
- x. Pages 32 - 33: *Oxford Learner's Dictionary*, printed October 25, 2018 from the URL
<https://www.oxfordlearnersdictionaries.com/us/spellcheck/english/?q=live+photo>
s;
- y. Pages 34 - 35: *Oxford Learner's Dictionary*, printed July 13, 2018 from the URL
<https://www.oxfordlearnersdictionaries.com/us/spellcheck/english/?q=live+photo>;
- z. Page 36: *Synonymy*, printed October 25, 2018 from the URL
<http://www.synonymy.com/results.php?word=live%20photos>;
- aa. Page 37: *Synonymy*, printed July 13, 2018 from the URL
<http://www.synonymy.com/results.php?word=live%20photo>;
- bb. Page 38: *Thesaurus.com*, printed October 25, 2018 from the URL
<https://www.thesaurus.com/misspelling?term=live%20photos>;
- cc. Page 39: *Thesaurus.com*, printed July 13, 2018 from the URL
<http://www.thesaurus.com/misspelling?term=live%20photo&s=t>;

- dd. Page 40: Vocabulary.com, printed October 25, 2018 from the URL <https://www.vocabulary.com/dictionary/Lophophorus>;
- ee. Page 41 Vocabulary.com, printed July 13, 2018 from the URL <https://www.vocabulary.com/dictionary/live%20up%20to>;
- ff. Page 42: *Webster*, printed October 25, 2018 from the URL <https://www.webster-dictionary.org/definition/live%20photos>;
- gg. Page 43: *Webster*, printed July 13, 2018 from the URL <http://www.webster-dictionary.org/definition/live%20photo>;
- hh. Page 44: *Wordnik*, printed October 25, 2018 from the URL <https://www.wordnik.com/words/live%20photos#define>;
- ii. Page 45: *Wordnik*, printed July 13, 2018 from the URL <https://www.wordnik.com/words/live%20photo>;
- jj. Pages 46 - 50; 56: WordReference.com, printed October 25, 2018 from the URLs <http://www.wordreference.com/definition/live%20photos> and <http://www.wordreference.com/synonyms/live%20photos>;
- kk. Pages 51 - 55; 57 - 58: WordReference.com, printed July 13, 2018 from the URL <http://www.wordreference.com/definition/live%20photo> and <http://www.wordreference.com/synonyms/live%20photo>;
- ll. Page 59: *Wordsmyth*, printed October 25, 2018 from the URL <https://www.wordsmyth.net/?level=3&ent=live+photos>;
- mm. Page 60: *Wordsmyth*, printed July 13, 2018 from the URL <https://www.wordsmyth.net/?level=3&ent=live+photo>;

nn. Page 61: *WordWebOnline*, printed July 13, 2018 from the URL

<https://www.wordwebonline.com/search.pl?w=live+photo>; and

oo. Page 62: *WordWebOnline*, printed October 25, 2018 from the URL

<https://www.wordwebonline.com/search.pl?w=live+photos>;

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). They are relevant to show that the LIVE PHOTOS mark is not descriptive or generic. This exhibit was used during the cross-examination by written questions of Gang Cao and was provided to the Board with the transcript from that exam. (48 TTABVUE378–439.)

3. Apple Trial Exhibits 8 and 9, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, are printouts from the websites from the following publicly available online dictionaries and thesauruses showing the results of searches for the phrase “live photos”:

a. Exhibit 8: *The Free Dictionary*, printed July 13, 2018 from the URL

<https://encyclopedia2.thefreedictionary.com/Live+Photos>.

b. Exhibit 9: *Your Dictionary*, printed October 25, 2018 from the URL

http://www.yourdictionary.com/live-photos#computer?direct_search_result=yes.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These exhibits are relevant to show that the LIVE PHOTOS mark is not descriptive or generic and that Apple has acquired secondary meaning in the mark LIVE PHOTOS. These materials were used during the cross-examination by written questions of Gang Cao and were provided to the Board with the transcript from that exam. (48 TTABVUE 440–42.)

4. Apple Trial Exhibit 11, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, is Opposer Gang Cao's Objections and Responses to Applicant Apple Inc.'s First Set of Interrogatories to Opposer Mr. Gang Cao, dated May 21, 2018. These responses and objections may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.120(k)(3)(i) and TBMP § 704.10. This exhibit is relevant to show Mr. Cao's lack of standing to oppose registration of Apple's LIVE PHOTOS mark; Mr. Cao's lack of interest in, or use of, the phrase "live photos" or domain names containing the phrase "live photo"; the lack of damage or harm to Mr. Cao in the event Apple's LIVE PHOTOS mark is registered; and the apps Mr. Cao currently offers. This exhibit was used during the cross-examination by written questions of Gang Cao and was provided to the Board with the transcript from that exam. (48 TTABVUE 445-70.)

5. Apple Trial Exhibit 12, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, is a printout of a publicly available preservation of the website <create.ca> preserved by The Internet Archive, printed on January 25, 2018 from the URL <https://web.archive.org/web/20110202203028/http://www.create.ca/domain/livephoto.php>. This exhibit may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). This exhibit shows that Mr. Cao's www.livephoto.com and www.livephoto.ca websites were listed as "for sale" after he purchased them. This exhibit is relevant to show Mr. Cao's lack of standing to oppose registration of Apple's LIVE PHOTOS mark; Mr. Cao's lack of interest in, or use of, the phrase "live photos" or domain names containing the phrase "live photo"; and the lack of damage or harm to Mr. Cao in the event Apple's LIVE PHOTOS mark is registered. This exhibit was used during the cross-examination by written questions of Gang Cao and was provided to the Board with the transcript from that

exam. (48 TTABVUE 471.) A copy of the website preservation in Apple Trial Exhibit 12 is also attached on page 2 of Appendix A to the Affidavit of Elizabeth Rosenberg, a representative from the organization The Internet Archive, which is being submitted simultaneously with this Notice of Reliance. The only difference is that the version attached to Ms. Rosenberg's affidavit was printed more recently, was printed in portrait orientation, and does not contain a bates stamp.

6. Apple Trial Exhibit 13, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, is Opposer Gang Cao's Objections and Responses to Agreed Subset of Applicant Apple Inc.'s Second Set of Requests for Admission, dated January 4, 2019. These responses and objections may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.120(k)(3)(i) and TBMP § 704.10. This exhibit is relevant to show Mr. Cao's lack of standing to oppose registration of Apple's LIVE PHOTOS mark; Mr. Cao's lack of interest in, or use, of the phrase "live photos" or domain names containing the phrase "live photo"; and the lack of damage or harm to Mr. Cao in the event Apple's LIVE PHOTOS mark is registered. This exhibit was used during the cross-examination by written questions of Gang Cao and was provided to the Board with the transcript from that exam. (48 TTABVUE 472-83.)

7. Apple Trial Exhibit 16, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, is a printout of the livephoto.com website printed on January 23, 2020 from the URL <http://livephoto.com/>. This exhibit may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). This exhibit is relevant to show Mr. Cao's lack of standing to oppose registration of Apple's LIVE PHOTOS mark; Mr. Cao's lack of interest in, or use of, the phrase "live photos" or domain names containing the phrase "live photo"; and the lack of damage or harm to Mr. Cao in the event Apple's LIVE PHOTOS mark is registered. This exhibit was used during the cross-examination by written

questions of Gang Cao and was provided to the Board with the transcript from that exam. (48 TTABVUE 487.)

8. Apple Trial Exhibits 19–23, previously submitted with the Cross Examination by Written Questions of Mr. Gang Cao, are printouts from publicly available websites showing information about the apps Mr. Cao offers.

- a. Exhibit 19: SpinFun website, printed on January 10, 2020 from the URL <http://spinfun.co/>.
- b. Exhibit 20: SpinFun app page, printed on October 24, 2018 from the URL <https://itunes.apple.com/ng/app/spinfun/id1137701825?mt=8>.
- c. Exhibit 21: SpinExplorer website, printed on January 10, 2020 from the URL <http://spinexplorer.com/>.
- d. Exhibit 22: SpinExplorer app page, printed on October 24, 2018 from the URL <https://itunes.apple.com/ng/app/spin-explorer/id1254344513?mt=8>.
- e. Exhibit 23: SpinExplorer 2 app page, printed on October 24, 2018 from the URL <https://itunes.apple.com/us/app/spin-explorer-2/id1387180933?mt=8>.

These exhibits may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show Mr. Cao’s lack of standing to oppose registration of Apple’s LIVE PHOTOS mark; Mr. Cao’s lack of interest in, or use of, the phrase “live photos” or domain names containing the phrase “live photo”; the lack of damage or harm to Mr. Cao in the event Apple’s LIVE PHOTOS mark is registered; and the functionality and promotion of Mr. Cao’s apps “SpinFun,” “SpinExplorer,” and “SpinExplorer 2.” These exhibits were used during the cross-examination by written questions of Gang Cao and provided to the Board with the transcript from that exam. (48 TTABVUE 490–97.)

9. Attached hereto as Exhibits 35–37 are printouts from Apple’s publicly available website showing its use of the LIVE PHOTOS mark.

- a. Exhibit 35: A September 9, 2015 press release from Apple titled “Apple Introduces iPhone 6s & iPhone 6s Plus,” printed on August 21, 2018 from the URL <https://www.apple.com/newsroom/2015/09/09Apple-Introduces-iPhone-6s-iPhone-6s-Plus/>.
- b. Exhibit 36: A page from Apple’s website titled “Take and edit Live Photos,” printed on August 21, 2018 from the URL <https://support.apple.com/en-us/HT207310>.
- c. Exhibit 37: A page from Apple’s website titled “Photos for macOS,” printed on August 7, 2020 from the URL <https://www.apple.com/macOS/photos/>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These documents are relevant to show that the LIVE PHOTOS mark is suggestive, not descriptive; that Apple has acquired secondary meaning in the LIVE PHOTOS mark; that the LIVE PHOTOS mark is not generic; use of the LIVE PHOTOS mark as a trademark for Apple’s camera feature; and the functionality and promotion of Apple’s Live Photos camera feature.

10. Attached hereto as Exhibit 38–39 are printouts from publicly available YouTube pages for videos containing references to Apple’s LIVE PHOTOS software feature using the trademark LIVE PHOTOS.

- a. Exhibit 38: The YouTube webpage for the video titled “Apple - September Event 2015” printed on August 7, 2020 from the URL <https://www.youtube.com/watch?v=0qwALOOvUik>.

- b. Exhibit 39: The YouTube webpage for the video titled “iPhone 6s Impressions!” printed on July 20, 2020 from the URL <https://www.youtube.com/watch?v=gN-MeB-S8Kw&t=42s>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These documents are relevant to show that Apple has acquired secondary meaning in the LIVE PHOTOS mark and that the LIVE PHOTOS mark is not generic.

11. Attached hereto as Exhibits 40–45 are printouts from publicly available websites showing the circulation, distribution, and/or website rankings for various news sources.

- a. Exhibit 40: A webpage from the website rankings website www.alexa.com showing the website ranking information for the online news source, The Verge, printed on July 24, 2020 from the URL <https://www.alexa.com/siteinfo/theverge.com>.
- b. Exhibit 41: A webpage titled “Circulation of select newspapers in the U.S. 2015” from Statista, printed on July 24, 2020 from the URL <https://www.statista.com/statistics/272790/circulation-of-the-biggest-daily-newspapers-in-the-us/>.
- c. Exhibit 42: Excerpts from the New York Times Company’s 10-K filing for the fiscal year ended December 27, 2015, printed on July 30, 2020 from the URL <https://www.sec.gov/Archives/edgar/data/71691/000007169116000023/a2015form10-k.htm>.
- d. Exhibit 43: A webpage titled “About Us” by the Biloxi Sun Herald, printed on July 24, 2020 from the URL <https://www.sunherald.com/customer-service/about-us/>.

- e. Exhibit 44: An article titled “Janice Min to step down from Hollywood Reporter after remaking the trade publication,” from the *Los Angeles Times*, dated February 6, 2017 and printed on July 24, 2020 from the URL <https://www.latimes.com/business/hollywood/la-fi-ct-janice-min-hollywood-reporter-20170206-story.html>.
- f. Exhibit 45: A presentation available online titled “Media Kit 2020” from Hearst Bay Area printed on August 7, 2020 from the URL [https://cdn2.hubspot.net/hubfs/655969/Media Kit and File Assets/MEDIA KIT GENERAL.pdf](https://cdn2.hubspot.net/hubfs/655969/Media%20Kit%20and%20File%20Assets/MEDIA%20KIT_GENERAL.pdf).

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show the popularity or circulation of various new sources that reported on Apple’s LIVE PHOTOS feature, which is relevant to showing that Apple’s LIVE PHOTOS mark has acquired secondary meaning and is not generic.

12. Attached hereto as Exhibit 46 is a printout from the publicly available website iSpot.tv concerning the “Apple iPhone 6s TV Commercial Live Photos,” printed on July 20, 2020 from the URL <https://www.ispot.tv/ad/AqQw/apple-iphone-6s-live-photos?conv=1>. This document may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). This document shows advertising metrics, such as TV impressions and social impressions, for Apple’s iPhone 6s, Live Photos television commercial. It is relevant to show that Apple’s LIVE PHOTOS mark has acquired secondary meaning and is not generic.

13. Attached hereto as Exhibits 47–48 is Opposer Gang Cao’s responses to certain discovery requests served by Apple.

- a. Exhibit 47: Opposer Gang Cao's Responses to Applicant Apple Inc.'s Second Set of Interrogatories to Opposer Mr. Gang Cao, dated July 11, 2018.
- b. Exhibit 48: Opposer Gang Cao's Objections and Responses to Applicant Apple Inc.'s Third Set of Interrogatories to Opposer Mr. Gang Cao, dated November 2, 2018.

These responses and objections may be introduced by notice of reliance pursuant to C.F.R. § 2.120(k)(3)(i) and TBMP § 704.10. These exhibits are relevant to show Mr. Cao's lack of standing to oppose registration of Apple's LIVE PHOTOS mark; Mr. Cao's lack of interest in, or use of, the phrase "live photos" or domain names containing the phrase "live photo"; the lack of damage or harm to Mr. Cao in the event Apple's LIVE PHOTOS mark is registered; and the functionality of the apps Mr. Cao offers.

14. Attached hereto as Exhibits 49–50 are printouts from publicly available websites showing engagement and visitor statistics for Apple's website www.apple.com.

- a. Exhibit 49: A webpage from the web ranking website www.alexa.com showing the website ranking information for Apple's website, printed on June 5, 2020 from the URL <https://www.alexa.com/siteinfo/apple.com>.
- b. Exhibit 50: A webpage from the digital marketing service SimilarWeb showing information about Apple's website, printed on August 7, 2020 from the URL <https://www.similarweb.com/website/apple.com/>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple's LIVE PHOTOS mark has acquired secondary meaning and is not generic given the number of people likely to view the mark on Apple's website where it is used as a trademark for Apple's camera feature.

15. Attached hereto as Exhibit 51 is a collection of printouts from Apple's publicly available website showing the technical specifications for various iPhone devices, all of which reference Apple's Live Photos camera feature. The webpages in this composite exhibit are the following:

- a. Pages 1 - 7: "iPhone 6s - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP726?locale=en_US;
- b. Pages 8 - 14: "iPhone 6s Plus - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP727?locale=en_US;
- c. Pages 15 - 21: "iPhone 7 - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP743?locale=en_US;
- d. Pages 22 - 28: "iPhone 7 Plus - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP744?locale=en_US;
- e. Pages 29 - 35: "iPhone 8 - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP767?locale=en_US;
- f. Pages 36 - 42: "iPhone 8 Plus - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP768?locale=en_US;
- g. Pages 43 - 49: "iPhone 11 - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP804?locale=en_US;
- h. Pages 50 - 56: "iPhone 11 Pro - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP805?locale=en_US;
- i. Pages 57 - 63: "iPhone 11 Pro Max - Technical Specifications", printed on May 26, 2020 from the URL https://support.apple.com/kb/SP806?locale=en_US;

- j. Pages 64 - 70: “iPhone X - Technical Specifications”, printed on May 26, 2020 from the URL https://support.apple.com/kb/SP770?locale=en_US;
- k. Pages 71 - 77: “iPhone XR - Technical Specifications”, printed on May 26, 2020 from the URL https://support.apple.com/kb/SP781?locale=en_US;
- l. Pages 78 - 84: “iPhone XS - Technical Specifications”, printed on May 26, 2020 from the URL https://support.apple.com/kb/SP779?locale=en_US; and
- m. Pages 85 - 91: “iPhone XS Max - Technical Specifications”, printed on May 26, 2020 from the URL https://support.apple.com/kb/SP780?locale=en_US.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple’s LIVE PHOTOS mark has acquired secondary meaning and is not generic.

16. Attached hereto as Exhibits 52–54 are printouts from Apple’s publicly available website showing its use of the LIVE PHOTOS mark in promotional materials such as press releases and sections of its website promoting new software.

- a. Exhibit 52: A January 8, 2017 press release from Apple titled “iPhone at ten: the revolution continues” printed on January 16, 2018 from the URL <https://www.apple.com/newsroom/2017/01/iphone-at-ten-the-revolution-continues/>.
- b. Exhibit 53: A page from Apple’s website titled “iOS 11,” printed on August 21, 2018 from the URL <https://www.apple.com/ios/ios-11/>.
- c. Exhibit 54: A September 18, 2017 press release from Apple titled “iOS 11 is available tomorrow,” printed on August 21, 2018 from the URL <https://www.apple.com/newsroom/2017/09/ios-11-available-tomorrow/>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These exhibits are relevant to show that the LIVE PHOTOS mark is suggestive, not descriptive; that Apple has acquired secondary meaning in the LIVE PHOTOS mark; that the LIVE PHOTOS mark is not generic; use of the LIVE PHOTOS mark as a trademark for Apple's camera feature; and the functionality and promotion of Apple's Live Photos camera feature.

17. Attached hereto as Exhibit 55 is a copy of a press release that Apple issued on September 28, 2018 and that the Targeted News Service distributed titled "Apple Announces Record iPhone 6s & iPhone 6s Plus Sales," retrieved from the LexisNexis database of news articles. This material may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(1) and TBMP § 704.08(a). It is relevant to show that the LIVE PHOTOS mark is suggestive, not descriptive; that Apple has acquired secondary meaning in the LIVE PHOTOS mark; that the LIVE PHOTOS mark is not generic; use of the LIVE PHOTOS mark as a trademark for Apple's camera feature; and the functionality and promotion of Apple's Live Photos camera feature.

18. Attached hereto as Exhibit 56 is a printout of an excerpt from the publicly available January 31, 2017 online article from *TechCrunch*, "Apple breaks iPhone sales record with 78.3 million units sold in the holiday quarter," printed on January 30, 2018 from the URL <https://techcrunch.com/2017/01/31/iphone-sales-q1-2017/>. This document may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). It is relevant to show that Apple's LIVE PHOTOS mark has acquired secondary meaning.

19. Attached hereto as Exhibits 57–59 are the following publicly available 10-K filings by Apple, filed with the Securities and Exchange Commission and printed from the SEC website:

- a. Exhibit 57: Apple’s 10-K for the fiscal year ended September 30, 2017, printed on May 27, 2020 from the URL <https://www.sec.gov/Archives/edgar/data/320193/000032019317000070/a10-k20179302017.htm>;
- b. Exhibit 58: Apple’s 10-K for the fiscal year ended September 29, 2018, printed on May 27, 2020 from the URL <https://www.sec.gov/Archives/edgar/data/320193/000032019318000145/a10-k20189292018.htm>; and
- c. Exhibit 59: Apple’s 10-K for the fiscal year ended September 28, 2019, printed on July 20, 2020 from the URL: <https://www.sec.gov/Archives/edgar/data/320193/000032019319000119/a10-k20199282019.htm>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials contain sales information related to Apple and its devices. They are relevant to show that Apple has acquired secondary meaning in the LIVE PHOTOS mark.

20. Attached hereto as Exhibits 60–62 are printouts from the publicly available Google Trends website showing Google Trends data for various searches containing the phrase “live photos”:

- a. Exhibit 60: A printout of Google Trends data for the search term “live photos” for the time period September 1, 2015 to October 25, 2018, printed on October 25, 2018 from the URL <https://trends.google.com/trends/explore?date=2015-09-01%202018-10-25&geo=US&q=live%20photos>.
- b. Exhibit 61: A printout of Google Trends data for the search term “iphone 6 live photos” for the time period September 1, 2015 to October 25, 2018, printed on October 25, 2018 from the URL <https://trends.google.com/trends/explore?date=2015-09-01%202018-10-25&geo=US&q=iphone%206%20live%20photos>.
- c. Exhibit 62: A printout of Google Trends data for the search term “live photos” for the time period September 1, 2015 to July 31, 2020, printed on August 7, 2020 from the URL <https://trends.google.com/trends/explore?date=2015-09-01%202020-07-31&geo=US&q=live%20photos>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple’s LIVE PHOTOS mark has acquired secondary meaning and is not generic.

21. Attached hereto as Exhibits 63–65 hereto are printouts of the publicly available websites for various tech companies showing that they describe their products for creating photographs that animate without using the phrase “live photo(s).”

- a. Exhibits 63: A printout from Samsung’s website titled “What is Motion Photo?,” printed on August 7, 2020 from the URL <https://www.samsung.com/global/galaxy/what-is/motion-photo/>.

- b. Exhibit 64: A printout from the Google website titled “Take motion photos & use Top Shot on your Pixel phone,” printed August 7, 2020 from the URL https://support.google.com/googlecamera/answer/9937175?hl=en&ref_topic=6164365.
- c. Exhibit 65: A printout of a publicly available website showing the listing for Microsoft Mobile app titled “Lumia Camera”, printed on August 7, 2020 from the URL <https://www.microsoft.com/en-us/p/lumia-camera/9wzdncrfhww1?activetab=pivot:overviewtab>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple’s LIVE PHOTOS mark is not generic or descriptive.

22. Attached hereto as Exhibit 66 is a copy of the registration certificate for trademark Registration No. 5,698,154 for SPIN EXPLORER issued to Gang Cao on March 12, 2019. This document may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(1) and TBMP § 704.03(b)(1). It is relevant to show Mr. Cao’s lack of standing, lack of interest in the LIVE PHOTOS mark, and lack of damage or harm in the event Apple’s LIVE PHOTOS mark is registered, as he filed for and obtained a trademark registration for the mark SPIN EXPLORER, but not LIVE PHOTOS.

23. Attached hereto as Exhibit 67 is a collection of the following printouts from publicly available websites demonstrating that several of the documents Mr. Cao presented to the Board are from extraterritorial sources:

- a. Page 1: Facebook page for 500px, printed on June 23, 2020 from the URL https://www.facebook.com/pg/500px/about/?ref=page_internal demonstrating that 500px is located in Toronto, Canada;
- b. Pages 2 - 7: Future PLC's Terms & Conditions, printed on June 24, 2020 from the URL https://www.futureplc.com/terms-conditions/?utm_source=ac&utm_medium=drawer&utm_campaign=navigation demonstrating that Future PLC (which owns Android Central) is located in the UK;
- c. Page 8: The "Contact Us" page for The Android Portal, printed on June 24, 2020 from the URL <https://www.theandroidportal.com/contact/> demonstrating that The Android Portal is located in Gujarat, India;
- d. Pages 9 - 10: LinkedIn page for Kapil Malani, co-founder of The Android Soul, printed on June 23, 2020 from the URL <https://www.linkedin.com/in/kapil-malani-60a32aa/1> demonstrating that Mr. Malani and The Android Soul are located in India;
- e. Pages 11 - 13: LinkedIn page for Rupesh Sinha, producer at Beebom, printed on June 23, 2020 from the URL <https://www.linkedin.com/in/rupesh-sinha-90696a55/> demonstrating that Mr. Sinha and Beebom are located in the New Delhi Area of India;
- f. Page 14: The "About Us" page for betakit, printed on June 24, 2020 from the URL <https://betakit.com/about-us/> demonstrating that betakit is located in Canada;

- g. Pages 15 - 16: Twitter page for Dspecs, printed June 24, 2020 from the URL https://twitter.com/dspecs_com demonstrating that Dspecs is located in India (“IN”);
- h. Pages 17 - 23: The homepage for The Economic Times, printed June 24, 2020 from the URL <https://economictimes.indiatimes.com/> demonstrating that The Economic Times serves the Indian market;
- i. Pages 24 - 26: LinkedIn page for Hitesh Raj Bhagat, previous editor at The Economic Times and author of the article submitted as Exhibit 50 to Cao’s Fourth Notice of Reliance, printed June 24, 2020 from the URL <https://www.linkedin.com/in/hiteshrajbhagat/> demonstrating that Mr. Bhagat is located in India;
- j. Pages 27 - 31: LinkedIn page for Karan Bajaj, printed July 2, 2020 from the URL <https://www.linkedin.com/in/karanbajaj/> demonstrating that Mr. Bajaj was located in India when he worked for The Economic Times and authored the article attached as Exhibit 44 to Mr. Cao’s Fourth Notice of Reliance;
- k. Pages 32 - 33: The “About” page for Times Internet, printed on July 2, 2020 from the URL <https://www.timesinternet.in/about> demonstrating that the corporate office of Times Internet is located in Haryana, India;
- l. Pages 34 - 35: The “About Us” page for EFY Group, printed on June 24, 2020 from the URL <https://efy.in/about/> demonstrating that the corporate office of EFY Group is located in New Delhi, India;

- m. Pages 36 - 38: The “Privacy Policy” page for Flixel, printed on June 24, 2020 from the URL <https://flixel.com/privacy/> demonstrating that Flixel is located in Canada;
- n. Pages 39 - 42: The “About Us” page for HuffPost Canada, printed on June 23, 2020 from the URL <https://www.huffingtonpost.ca/p/about-us> demonstrating that HuffPost Canada serves the Canadian market;
- o. Page 43: The “Contact” page for MakeUseOf, printed on June 23, 2020 from the URL <https://www.makeuseof.com/contact/> demonstrating that MakeUseOf is located in Hong Kong;
- p. Pages 44 - 46: The “About Us” page for MobileSyrup, printed on Jun 23, 2020 from the URL <https://mobilesyrup.com/about-us/> demonstrating that MobileSyrup is located in Canada and that all news and reviews on MobileSyrup are written by Canadians;
- q. Pages 47 - 50: The “About Us” page for NBIF, printed on June 24, 2020 from the URL <https://nbif.ca/about/> demonstrating that NBIF is located in New Brunswick, Canada;
- r. Page 51: The “Contact Us” page for PhoneArena, printed on June 23, 2020 from the URL <https://www.phonearena.com/contacts> demonstrating that PhoneArena is located in Bulgaria;
- s. Page 52: The “Let’s Talk!” page for Push Interactions, printed on June 24, 2020 from the URL <https://pushinteractions.com/contact/> demonstrating that Push Interactions is located in Saskatoon, Saskatchewan, Canada;

- t. Pages 53 - 54: Twitter page for Sudip Majhi, printed June 23, 2020 from the URL <https://twitter.com/sudipmus?lang=en> demonstrating that Mr. Majhi, who authored the document attached as Exhibit 7 to Cao's Third Notice of Reliance, is located in Kolkata, India where he writes for The Windows Club (which, as noted below, is owned by Khanse Webmedia Pvt Ltd., which is located in India);
- u. Page 55: Member profile for dottysbb, author of the document attached as Exhibit 41 to Mr. Cao's Fourth Notice of Reliance, from the xdadevelopers forum, printed June 24, 2020 from the URL <https://forum.xda-developers.com/member.php?u=3908970> demonstrating that dottysbb is located in Bulgaria;
- v. Page 56: YouTube about page for Flixel Living Photos, printed June 24, 2020 from the URL <https://www.youtube.com/user/FlixelPhotos/about> demonstrating that the FlixelPhotos YouTube account, which posted the videos titled "Flixel App Commercial" and "Flixel Tutorial - Cinemagraph Pro for Mac with Giulio Sciorio" attached within Exhibit 33 to Mr. Cao's Fourth Notice Reliance, is located in Toronto, Canada;
- w. Page 57: The "About & Privacy" page for TheWindowsClub, printed August 11, 2020 from the URL <https://www.thewindowsclub.com/about> demonstrating that the author or site-owner is Khanse Webmedia Pvt Ltd. (which, as noted below, is located in India);
- x. Page 58: YouTube about page for LadaSoukup Photography, printed June 24, 2020 from the URL <https://www.youtube.com/user/ladasoukup/about> demonstrating that the LadaSoukup YouTube account, which posted the video

- titled “Living photo (cinemagraph) - Flixel app demo” attached within Exhibit 33 to Mr. Cao’s Fourth Notice Reliance, is located in Czechia (*i.e.*, Czech Republic);
- y. Page 59: YouTube about page for My Tech Support, printed 24, 2020 from the URL <https://www.youtube.com/channel/UCvqafA-E51boYXqyDnAbydw/about> demonstrating that the My Tech Support YouTube account, which posted the video titled “How to Make Normal Photo to Live Photo / Live Effect / Pixaloop” attached as Exhibit 1 to Mr. Cao’s Fifth Notice of Reliance, is located in India;
- z. Page 60: YouTube about page for Ontario Creates, printed June 24, 2020 from the URL <https://www.youtube.com/user/OMDCOnline/about> demonstrating that the Ontario Creates YouTube account, which posted the video titled “OMDC Digital Dialogue 2015 Tech Crunch Lunch - Philippe LeBlanc (Flixel)” attached within Exhibit 33 to Mr. Cao’s Fourth Notice Reliance, is located in Canada;
- aa. Page 61: YouTube about page for Video Ampuh, printed June 24, 2020 from the URL <https://www.youtube.com/channel/UC3HCcyFACeS98jyHWAxDy3g/about> demonstrating that the Video Ampuh YouTube account, which posted the video titled “Cinemagraphs - Living Photos” attached within Exhibit 33 to Mr. Cao’s Fourth Notice Reliance, is located in Indonesia;
- bb. Pages 62 - 69: The “About Android Central” webpage from Android Central, printed August 9, 2020 from the URL <https://www.androidcentral.com/about> demonstrating that Android Central is part of Future, PLC (which, as noted above, is located in the UK);

- cc. Pages 70 - 73: The homepage for Gadgets 360, an NDTV series, printed August 9, 2020 from the URL <https://gadgets.ndtv.com/> demonstrating that Gadgets 360 is an NDTV venture;
- dd. Pages 74 - 75: The “About the Company” page for NDTV, printed August 9, 2020 from the URL <https://www.ndtv.com/convergence/ndtv/corporatepage/index.aspx> demonstrating that NDTV is a news network in India;
- ee. Pages 76 - 77: The “Mobile Phone Advisor Limited” page from CompanyCheck, printed August 9, 2020 from the URL <https://companycheck.co.uk/company/10928026/MOBILE-PHONE-ADVISOR-LIMITED/companies-house-data> demonstrating that Mobile Phone Advisors Limited is located in Lancaster, England; and
- ff. Pages 78 - 79: The “Company Registration India” page for Khanse Webmedia Private Limited, printed August 11, 2020 from the URL <https://companyregistrationindia.com/company/maharashtra/khanse-webmedia-private-limited-U74900PN1996PTC097915.php> demonstrating that Khanse Webmedia Private Limited is located in Maharashtra, India.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that the LIVE PHOTOS mark is not generic or descriptive, as much of the evidence Mr. Cao introduced to support his position is irrelevant because it comes from sources located outside of the United States.

24. Attached hereto as Exhibits 68–74 are the following printouts of publicly available webpages for various apps that are, or once were, available through the Google Play

store and that Mr. Cao cited as evidence to the Board. Each of the URLs below are the same as the URLs identified in Mr. Cao's evidence.

- a. Exhibit 68: The webpage for the app "Graphica Live Photo Maker", printed August 7, 2020 from the URL
https://play.google.com/store/apps/details?id=com.developerhouse.graphica&fbclid=IwAR3DP6XI-kGqbMyCXkbrUZ-ZEUcrHIPWDv9P_sL-yM_zEWK0hGBStNLxvPs;
- b. Exhibit 69: The webpage for the app "Live Photo Editor", printed August 7, 2020 from the URL
<https://play.google.com/store/apps/details?id=com.slow.motion.live.photo.editor>;
- c. Exhibit 70: The webpage for the app "Live Photo On Motion Cinemagraph Photoloop Effect", printed August 7, 2020 from the URL
<https://play.google.com/store/apps/details?id=moffin.cinemagraph.livephoto.animation.livepicture>;
- d. Exhibit 71: The webpage for the app "Live Photos - Movense", printed August 7, 2020 from the URL
<https://play.google.com/store/apps/details?id=com.reality.virtual.Movense>;
- e. Exhibit 72: The webpage for the app "TikTok Wall Picture", formerly "musical.ly Live Photo," printed August 7, 2020 from the URL
<https://play.google.com/store/apps/details?id=com.zhiliao.musically.livewallpaper>
;

- f. Exhibit 73: The webpage for the app “PICOO Camera - Live Photo”, printed August 7, 2020 from the URL https://play.google.com/store/apps/details?id=com.picoo.camera&hl=en_US; and
- g. Exhibit 74: The webpage for the app “TikTok Wall Picture”, formerly “TikTok Live Photo,” printed August 7, 2020 from the URL <https://play.google.com/store/apps/details?id=com.ss.android.ugc.tiktok.livewallpaper>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that the LIVE PHOTOS mark is not generic or descriptive, as the evidence Mr. Cao submitted concerning these apps is irrelevant because each of these apps has been removed from the Google Play store or changed its name to no longer include the phrase “Live Photos.”

25. Attached hereto as Exhibit 75 are excerpts from Opposer Gang Cao’s Objections and Responses to Applicant Apple Inc.’s First Set of Requests for Admission to Opposer Mr. Gang Cao and exhibits referenced therein, dated May 21, 2018. These responses and objections may be introduced by notice of reliance pursuant to C.F.R. § 2.120(k)(3)(i) and TBMP § 704.10. They are relevant to show that the LIVE PHOTOS mark is suggestive, not descriptive; that Apple has acquired secondary meaning in the LIVE PHOTOS mark; that the LIVE PHOTOS mark is not generic; that Mr. Cao lacks standing to oppose registration of Apple’s LIVE PHOTOS mark; Mr. Cao’s lack of interest in, or use of, the phrase “live photos” or domain names containing the phrase “live photo;” the lack of damage or harm to Mr. Cao in the event Apple’s LIVE PHOTOS mark is registered; and the apps Mr. Cao currently offers.

26. Attached hereto as Exhibits 76–97 are printouts of the following publicly available articles, each of which contain references to Apple’s LIVE PHOTOS camera feature and are available from the Internet:

- a. Exhibit 76: *The Verge*, “Apple’s new Live Photos feature turns your pictures into videos”, dated September 9, 2015 and printed on January 16, 2018 from the URL <https://www.theverge.com/2015/9/9/9296829/apple-live-photos-feature-iphone-6s>;
- b. Exhibit 77: *Mic*, “Apple Live Photos: How iPhone’s Newest Camera Feature Will Change the Way We View Photos”, dated September 10, 2015 and printed on January 16, 2018 and printed from the URL <https://mic.com/articles/125088/apple-live-photos-how-i-phone-s-newest-camera-feature-will-change-the-way-we-view-photos#.SJXS8DPKw>;
- c. Exhibit 78: *Forbes*, “How One Small Change To Apple iPhone 6 Revolutionizes Photography”, dated September 15, 2015 and printed on January 16, 2018 from the URL <https://www.forbes.com/sites/allenadamson/2015/09/15/how-one-small-change-to-apple-iphone-6-revolutionizes-photography/#5a5e4eb03caa>;
- d. Exhibit 79: *MacRumors*, “Live Photos Called ‘Best New Feature,’ Composed of Separate JPG and MOV Files”, dated September 22, 2015 and printed on January 17, 2018 from the URL <https://www.macrumors.com/2015/09/22/iphone6s-live-photos-file-details/>;
- e. Exhibit 80: *TechCrunch*, “Review: Apple’s iPhone 6s and 6s Plus Go ‘Tick’”, dated September 22, 2015 and printed on January 16, 2018 from the URL <https://techcrunch.com/2015/09/22/review-apples-iphone-6s-and-6s-plus-go-tick/>;

- f. Exhibit 81: *CNET*, “iOS 11 livens up Live Photos with some new tricks”, dated September 14, 2017 and printed on January 16, 2018 from the URL <https://www.cnet.com/how-to/check-out-ios-11s-new-live-photos-tricks/>;
- g. Exhibit 82: *Techvicity*, “Apple iOS 12.1.1 Developer Beta 2 and watchOS 5.1.3 Developer Beta 2 Released”, dated November 8, 2018 and printed on August 5, 2020 from the URL <https://techvicity.com/2018/11/apple-ios-12-1-1-developer-beta-2-and-watchos-5-1-2-developer-beta-2-released.html>;
- h. Exhibit 83: *Yahoo! Finance*, “Apple rolls out iOS 12.1.1 with broader Dual SIM support, enhanced Live Photos, and more”, dated December 5, 2018 and printed on August 7, 2020 from the URL <https://finance.yahoo.com/news/apple-rolls-ios-12-1-1-broader-dual-180013987.html>;
- i. Exhibit 84: *The Verge*, “Apple reportedly testing new iPhones with three rear cameras and a USB-C port”, dated January 30, 2019 and printed on June 4, 2020 from the URL <https://www.theverge.com/2019/1/30/18204220/apple-new-iphone-testing-camera-three-rear-usb-c-port>;
- j. Exhibit 85: *CNET*, “Apple releases iPhone update to fix Group FaceTime eavesdropping bug”, dated February 7, 2019 and printed on June 4, 2020 from the URL <https://www.cnet.com/news/apple-releases-iphone-update-to-fix-group-facetime-eavesdropping-bug/>;
- k. Exhibit 86: *Wall Street Journal*, “Apple to Reward Teen as It Patches FaceTime Bug”, dated February 7, 2019 and printed on June 4, 2020 from the URL <https://www.wsj.com/articles/apple-to-reward-teen-as-it-patches-facetime-bug-11549572939>;

- l. Exhibit 87: *Silicon Valley Business Journal*, “Apple to pay cash bounty, tuition to teen who discovered its FaceTime eavesdropping bug”, dated February 8, 2019 and printed on June 4, 2020 from the URL <https://www.bizjournals.com/sanjose/news/2019/02/08/apple-facetime-bug-grant-thompson-bounty-award.html>;
- m. Exhibit 88: *USA Today*, “Apple News+: Are 300 magazines worth \$9.99 a month?”, dated March 29, 2019 and printed on June 4, 2020 from the URL <https://www.usatoday.com/story/tech/columnist/baig/2019/03/29/apple-news-review-model-isnt-perfect-but-bundle-good-deal/3304471002/>;
- n. Exhibit 89: *Macworld*, “How to disable Live Photos on your iPhone or iPad”, April 17, 2019 and printed on June 8, 2020 from the URL <https://www.macworld.com/article/3389743/how-to-disable-live-photos-on-your-iphone-or-ipad.html>;
- o. Exhibit 90: *Business Insider*, “Apple’s new 2019 iPhones are expected to get a major camera upgrade. Here’s everything we know so far.”, dated April 23, 2019 and printed on August 5, 2020 from the URL <https://www.businessinsider.com/apple-new-2019-iphones-camera-leaks-rumors-so-far-2019-4>;
- p. Exhibit 91: *PCWorld*, “Budget tablet showdown: Apple 10.2-inch iPad (2019) vs. Microsoft Surface Go”, dated September 11, 2019 and printed on June 4, 2020 from the URL <https://www.pcworld.com/article/3438136/apple-102-inch-ipad-2019-vs-microsoft-surface-go.html>;

- q. Exhibit 92: *Bustle*, “How To Switch Off Live Photos On Your iPhone If You’re All About The Still Shots”, dated October 16, 2019 and printed on August 5, 2020 from the URL <https://www.bustle.com/p/how-to-turn-off-live-photos-on-your-iphone-if-you-prefer-still-shots-19223599>;
- r. Exhibit 93: *9to5 Mac*, “iPhone: How to turn off Live Photos for existing pictures”, January 16, 2020 and printed on August 5, 2020 from the URL <https://9to5mac.com/2020/01/16/iphone-how-to-turn-off-live-photos-existing-pictures/>;
- s. Exhibit 94: *IBT*, “Apple iPhone Tip: How To Create Live Wallpapers”, dated April 23, 2020 and printed on August 7, 2020 from the URL <https://www.ibtimes.com/apple-iphone-tip-how-create-live-wallpapers-2963718>;
- t. Exhibit 95: *BusinessWire*, “iPhone SE: A Powerful New Smartphone in a Popular Design”, dated April 15, 2020 and printed on June 4, 2020 from the URL <https://www.businesswire.com/news/home/20200415005229/en/>; and
- u. Exhibit 96: *MacSales.com (Rocket Yard)*, “How to Take Live Photos During a FaceTime Call in macOS Catalina”, dated June 10, 2020 and printed August 9, 2020 from the URL <https://blog.macsales.com/62714-how-to-take-live-photos-during-a-facetime-call-in-macos-catalina/>;
- v. Exhibit 97: *TechRadar*, “Why now is the time for Apple to bring Android-like features to iPhones”, dated June 23, 2020 and printed on August 5, 2020 from the URL <https://www.techradar.com/uk/news/why-now-is-the-time-for-apple-to-bring-android-like-features-to-iphones>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple's LIVE PHOTOS mark has acquired secondary meaning and that the LIVE PHOTOS mark is not generic or descriptive.

27. Attached hereto as Exhibit 98 is a printout of the publicly available article "Apple's iPhone 8 And X Sales Remain Strong Post The Thanksgiving Weekend" from *Forbes* dated December 11, 2017 and printed on February 15, 2018 from the URL <https://www.forbes.com/sites/chuckjones/2017/12/11/apples-iphone-8-and-x-sales-remain-strong-post-the-thanksgiving-weekend/#c0155d269e2c>. This exhibit may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). It is relevant to show that Apple's LIVE PHOTOS mark has acquired secondary meaning.

28. Attached hereto as Exhibits 99–154 are the following publicly available articles printed in various United States news publications and obtained via the LexisNexis database of news articles:

- a. Exhibit 99: *Atlanta Business Chronicle*, "Apple unveils-large screen iPad Pro, new iPhone and Apple TV (Video)", published September 9, 2015;
- b. Exhibit 100: *San Jose Mercury News*, "What you need to know about the new Apple TV, iPhone 6s, 6s Plus, iPad Pro", published September 9, 2015;
- c. Exhibit 101: *Record-Journal*, "Apple unveils iPad Pro, Apple Pencil, new Apple TV, and iPhone 6s", published September 10, 2015;
- d. Exhibit 102: *The New York Post*, "How do you like them Apples! New iPhones, iPads and even lifesaving watch apps on the way", published September 10, 2015;
- e. Exhibit 103: *Reno Gazette-Journal*, "iPad pro, iPhone 6S, new Apple TV unveiled", published September 10, 2015;

- f. Exhibit 104: *The Tampa Tribune*, “Apple insight [JUMP]iPhone tweaks more than skin deep”, published September 11, 2015;
- g. Exhibit 105: *The Washington Post*, “Two new iPhone models, just a touch different from their predecessors”, published September 11, 2015;
- h. Exhibit 106: *The Houston Chronicle*, “DR. MAC; Pressure-sensitive touch feature stands out”, published September 15, 2015;
- i. Exhibit 107: *Daily News*, “‘Plus’-size gain Strong sales for new Apple phones”, published September 15, 2015;
- j. Exhibit 108: *The Hawkeye: University of Louisiana - Monroe*, “Apple advances color, quality,” published September 20, 2015;
- k. Exhibit 109: *The New York Times Blogs*, “Daily Report: A New iPhone for the Slow Upgrade Crowd”, published September 22, 2015;
- l. Exhibit 110: *The Wall Street Journal*, “Why We Keep Buying Each New iPhone”, published September 23, 2015;
- m. Exhibit 111: *The Washington Post*, “A new line of iPhones, designed with millennials and functionality in mind”, published September 25, 2015;
- n. Exhibit 112: *The Boston Herald*, “New iPhone 6s only a bit better; 3D touch not a showstopper”, published September 26, 2015;
- o. Exhibit 113: *The Biloxi Sun Herald*, “Photography gets even better with Apple’s new iPhones.”, published September 26, 2015;
- p. Exhibit 114: *Charlotte Business Journal*, “A Droid user’s take on new iPhone 6s”, published September 28, 2015;

- q. Exhibit 115: *Hollywood Reporter*, “Apple iPhone 6s Sets New Record in First Weekend”, published September 28, 2015;
- r. Exhibit 116: *Silicon Valley Business*, “Apple posts record iPhone sales of 13 million in first weekend”, published September 28, 2015;
- s. Exhibit 117: *The Chronicle*, “Apple reports record sales of new iPhones”, published September 28, 2015;
- t. Exhibit 118: *The San Francisco Chronicle*, “iPhone 6s sales break record at 13 million; Apple sells record 13 million iPhone 6s devices in first weekend”, published September 29, 2015;
- u. Exhibit 119: *The Delta Discovery*, “GCI to Offer iPhone 6s and iPhone 6s Plus in Alaska on Sept. 25”, published September 30, 2015;
- v. Exhibit 120: *The Reveille: Louisiana State University*, “TECH DUMP: iPhone 6S review TECH DUMP: iPhone 6S review”, published October 1, 2015;
- w. Exhibit 121: *Pensacola News Journal*, “‘El Capitan’ Proves a Modest Mac Upgrade”, published October 4, 2015;
- x. Exhibit 122: *The Pacifican: University of the Pacific*, “New iPhone packed with upgrades-but at a steep price”, published October 17, 2015;
- y. Exhibit 123: *The Courier: Monmouth University*, “iPhone 6S: Is It Worth the Upgrade?”, published October 30, 2015;
- z. Exhibit 124: *Filipino Reporter*, “iPhone 6s pre-registration starts”, published October 5, 2015 - November 5, 2015;
- aa. Exhibit 125: *Monterey County Herald*, “Getting Acquainted With iPhone's Cool New Features”, published November 28, 2015;

- bb. Exhibit 126: *Palm Beach Post*, “Morning Line”, published December 22, 2015;
- cc. Exhibit 127: *Journal and Courier*, “Top Stories of 2015”, published January 2, 2016;
- dd. Exhibit 128: WKKG -101.5 FM, “Apple Provides Temporary Fix for iPhone 6s Battery Freeze Issue”, published January 19, 2016;
- ee. Exhibit 129: *The Asheville Citizen-Times*, “REPORT: APPLE WORKING ON SMALLER IPHONE”, published February 3, 2016;
- ff. Exhibit 130: *The Bell Ringer: Augusta State University*, “Battle Of The Apples: iPad Mini 4 vs Air 2 vs Pro”, published February 22, 2016;
- gg. Exhibit 131: NBC - 2 WCBD, “New iPad, iPhone, Apple Watch Launch Moved to Week of March 21”, published February 29, 2016;
- hh. Exhibit 132: *The Post Standard*, “Catching up Camera on New Samsung S7 Now Rivals the iPhone”, published March 13, 2016;
- ii. Exhibit 133: *Salem State Log*, “Apple Inc. (AAPL) iPhone SE Retail Box Leaked Images Confirm Branding; Suggest 16GB Storage”, published March 18, 2016;
- jj. Exhibit 134: *Chicago Daily Herald*, “Review: What You Need to Know About Samsung's Newest Phones”, published March 20, 2016;
- kk. Exhibit 135: *The Washington Post*, “The New iPad and iPhone Should Feel Pretty Familiar”, published March 23, 2016;
- ll. Exhibit 136: *USA Today*, “How Apple's \$399 iPhone May Give It an Edge”, published March 24, 2016;
- mm. Exhibit 137: *The Wall Street Journal*, “Smaller Gets Smarter With New iPhone SE”, published March 24, 2016;

- nn. Exhibit 138: *Daytona Beach News Journal*, “Who Should (and Should Not) buy iPhone SE”, published April 6, 2016;
- oo. Exhibit 139: *The Mercury News*, “Wolverton: Apple's Newer, Smaller iPad Pro a Terrific Tablet”, published April 10, 2016;
- pp. Exhibit 140: *Silicon Valley Business*, “Google's New Motion Stills App Takes on Apple's Live Photo”, published June 8, 2016;
- qq. Exhibit 141: *The New York Times*, “About Those Wireless Headphones, and Other Apple Accessories”, published September 15, 2016;
- rr. Exhibit 142: *San Antonio Express News*, “Digital Dish Your Weekly Serving of Tech News”, published January 10, 2017;
- ss. Exhibit 143: *The Houston Chronicle*, “Dr. Mac; Chewing Over Apple's News”, published March 28, 2017;
- tt. Exhibit 144: NBC - 4 WCMH, “iOS 11 Brings 'Do Not Disturb While Driving' Feature to iPhone”, published June 5, 2017;
- uu. Exhibit 145: *The Arizona Republic*, “Eleven Changes for iPhone With iOS 11 Coming This Fall”, published June 11, 2017;
- vv. Exhibit 146: *The Lion's Pride: Saint Leo University*, “Apple's New iOS Update Won't Allow Use of Phone While Driving”, published June 12, 2017;
- ww. Exhibit 147: *USA Today*, “Coolest Features of iOS 11 - If You're Brave Enough to Try”, published June 28, 2017;
- xx. Exhibit 148: CBS - 3 WREG, “Secret iOS 11 features you're probably not using”, published September 26, 2017;

- yy. Exhibit 149: *The San Francisco Chronicle*, “Google Unveils New Pixel Phones; Google's New Pixel Smartphones to Be Priced at \$649 and \$849”, published October 5, 2017;
- zz. Exhibit 150: *USA Today*, “Google Takes on iPhone x; Search Giant Debuts Pixel 2 and Pixel 2 XL”, published October 5, 2017;
- aaa. Exhibit 151: *Chicago Daily Herald*, “Review: Hands-on with Google's New Pixel 2 Phone”, published October 8, 2017;
- bbb. Exhibit 152: *The Daily Telegram*, “Google's Pixel 2 Gives You the Best of Android - If You Can Find It; TECH REVIEW”, published October 22, 2017;
- ccc. Exhibit 153: *The New York Times*, “Adding Even More Life to Live Photos; Tech Tip”, published December 26, 2017;
- ddd. Exhibit 154: *The New York Times*, “Finding the Perfect Part of a Live Photo”, published January 9, 2018

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show that Apple’s LIVE PHOTOS mark has acquired secondary meaning and that the LIVE PHOTOS mark is not generic or descriptive.

29. Apple Trial Exhibit 155 is Appendix A to the Affidavit of Elizabeth Rosenberg, which is being submitted simultaneously with this Notice of Reliance. Appendix A is a compilation of publicly available preservations of publicly available websites preserved by The Internet Archive and available through its website at <http://web.archive.org/>. The documents in Appendix A are the following:

- a. Page 1: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of July 10, 2010, printed August 3, 2020 from URL

<https://web.archive.org/web/20100710054343/http://www.create.ca:80/domain/livephoto.php>;

- b. Page 2: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of February 2, 2011, printed on August 3, 2020 from URL <https://web.archive.org/web/20110202203028/http://www.create.ca/domain/livephoto.php>;
- c. Page 3: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of August 2, 2015, printed on August 3, 2020 from URL <https://web.archive.org/web/20150802015548/http://www.create.ca/domain/livephoto.php>;
- d. Page 4: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of July 4, 2013, printed on August 3, 2020 from URL <https://web.archive.org/web/20130704022115/http://www.create.ca:80/domain/livephoto.php>;
- e. Page 5: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of February 11, 2014, printed on August 3, 2020 from URL <https://web.archive.org/web/20140211112816/http://www.create.ca/domain/livephoto.php>;
- f. Page 6: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of May 18, 2014, printed on August 3, 2020 from URL <https://web.archive.org/web/20140518002922/http://www.create.ca/domain/livephoto.php>;

- g. Page 7: Archive.org capture of LivePhoto.com and LivePhoto.ca redirect webpage as of December 20, 2014, printed on August 3, 2020 from URL <https://web.archive.org/web/20141220170507/http://www.create.ca/domain/livephoto.php>;
- h. Page 8: Archive.org capture of LivePhoto.ca webpage as of May 16, 2017, printed on August 3, 2020 from URL <https://web.archive.org/web/20170516015500/http://livephoto.ca/>;
- i. Pages 9 - 10: Archive.org capture of LivePhoto.com webpage as of September 12, 2017, printed on August 3, 2020 from URL <https://web.archive.org/web/20170912104710/http://livephoto.com/>; and
- j. Pages 11 - 18: Archive.org capture of Apple’s iPhone 6s Cameras webpage as of September 9, 2015, printed on August 3, 2020 from URL <https://web.archive.org/web/20150909193838/www.apple.com/iphone-6s/cameras/>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials at pages 1 through 10 in Trial Exhibit 155 are relevant to show Mr. Cao’s lack of standing to oppose registration of Apple’s LIVE PHOTOS mark; Mr. Cao’s lack of interest in, or use of, the phrase “live photos” or domain names containing the phrase “live photo”; and the lack of damage or harm to Mr. Cao in the event Apple’s LIVE PHOTOS mark is registered. The materials at pages 11 to 18 in Trial Exhibit 155 are relevant to show that Apple’s LIVE PHOTOS mark is suggestive, not descriptive; that Apple’s LIVE PHOTOS mark has acquired secondary meaning; that the LIVE PHOTOS mark is not generic;

use of the LIVE PHOTOS mark as a trademark for Apple’s camera feature; and the functionality and promotion of Apple’s Live Photos camera feature.

30. Attached hereto as Exhibits 156–157 are printouts from publicly available websites showing the circulation, distribution, and/or website engagement for various news sources.

- a. Exhibit 156: A webpage titled “Leading daily newspapers in the United States in September 2017 and January 2019 by circulation (in thousands)” from Statista, printed on August 14, 2020 from the URL <https://www.statista.com/statistics/184682/us-daily-newspapers-by-circulation>.
- b. Exhibit 157: A webpage titled “The top 25 U.S. daily newspapers of fall 2019” from Muck Rack, dated October 24, 2019 and printed on August 14, 2020 from the URL <https://muckrack.com/blog/2019/10/24/the-top-25-us-daily-newspapers-of-fall-2019>.

These materials may be introduced by notice of reliance pursuant to 37 C.F.R. § 2.122(e)(2) and TBMP § 704.08(b). These materials are relevant to show the popularity or circulation of various news sources that reported on Apple’s LIVE PHOTOS feature, which is relevant to showing that Apple’s LIVE PHOTOS mark has acquired secondary meaning and is not generic.

Dated: August 14, 2020

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Attorneys for Applicant Apple Inc.

CERTIFICATE OF SERVICE

I hereby certify that on August 14, 2020 I caused copies of the foregoing **APPLICANT APPLE INC.'S NOTICE OF RELIANCE** and exhibits thereto to be served via e-mail upon the following individuals:

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Seattle, WA 98104
marcl@seedIP.com

Dated: August 14, 2020

/s/ Dale M. Cendali

Dale M. Cendali



PRESS RELEASE

SEPTEMBER 9, 2015

Apple Introduces iPhone 6s & iPhone 6s Plus

Next Generation of Multi-Touch Arrives in The Most Advanced iPhones Ever

SAN FRANCISCO — September 9, 2015 — Apple® today announced iPhone® 6s and iPhone 6s Plus, the most advanced iPhones ever, adding a powerful new dimension to iPhone's revolutionary Multi-Touch™ interface. The new iPhones introduce 3D Touch, which senses force to enable intuitive new ways to access features and interact with content. iPhone 6s and iPhone 6s Plus feature Retina® HD displays made from the strongest glass on any smartphone and 7000 series aluminum, the same alloy used in the aerospace industry, in gorgeous metallic finishes that now include rose gold.

iPhone 6s and iPhone 6s Plus also introduce a transformative new approach to photography called Live Photos, bringing still images to life by capturing a moment in motion. Live Photos, 3D Touch and other advancements in the new iPhones are powered by the Apple-designed A9 chip, the most advanced chip ever in a smartphone, delivering faster performance and great battery life.

"The only thing that has changed with iPhone 6s and iPhone 6s Plus is everything — 3D Touch lets users interact with iPhone in entirely new and fun ways, and the innovative Live Photos brings your pictures to life," said Philip Schiller, Apple's senior vice president of Worldwide Marketing. "These are the most advanced iPhones ever, with 7000 series aluminum, ion-strengthened glass, the new 64-bit A9 chip, 12-megapixel iSight and 5-megapixel FaceTime HD cameras, faster Touch ID, LTE and Wi-Fi. Customers are going to love them."

3D Touch

iPhone 6s and iPhone 6s Plus introduce new ways to navigate and experience iPhone by sensing pressure to enable new gestures — Peek and Pop™— so you can dip in and out of content without losing your place. Press lightly to Peek at a photo, email, web page or other content, and press a little deeper to Pop into the content itself. With Quick Actions, 3D Touch provides shortcuts to the things you do most, so you

Cao v. Apple
Apple Trial Exhibit
35

can send a message or take a selfie with just a simple press from the Home screen.

Camera Innovations

The world's most popular camera is even better in the new iPhones with new ways to capture and relive unforgettable moments. iPhone 6s and iPhone 6s Plus introduce Live Photos, which go beyond snapshots to capture moments in motion. Live Photos are beautiful 12-megapixel photos that, with just a press, reveal the moments immediately before and after the shot was taken, so you can enjoy a living memory rather than an instant frozen in time.

High-definition video improves with support for 4K — with a resolution of 3840 x 2160, delivering over 8 million pixels — and the expansion of optical image stabilization to video on iPhone 6s Plus, for taking beautiful videos in lower light. After capturing 4K video, you can edit on your Mac®, PC, iPad® and with the latest version of iMovie® on iPhone, you can even edit two simultaneous streams.

Additional camera advancements include:

- a new state-of-the-art 12-megapixel sensor with advanced pixel technology and Apple-designed image signal processor, for truer colors and sharper, more detailed photos; and
- a new 5-megapixel FaceTime® HD camera and Retina Flash, which momentarily makes the display three times brighter with True Tone® lighting, for wonderfully bright selfies in low light.

Advanced Technology

A9, Apple's third-generation 64-bit chip powers these innovations with 70 percent faster CPU and 90 percent faster GPU performance than the A8, all with gains in energy efficiency for great battery life. The A9 chip and iOS 9 are architected together for optimal performance where it matters most, in real world usage. M9, Apple's next-generation motion coprocessor, is embedded into A9, allowing more features to run all the time at lower power, including "Hey Siri," without iPhone needing to be plugged in.

With advanced wireless technologies including faster Wi-Fi and LTE Advanced, iPhone 6s and iPhone 6s Plus users can browse, download and stream content even faster.¹ The new iPhones also support up to 23 LTE bands — the most in any smartphone — for better worldwide roaming.

iOS 9, the world's most advanced mobile operating system, brings more intelligence to iPhone with proactive assistance, powerful search and improved Siri® features, all while protecting users' privacy. Built-in apps become more powerful with a redesigned Notes app, detailed transit information in Maps, and an all-new News app for the best news reading experience on any mobile device.² The foundation of iOS is even stronger with software updates that require less space to install and advanced security features to further protect your devices.

Pricing & Availability

- iPhone 6s and iPhone 6s Plus will be available in gold, silver, space gray and the new rose gold metallic finishes for \$0 down with 24 monthly payments starting at \$27 (US) and \$31 (US), respectively, from Apple's retail stores in the US, Apple.com, select carriers and Apple Authorized Resellers.³
- Exclusively at Apple's retail stores in the US, customers can choose their carrier and get an unlocked iPhone 6s or iPhone 6s Plus with the opportunity to get a new iPhone annually and AppleCare+ on the new iPhone Upgrade Program with monthly payments starting at \$32 (US) and \$37 (US), respectively.⁴
- Both models will be available in Australia, Canada, China, France, Germany, Hong Kong, Japan, New Zealand, Puerto Rico, Singapore, the UK and the US beginning Friday, September 25, with pre-orders beginning Saturday, September 12.
- Apple-designed accessories including leather and silicone cases in a range of colors and Lightning Docks in color-matched metallic finishes will also be available.

¹ Data plan required. LTE Advanced and LTE are available in select markets and through select carriers. Speeds vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.

² Transit information in Maps will be available in select major cities including Baltimore, Berlin, Chicago, London, Mexico City, New York City, Philadelphia, the San Francisco Bay Area, Toronto and Washington D.C., as well as over 300 cities in China, including Beijing, Chengdu and Shanghai. News app availability varies by country.

³ Prices are rounded to nearest dollar and are based on 24 monthly installment payments. Taxes and activation fees may be due at sale. Carrier terms and eligibility may apply.

⁴ The iPhone Upgrade Program is available to qualified customers only with a valid US personal credit card. Requires a 24-month installment loan with Citizens Bank, N.A. and iPhone activation with a national carrier — AT&T, Sprint, T-Mobile or Verizon. Full terms apply.

Apple revolutionized personal technology with the introduction of the Macintosh in 1984. Today, Apple leads the world in innovation with iPhone, iPad, the Mac and Apple Watch. Apple's three software platforms — iOS, OS X and watchOS — provide seamless experiences across all Apple devices and empower people with breakthrough services including the App Store, Apple Music, Apple Pay and iCloud. Apple's 100,000 employees are dedicated to making the best products on earth, and to leaving the world better than we found it.

Additional Content:

- Images
- 3D Touch video
- Live Photos video

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 United States





Take and edit Live Photos

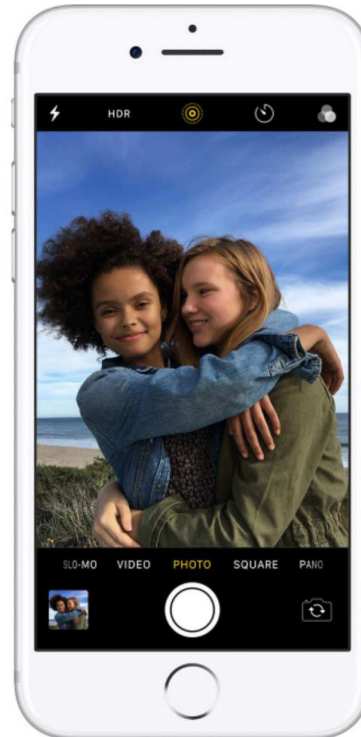
Capture photos that come alive when you touch them. Then you can pick a different key photo, add a fun effect, edit your Live Photo, and share with your family and friends. All from your iPhone 6s and later.

Take a Live Photo

Live Photos records what happens 1.5 seconds before and after you take a picture. What you get is more than a great photo: a moment captured with movement and sound. You take a Live Photo just like you do a traditional photo.

1. Open the Camera app.
2. Make sure that your Camera is [set to photo mode](#) and Live Photos is turned on.
3. Hold your iPhone still.
4. Tap .

Live Photos is on by default on your [iPhone 6s and later](#). If you want to [take a still image instead](#), tap  to turn off Live Photos. You can preserve your Camera settings so that Live Photos is always on or off. Go to Settings > Camera > Preserve Settings.



See your photos come to life

After you take a Live Photo, you can relive the moment instantly from the Photos app.

1. Open the Photos app.
2. Go to the Photos tab.
3. Tap the Live Photo.
4. Firmly press the screen and hold.



You can enjoy your Live Photo every time you unlock your iPhone too. Just [set it as your Lock screen wallpaper](#).

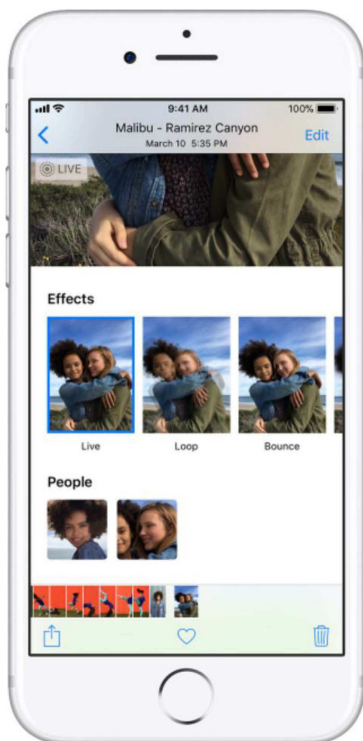
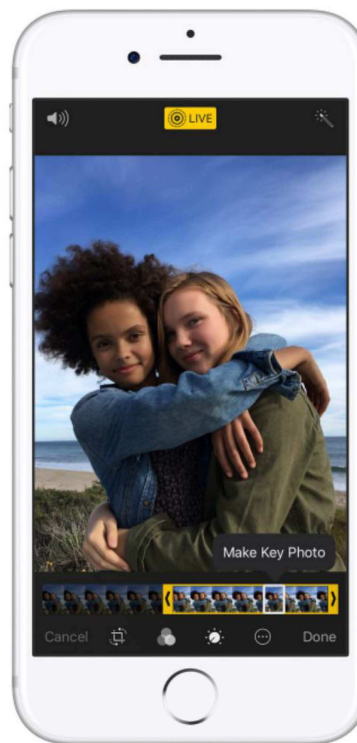


Change your key photo

Want to use a different key photo than the one you see in your photo library? In iOS 11 and later, it's no problem. Choose from the range of frames that make up your Live Photo.

1. Open the Live Photo.
2. Tap Edit.
3. Move the slider to change the frame.
4. Release your finger, then tap Make Key Photo.
5. Tap Done.

You can also toggle the Live Photo effect off when you tap Edit > . If you change your mind, just tap  again in Edit.



Add Live Photo effects

With Live Photo effects in iOS 11 and later, your photos can be even more expressive, creative, and just plain fun.

1. Open the Live Photo.
2. Swipe up until you see Effects.
3. Choose Loop, Bounce, or Long Exposure.

Loop: **Turn** a Live Photo you love into a video loop. Choose an image yourself, or let Photos suggest which ones would make great loops.

Bounce: Make your Live Photo rock back and forth. Watch your Live Photo as it happened, then instantly play in reverse.

Long Exposure: Capture the elements of time and movement. Create a beautiful effect that used to be possible only with a DSLR camera. Fireworks become bright streaks across the night sky. A waterfall, a magical blur.


Edit your Live Photos

Make edits to your Live Photos [the same way as any other photo](#), with the tools built directly into


Share any way you like

Show off your Live Photos to family and friends. Just make sure that they have the [latest iOS](#) or

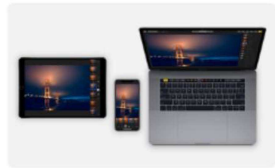
the Photos app. Crop, add filters, adjust the light, and more. You can even trim or mute the sound.

1. Open the Photos app.
2. Go to the Photos tab.
3. Tap the Live Photo that you want to edit.
4. Tap Edit or .

Messages for Mac. You can share your moment as a Live Photo or a still photo.

1. Tap .
2. In iOS 10 and earlier, if you want to share the still photo and not the Live Photo, tap Live in the upper-left corner.
3. Choose how you want to share your photo.
If you choose Mail, it sends as a still image.

If you edit your Live Photo in a third-party app, you might lose the Live Photo effect.



Take Photos further

Ready to get the most out of your shots with the powerful, easy-to-use editing tools in Photos? Schedule a 30-minute guided session with a Photos expert.

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 United States



Mac

iPad

iPhone

Watch

TV

Music

Support



Photos for macOS



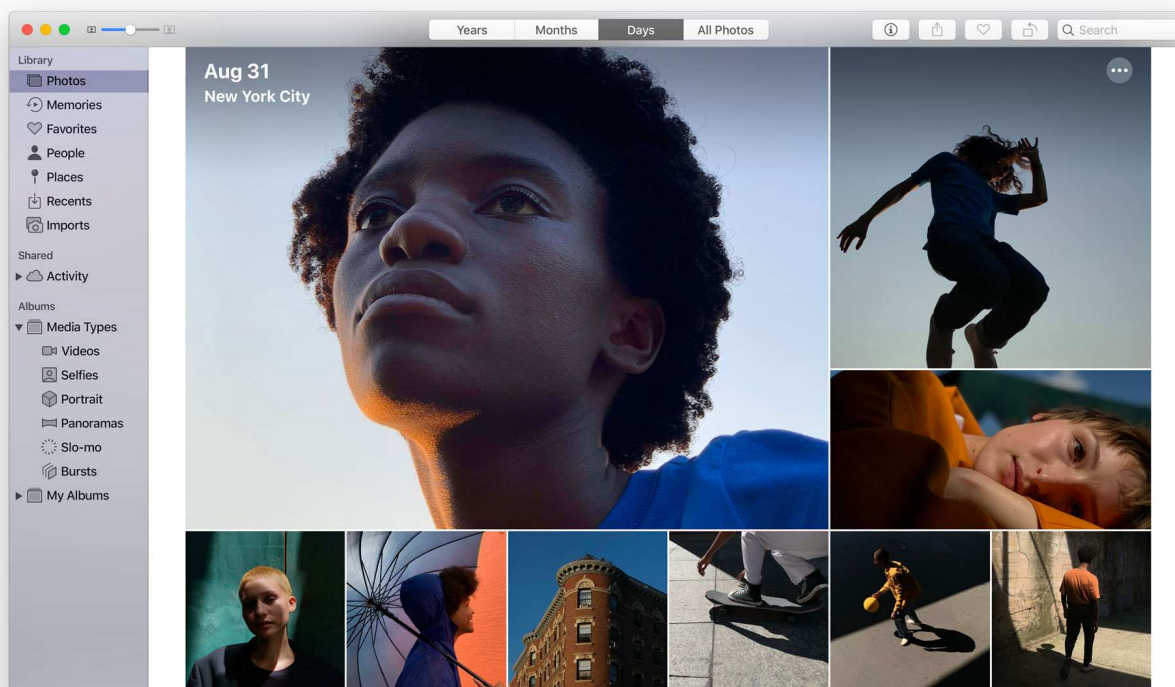
Cao v. Apple
Apple Trial Exhibit
37

Photos in macOS Catalina has an immersive, dynamic look that showcases your best photos. Find the shots you're looking for with powerful search options.

Organize your collection into albums, or keep your photos organized automatically with smart albums. Perfect your images with intuitive built-in editing tools, or use your favorite photos apps. And with iCloud Photos, you can keep all your photos and videos stored in iCloud and up to date on your Mac, Apple TV, iPhone, iPad, and even your PC.

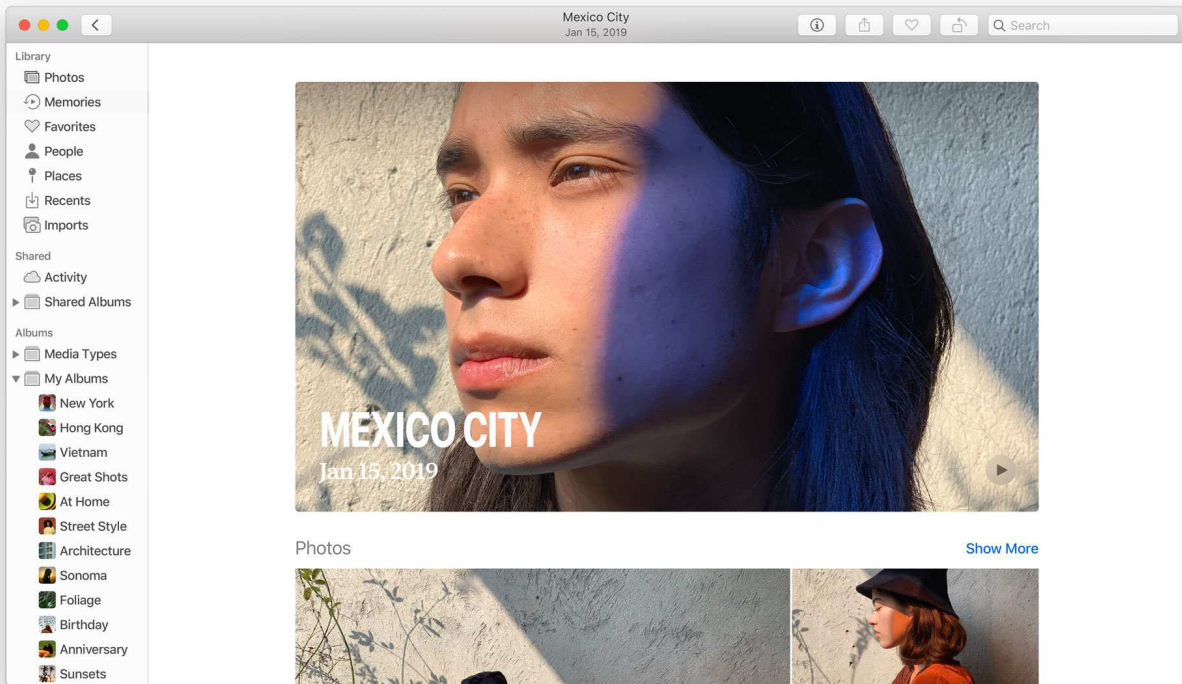
A smarter ~~way~~ to find or ~~favorites~~ ~~favorites~~

Photos in macOS Catalina intelligently declutters and curates your photos and videos — so you can easily see your best memories.



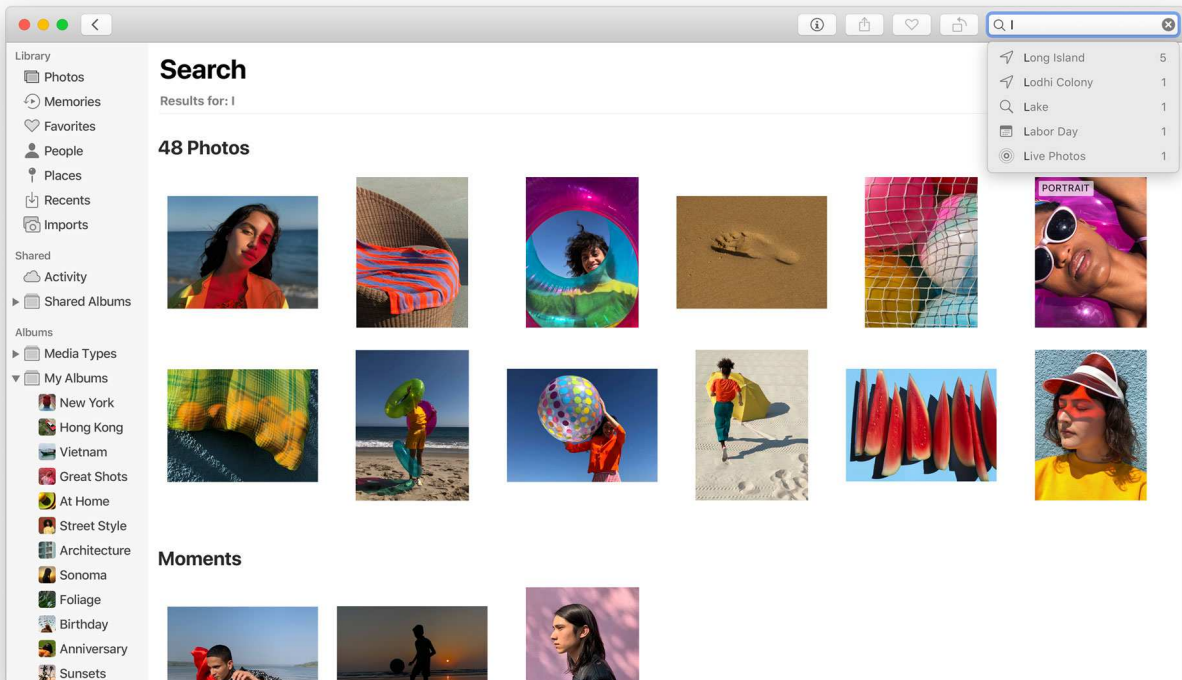
Focus on ~~or~~ best shots

Photos emphasizes the best shots in your library, hiding duplicates, receipts, and screenshots. Days, Months, and Years views organize your photos by when they were taken. Your best shots are highlighted with larger previews, and Live Photos and videos play automatically, bringing your library to life. Photos also highlights important moments like birthdays, anniversaries, and trips in the Months and Years views.



Yo memories o a g

Memories finds your best photos and videos and weaves them together into a memorable movie — complete with theme music, titles, and cinematic transitions — that you can personalize and share. So you can enjoy a curated collection of your trips, holidays, friends, family, pets, and more. And when you use iCloud Photos, all edits automatically sync to your other devices.



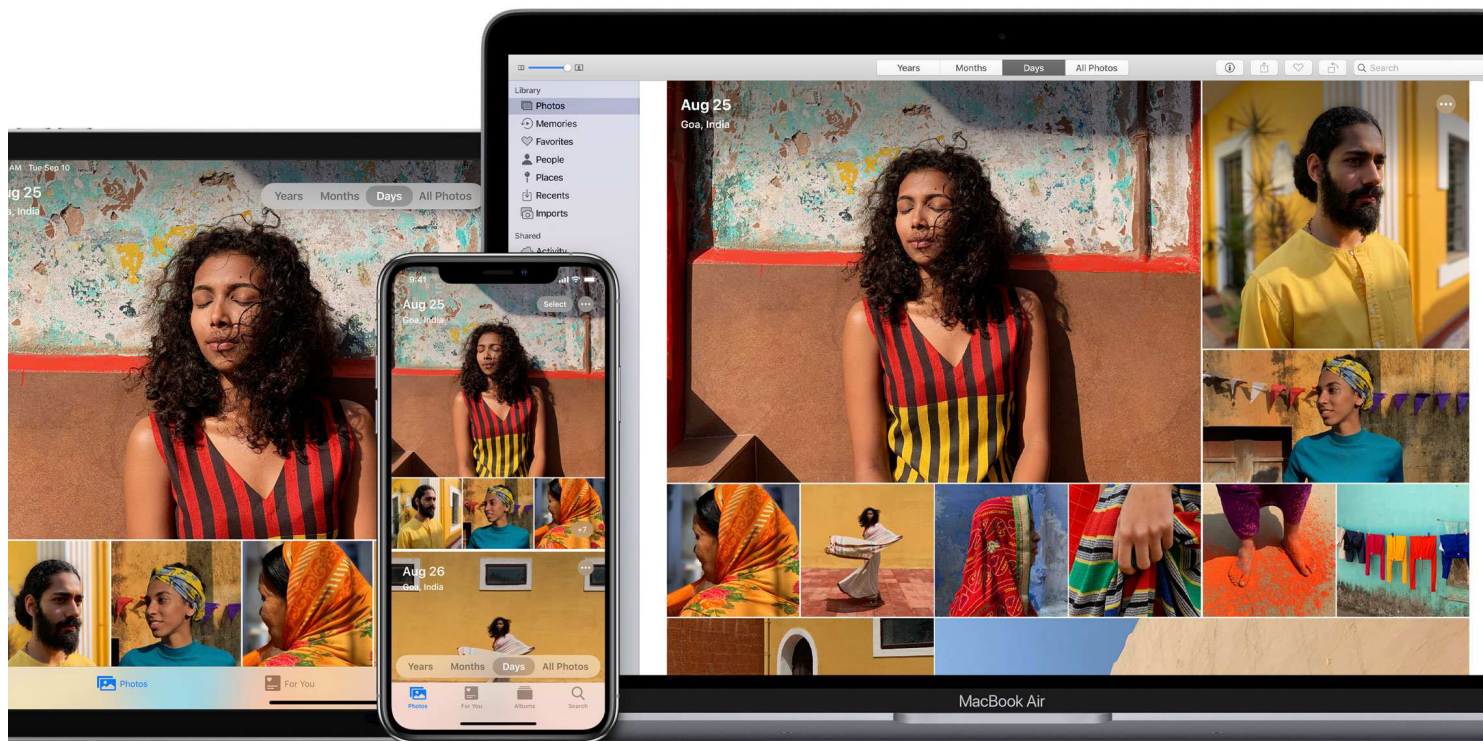
The moment ~~are~~ looking for ~~is~~ ~~as~~ ~~at~~ ~~hand~~

With Search, you can look for photos based on who's in them or what's in them — like strawberries or sunsets. Or combine search terms, like "beach 2017." If you're looking for photos you imported a couple of months ago, use the expanded import history to look back at each batch in chronological order. And in the My Albums tab, you'll find your videos, selfies, panoramas, and other media types automatically organized into separate albums.

Fill ~~or~~ library ~~is~~ not ~~or~~ delete ~~is~~

iCloud Photos can help you make the most of the space on your Mac. When you choose "Optimize Mac Storage," all your full-resolution photos and videos are stored in iCloud in their original formats, with storage-saving versions kept on your Mac as space is needed. You can also optimize storage on your iPhone, iPad, and iPod touch, so you can access more photos and videos than ever before. You get 5GB of free storage in iCloud — and as your library grows, you have the option to choose a plan for up to 2TB.

[Learn more about iCloud Photos >](#)



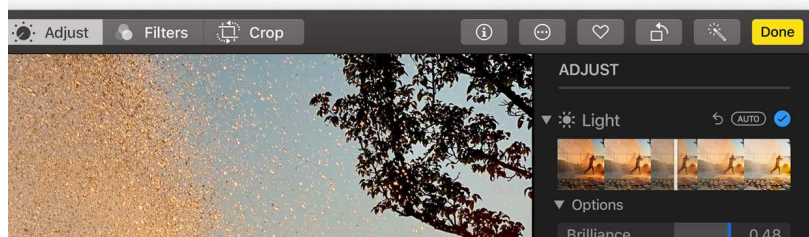
Make an edit here, see it there. When you make changes on your Mac like editing a photo, marking a Favorite, or adding to an album, they're kept up to date on your iPhone, your iPad, and iCloud.com. And vice versa — any changes made on your iOS or iPadOS devices are automatically reflected on your Mac.

All your photos on all your devices. iCloud Photos gives you access to your entire Mac photo and video library from all your devices. If you shoot a snapshot, slo-mo, or selfie on your iPhone, it's automatically added to iCloud Photos — so it appears on your Mac, iOS and iPadOS devices, Apple TV, iCloud.com, and your PC. Even the photos and videos imported from your DSLR, GoPro, or drone to your Mac appear on all your iCloud Photos-enabled devices. And since your collection is organized the same way across your Apple devices, navigating your library always feels familiar.



Resize Crop Collage Zoom Warp GIF And more

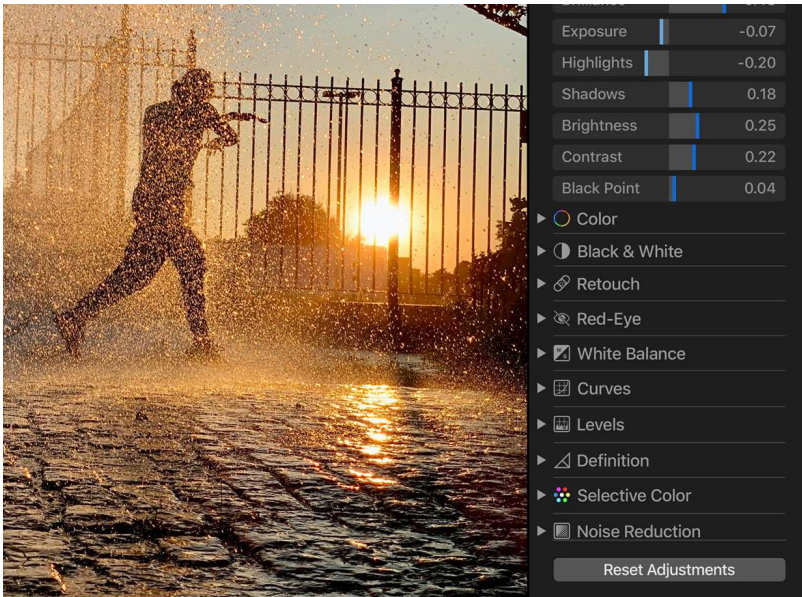
Create standout photos with a comprehensive set of powerful but easy-to-use editing tools. Instantly transform photos taken in Portrait mode with five different studio-quality lighting effects. Choose Enhance to improve your photo with just a click. Then use a filter to give it a new look. Or use Smart Sliders to quickly edit like a pro even if you're a beginner. Markup lets you add text, shapes, sketches, or a signature to your images. And you can turn Live Photos into fun, short video loops to share. You can also make edits to photos using third-party app extensions like Pixelmator, or edit a photo in an app like Photoshop and save your changes to your Photos library.



Light

Brilliance, a slider in Light, automatically brightens dark areas and pulls in highlights to reveal hidden details and make your photo look richer and more vibrant.

Color



Black & White

White Balance

Curves

Levels

Definition

Selective Color

Vignette

Editing Extensions

Reset Adjustments



Bring even more life to your Live Photos. When you edit a Live Photo, the Loop effect can turn it into a continuous looping video that you can experience again and again. Try Bounce to play the action forward and backward. Or choose Long Exposure for a beautiful DSLR-like effect to blur water or extend light trails. You can also trim, mute, and select a key photo for each Live Photo.

Add some filters

With just a click, you can apply one of nine photo filters inspired by classic photography styles to your photos.



- Original
- Vivid
- Vivid Warm
- Vivid Cool
- Dramatic
- Dramatic Warm
- Dramatic Cool
- Mono >

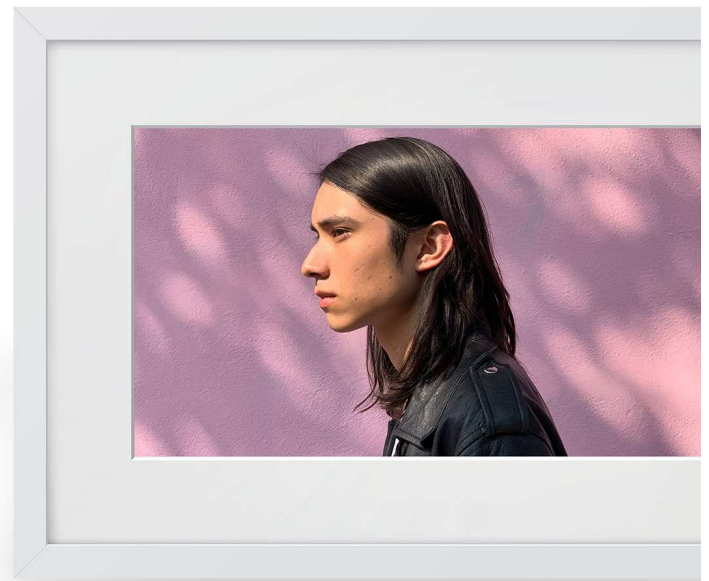
Share here
and everywhere

Use the Share menu to easily share photos via Shared Albums and AirDrop. Or send photos to your favorite photo sharing destinations, such as Facebook and Twitter. You can also customize the menu and share directly to other compatible sites that offer sharing extensions.

Turn pictures into projects

Making high-quality projects and special gifts for loved ones is easier than ever with Photos. Create everything from gorgeous photo books to professionally framed gallery prints to stunning websites using third-party project extensions like Motif, Mimeo Photos, Shutterfly, ifolor, WhiteWall, Mpix, Fujifilm, and Wix.

Download third-party extensions from the Mac App Store



Apple > macOS > Photos

Shop and Learn

- Mac
- iPad
- iPhone
- Watch

Services

- Apple Music
- Apple News+
- Apple TV+
- Apple Arcade

Apple Store

- Find a Store
- Genius Bar
- Today at Apple
- Apple Camp

For Business

- Apple and Business
- Shop for Business

For Education

- Apple and Education

Apple Values

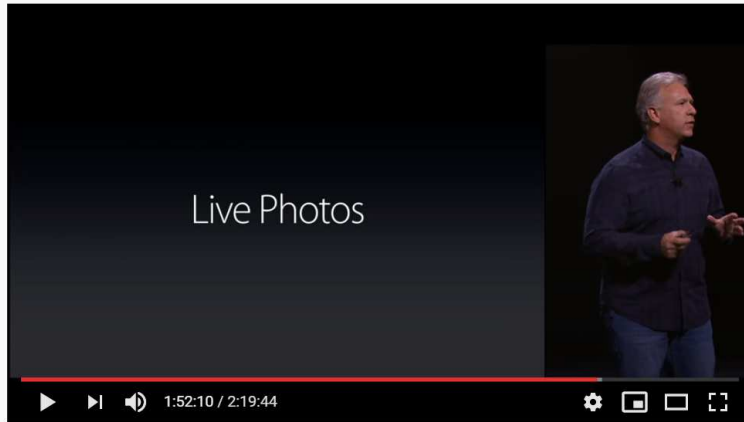
- Accessibility
- Education
- Environment
- Inclusion and Diversity

- | | | | | |
|-------------|----------------------|---------------------------|--------------------------------|-------------------------|
| TV | Apple Card | Field Trip | Shop for K-12 | Privacy |
| Music | iCloud | Apple Store App | Shop for College | Supplier Responsibility |
| AirPods | | Refurbished and Clearance | | |
| HomePod | Account | Financing | For Healthcare | About Apple |
| iPod touch | Manage Your Apple ID | Apple Trade In | Apple in Healthcare | Newsroom |
| Accessories | Apple Store Account | Order Status | Health on Apple Watch | Apple Leadership |
| Gift Cards | iCloud.com | Shopping Help | Health Records on iPhone | Job Opportunities |
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More ways to shop: [Find an Apple Store](#) or [other retailer](#) near you. Or call 1-800-MY-APPLE.

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 United States



Apple - September Event 2015

2,650,558 views • Sep 11, 2015

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Apple  11.9M subscribers

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Check out iPhone 6s and iPhone 6s Plus, learn about the powerful iPad Pro, take a look at the new features and bands for Apple Watch, and see the premiere of the all-new Apple TV.

<https://www.apple.com/?cid=www-us-ytb...>

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Marques Brownlee
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iPhone 6s Impressions!

6,989,642 views · Sep 9, 2015

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Marques Brownlee
11.6M subscribers

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Hands-on with Apple's new iPhone 6s and 6s Plus!

Faster. Crispier. And more sensitive. You know, because of 3D touch.

Video Gear I use: <http://amzn.com/lm/R3B571T7PT4PWM?tag...>

Intro Track: Deadmau5 - Slow Down, Start Over

- ~
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- <http://facebook.com/MKBHD>
- <http://instagram.com/MKBHD>

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10,386 Comments SORT BY

Add a public comment...

Austin Evans ✓ 4 years ago
The only iPhone 6s hands on I need to watch.
👍 1.9K 💬 REPLY
View 42 replies

Adnan Ahmed 1 year ago
Actually 2 gigs of ram
👍 24 💬 REPLY
View reply

Xman Galvan 4 years ago
Sitting here with 4s dreaming of a 6s
👍 72 💬 REPLY
View 10 replies

Bambusratte 1 year ago (edited)
I love the YouTube algorithm, thanks recommendations
It's not like the video is a few years old
👍 5 💬 REPLY

MenderSlen579 4 years ago

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- M** amazing
I have to admit apple really innovated with the new iphone 6s
👍 3 🗨️ REPLY
- holdmybeer** 4 years ago
Just here to look at technology I can afford in 4 years.
👍 174 🗨️ REPLY
[View 22 replies](#)
- Sir Savage** 4 years ago
Honestly I think iPhone 5s was the best iPhone that came out.
👍 21 🗨️ REPLY
[View 2 replies](#)
- BMoney8600** 4 years ago
I just got the 6S yesterday! I love the 3D Touch and I didn't know how the pictures worked. Thanks for showing all the features!
👍 4 🗨️ REPLY
- Callmehbria_A** 4 years ago
Getting one tomorrow at 2 o'clock in rose 🤪
👍 2 🗨️ REPLY
- Amira Phantomfire** 2 years ago
I can't wait to get a 6s. Just need a job so I can afford one. Pray for me, people.
👍 14 🗨️ REPLY
[View reply](#)
- Samuel Chernin** 3 years ago
Watching this on my 6s plus. Love it and was totally worth the price based on the performance and reliability it's given me these past 10 months.
👍 6 🗨️ REPLY
- Benjamin Kennedy** 1 year ago
Really happy a 3 year old phone review was in my recommend. Thx youtube
👍 2 🗨️ REPLY
- bizmonkey007** 4 years ago
I'm going to print out a small "s" and put it on the back of my iPhone 6. Voila! Now I have the new iPhone!
Thanks, Apple 🙌🙌.
👍 67 🗨️ REPLY
[View 4 replies](#)
- Gasoline AJ** 4 years ago
OMG I want it so much!!!! I thing it's probaly really expensive but it's AMAZING and anyone can live with out it right???
👍 1 🗨️ REPLY
- Jonathan Morrison** ✓ 4 years ago
Certified Crispy footage right there. Sick work man!
👍 540 🗨️ REPLY
[View 13 replies](#)
- CyberDasherXD** 1 year ago
1:15 it's to gb of ram
👍 3 🗨️ REPLY
- KingTuoyo** 4 years ago
I can't wait until I get mine on Friday aka my birthday! So excited!
👍 10 🗨️ REPLY
[View 4 replies](#)
- Julia G** 4 years ago
Getting one for my birthday. A new one will probably come out during the wait 🤪
👍 1 🗨️ REPLY
- Mr. Monocle** 1 month ago
Anyone else watching this on their iPhone 6?



heaven -- and hell. | Lilia Taraw...
TEDx Talks
Recommended for you
20:06



The whole working-from-home thing — Apple
Apple
Recommended for you
New
6:56



Apple iPhone 6 Review!
Marques Brownlee
6.9M views · 5 years ago
10:44



I'm switching to iPhone.
Mrwhosetheboss
2.5M views · 1 month ago
12:49



iPhone 6s #Chippgate: Explained!
Marques Brownlee
1.1M views · 4 years ago
5:30



How to set up an iPhone 6s: Unbox and set up your new...
Macworld UK
981K views · 4 years ago
7:08



iPhone SE (2020) Review: It All Adds Up!
Marques Brownlee
7.1M views · 2 months ago
10:04



iPhone 6S in 2019 - worth buying? (Review)
91Tech
691K views · 1 year ago
9:10

iPhone 6s 10 Tips and Tricks Hidden Features
iTalkTech
2.4M views · 4 years ago

Apple iPhone 6s vs Samsung Galaxy S6!
Jonathan Morrison
4.3M views · 4 years ago

iPhone X – Complete Beginners Guide
AppFind
1.3M views · 2 years ago

Apple's iPhone 6S event in 8 minutes
The Verge
709K views · 4 years ago

iPhone X Revisited: Still Worth \$1000?!!
Marques Brownlee
5.2M views · 2 years ago

iPhone 6S & iPhone 6S Plus Bend Test!
EverythingApplePro
4.3M views · 4 years ago

iOS 14 Hands-On: Everything New!
Marques Brownlee
7M views · 3 weeks ago

iPhone 6s Battery Case: Explained!
Marques Brownlee
1.7M views · 4 years ago

iPhone 6s vs Samsung Galaxy S6
SuperSaf
474K views · 4 years ago

👍 3 🗨️ REPLY

Snazzy Labs ✓ 4 years ago

Darn you and your A7Rii. Now I want one.

Marques Brownlee, making us all more poor since 2008.

👍 491 🗨️ REPLY

▾ View 14 replies

474K views · 4 years ago

Should You Buy iPhone 6S in 2018?

Nick Ackerman ✓

1M views · 2 years ago

iPhone 6s & 6s Plus Unboxing & First Look!

Marques Brownlee ✓

2.5M views · 4 years ago

Apple Magic Keyboard: Floating iPad Pro?

Marques Brownlee ✓

4.3M views · 2 months ago

iPhone 6 Space Grey 64GB Unboxing! (3 months later)

Ben Caygill

843K views · 5 years ago

iPhone 12: What to Expect!

Marques Brownlee ✓

4M views · 1 week ago

Apple iPhone 6+ Review!

Marques Brownlee ✓

2.3M views · 5 years ago

iPhone 6S & 6S Plus TIPS & TRICKS, Hacks for Advanced...

Gadgets Portal ✓

326K views · 4 years ago

Apple iPhone 6S Keynote September 2015

atuniverse

171K views · 4 years ago

COVID-19

See what articles people are publicly sharing on Twitter and Reddit, and how they are reacting to the latest news of the coronavirus pandemic.

theverge.com Competitive Analysis, Marketing Mix and Traffic

theverge.com



vs. techcrunch.com digitaltrends.com engadget.com
techradar.com

OVERVIEW

KEYWORD OPPORTUNITIES BREAKDOWN ?



- 823.2 k Optimization Opportunities
- 92.2 k Keyword Gaps
- 26 k Buyer Keywords
- 6.9 k Easy-to-Rank Keywords

[Keyword Opportunities >](#)

TOP INDUSTRY TOPICS BY SOCIAL ENGAGEMENT



- google
- user experience
- app

Average Engagement ?

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This Site	188
Competitor Avg. ?	37
Total Avg. ?	87

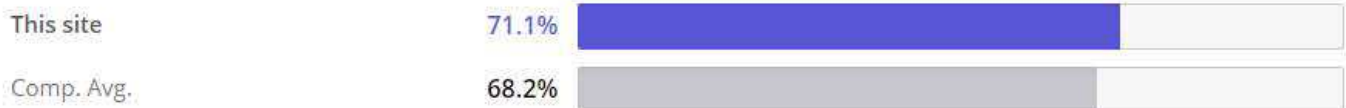
Social Engagement Analysis >

COMPARISON METRICS ?

Search Traffic



Bounce rate



Competitive Analysis >

TOP KEYWORDS BY TRAFFIC

Search Traffic

youtube	2.93%
amazon	2.74%
google	1.08%
google maps	0.64%
you tube	0.58%

Top Keywords >

SIMILAR SITES BY AUDIENCE OVERLAP ?

Similar sites	Overlap score
techcrunch.com	37.3

techradar.com	33.0
digitaltrends.com	32.3
businessinsider.com	31.7

[Audience Report >](#)

ALEXA RANK 90 DAY TREND



This site ranks:

677

in global internet engagement

1:60

Daily Time on Site

[Traffic Metrics >](#)

KEYWORD OPPORTUNITIES

Keyword Gaps

mavic air

58 Avg. Traffic to Competitors

53 Search Popularity

philo tv

56 Avg. Traffic to Competitors

51 Search Popularity

iphone se2

56 Avg. Traffic to Competitors

49 Search Popularity

chromecast

55 Avg. Traffic to Competitors

69 Search Popularity

[View all keywords](#)

[▶ Boost traffic by filling gaps](#)

Easy-to-Rank Keywords

nokia 7 plus

74 Relevance to this site

57 Search Popularity

whatsapp web

39 Relevance to this site

85 Search Popularity

huawei p20 lite

71 Relevance to this site

60 Search Popularity

iphone 6s

80 Relevance to this site

61 Search Popularity

[View all keywords](#)

[▶ How to find easy keywords](#)

Buyer Keywords

surface go review

76 Avg. Traffic to Competitors

80 Organic Competition

15 Organic Competition

google pay

74 Avg. Traffic to Competitors

15 Organic Competition

iphone xs review

74 Avg. Traffic to Competitors

80 Organic Competition

iphone xs max review

73 Avg. Traffic to Competitors

80 Organic Competition

[View all keywords](#)

 [Optimizing for buyer keywords](#)

Optimization Opportunities

amazon prime apps

18 Search Popularity

2.27% Organic Share of Voice

blizzard overwatch

34 Search Popularity

0.26% Organic Share of Voice

cheap smart phone

20 Search Popularity

1.21% Organic Share of Voice

window 10 screenshot

20 Search Popularity

2.10% Organic Share of Voice

[View all keywords](#)

 [Improving existing content](#)



How to Analyze Competitor Keywords

A competitor keyword analysis is a great way to find the best keyword opportunities, and solidify your content marketing and SEO strategy.

[Read](#)

SOCIAL ENGAGEMENT ANALYSIS

Top Social Topics

Top topics by total engagement amongst this site and it's competitors [?](#)

 google

This Site

188 Average Engagement

2,962 Total Articles

Competitor Avg. [?](#)

37 Average Engagement

1,500 Total Articles

 user experience

This Site

167 Average Engagement

1,954 Total Articles

Competitor Avg. [?](#)

54 Average Engagement

1,788 Total Articles



app

This Site

132 Average Engagement

2,774 Total Articles

Competitor Avg. [?](#)

37 Average Engagement

2,457 Total Articles

[View all topics](#)

Social Engagement

The total articles and average engagement across all sites [?](#)

[techcrunch.com](#)

77,312 Total Articles

39 Avg. Engagement

[theverge.com](#)

73,287 Total Articles

125 Avg. Engagement

[techradar.com](#)

48,247 Total Articles

9 Avg. Engagement

[digitaltrends.com](#)

47,377 Total Articles

16 Avg. Engagement

10 Avg. Engagement

[engadget.com](#)

42,055 Total Articles

35 Avg. Engagement

[View engagement details](#)

Popular Articles

Top articles by total engagement amongst this site and its competitors [?](#)[SpaceX successfully launches first crew to orbit, ush...](#)

theverge.com

222,570 Total Engagement

185 Total Shares

<https://www.theverge.com/2020/3/17/21184308/cor...>

theverge.com

144,936 Total Engagement

11,445 Total Shares

[Volunteers produce 3D-printed valves for life-saving...](#)

theverge.com

138,586 Total Engagement

10,705 Total Shares

[He filmed the killing of Eric Garner and the police...](#)

theverge.com

124,840 Total Engagement

51,093 Total Shares

[View all articles](#)

Explore Popular Articles by Topic

Discover recent trending articles across 275+ topics, and monitor the conversations your



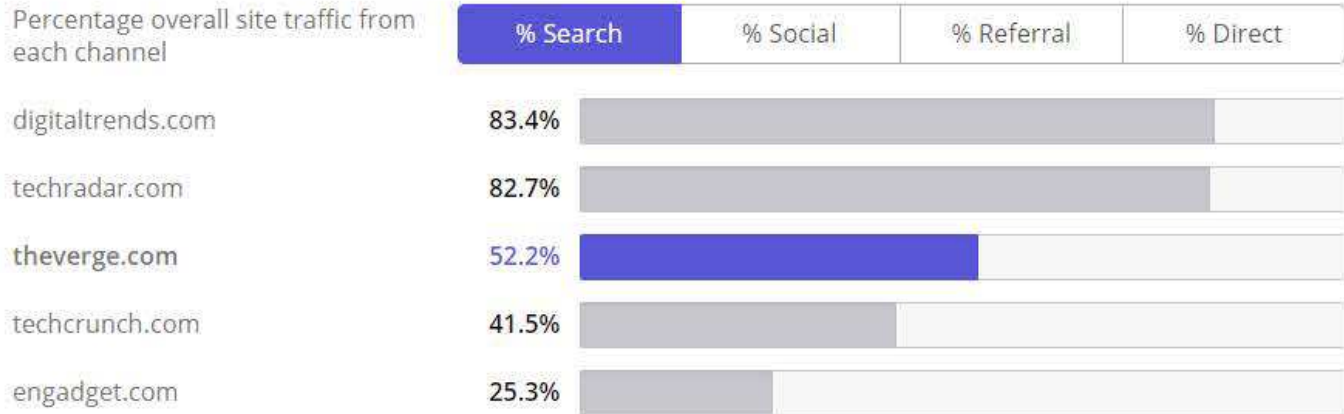
audience engages with.

[Get Started](#)

COMPETITIVE ANALYSIS

Traffic Sources

Percentage overall site traffic from each channel


[View all site comparisons](#)
[How to increase search traffic](#)
Referral Sites ?

Sites by how many other sites drive traffic to them

Referral Sites

techcrunch.com	29.8 k
engadget.com	24 k
theverge.com	18.1 k
digitaltrends.com	9.4 k
techradar.com	8.2 k

[View all referral sites](#)

Top Keywords ?

theverge.com

	Search Traffic	Share of Voice
youtube	2.93%	1.15%
amazon	2.74%	2.15%
google	1.08%	0.9%
google maps	0.64%	0.44%
you tube	0.58%	1.54%

[View all keywords](#)

Audience Overlap ?

Similar sites that share the same visitors and search keywords with this site.

Site's Overlap Score

40



Similar Sites to This Site

Alexa Rank

37.3	techcrunch.com	1,856
33.0	techradar.com	600
32.3	digitaltrends.com	629
31.7	businessinsider.com	231
30.9	forbes.com	220

[View all similar sites](#)



E-Book: Maximize Your Brand's Competitive Potential

Competition exists in all industries. But how do you get ahead of the competition when they

are working to do the same?

Download

TRAFFIC STATISTICS

Alexa Rank

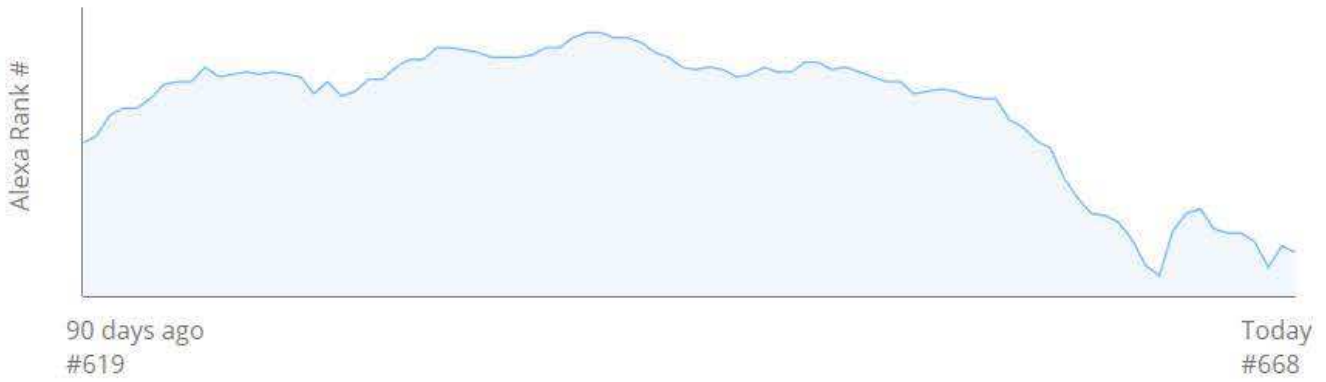
Estimate ?

This site ranks:

677

In global internet traffic and engagement over the past 90 days

~ 53



Country Alexa Rank

us United States

382

[Improving your Alexa Rank](#)

Audience Geography

Estimate ?

All visitors to this site in the past 30 days





Visitors by Country

us United States	43.5%
IN India	12.4%
ca Canada	3.8%
JP Japan	2.7%
GB United Kingdom	2.6%
DE Germany	2.4%
AU Australia	2.2%
NG Nigeria	1.7%
BR Brazil	1.6%
PK Pakistan	1.6%
More	

Site Metrics

Estimate [?](#)

All visitors to this site

Engagement

Past 90 Days

1.46 ↗ 1%
Daily Pageviews per Visitor

1:60 ↗ 1%
Daily Time on Site [?](#)

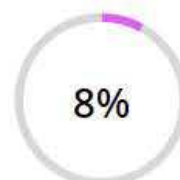
71.1% ↘ 1%
Bounce rate [?](#)

Traffic Sources

Past 30 Days

Search [?](#)

Social



Referral



Direct

Site Flow

Past 60 Days

Visited just before ?



Visited right after ?



18,064 Total Sites Linking In ?

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Source: <https://www.statista.com/statistics/272790/circulation-of-the-biggest-daily-newspapers-in-the-us/>

Circulation of select newspapers in the U.S. 2015

Published by [Statista Research Department](#), Jan 20, 2016

This statistic shows the average weekday individually paid print circulation of select newspapers in the United States as of September 2015. On an average weekday, Newsday, published by Cablevision Systems Corporation, sold 217 thousand copies. The leading newspaper on this list was the Wall Street Journal, which had a weekday paid print circulation of over 1.06 million. The New York Times Company, whose main newspaper was second on the list, generated [circulation revenue](#) of over 880 million U.S. dollars in 2016.

Average weekday individually paid print circulation of select newspapers in the United States as of September 2015

(in thousands)

	Circulation in thousands
Wall Street Journal	1,064
New York Times	528
Washington Post	330
Los Angeles Times	328
USA Today	299
Chicago Tribune	266
New York Post	245
New York Daily News	228
Newsday	217
Minneapolis Star-Tribune	184
Houston Chronicle	169
Arizona Republic	164
Denver Post	156
Cleveland Plain Dealer	153
Tampa Bay Times	141
Dallas Morning News	140
Boston Globe	140
Philadelphia Inquirer	138
Chicago Sun-Times	118
San Diego Union-Tribune	117
Newark Star-Ledger	114
Orange County Register	110

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41

	Circulation in thousands
Honolulu Star-Advertiser	94
Atlanta Journal-Constitution	92
Las Vegas Review-Journal	90

Showing entries 1 to 25 (25 entries in total)

[Additional Information](#)

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Source

[→ Show sources information](#)

[→ Show publisher information](#)

Release date

January 2016

Region

United States

Survey time period

as of September 2015

Special properties

copies bought by subscription or at newsstands

10-K 1 a2015form10-k.htm FORM 10-K

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K

Annual Report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

*For the fiscal year ended December 27, 2015**Commission file number 1-5837*

THE NEW YORK TIMES COMPANY
(Exact name of registrant as specified in its charter)

<i>New York</i>	<i>13-1102020</i>
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
<i>620 Eighth Avenue, New York, N.Y.</i>	<i>10018</i>
(Address of principal executive offices)	(Zip code)
Registrant's telephone number, including area code: <i>(212) 556-1234</i>	
Securities registered pursuant to Section 12(b) of the Act:	

Title of each class	Name of each exchange on which registered
<i>Class A Common Stock of \$.10 par value</i>	<i>New York Stock Exchange</i>
Securities registered pursuant to Section 12(g) of the Act: <i>Not Applicable</i>	

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate worldwide market value of Class A Common Stock held by non-affiliates, based on the closing price on June 26, 2015, the last business day of the registrant's most recently completed second quarter, as reported on the New York Stock Exchange, was approximately \$2.3 billion. As of such date, non-affiliates held 66,865 shares of Class B Common Stock. There is no active market for such stock.

The number of outstanding shares of each class of the registrant's common stock as of February 17, 2016 (exclusive of treasury shares), was as follows: 159,393,875 shares of Class A Common Stock and 816,635 shares of Class B Common Stock.

Documents incorporated by reference

Portions of the Proxy Statement relating to the registrant's 2016 Annual Meeting of Stockholders, to be held on May 4, 2016, are incorporated by reference into Part III of this report.

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42

content studio. In print, we re-launched The New York Times Magazine at the beginning of the year, and launched Men's Style, the first new print section in The Times in a decade.

The Company sold the New England Media Group in 2013 and the Regional Media Group and the About Group in 2012. The results of operations for these businesses have been presented as discontinued operations for all periods presented. See Note 13 of the Notes to the Consolidated Financial Statements for additional information regarding these discontinued operations.

PRODUCTS

The Company's principal business consists of distributing content generated by our newsroom through our print, web and mobile platforms. In addition, we distribute selected content on third-party platforms. The Times's print edition, a daily (Mon. - Sat.) and Sunday newspaper in the United States, commenced publication in 1851. The NYTimes.com website was launched in 1996. INYT, the international edition of The Times, is tailored and edited for global audiences. First published in 2013, INYT succeeded the International Herald Tribune, a leading daily newspaper that commenced publishing in Paris in 1887.

Our print newspapers are sold in the United States and around the world through individual home-delivery subscriptions, bulk subscriptions (by business, schools and other entities) and single-copy sales. All print home-delivery subscribers receive unlimited digital access.

Since 2011, we have charged consumers for content provided on our core news websites and mobile applications. Digital subscriptions can be purchased individually or through group corporate or group education subscriptions. Our metered model offers users free access to a set number of articles per month and then charges users for access to content beyond that limit. In addition, existing print and digital subscribers can, for an additional charge, access Times Insider, a suite of exclusive online content and features.

In addition to our core news websites and mobile applications, we have developed desktop and mobile applications that are tailored to a variety of interests, including cooking and our Crossword puzzle.

AUDIENCE AND CIRCULATION

Our content reaches a broad audience through our print, web and mobile platforms. As of December 27, 2015, we had over two million subscriptions in 195 countries to our print and digital products.

In the United States, The Times had the largest daily and Sunday circulation of all seven-day newspapers for the three-month period ended September 30, 2015, according to data collected by the Alliance for Audited Media ("AAM"), an independent agency that audits circulation of most U.S. newspapers and magazines.

For the fiscal year ended December 27, 2015, The Times's average print circulation (which includes paid and qualified circulation of the newspaper in print) was approximately 603,700 for weekday (Monday to Friday) and 1,127,200 for Sunday. (Under AAM's reporting guidance, qualified circulation represents copies available for individual consumers that are either non-paid or paid by someone other than the individual, such as copies delivered to schools and colleges and copies purchased by businesses for free distribution.)

Internationally, average circulation for INYT (which includes paid circulation of the newspaper in print and electronic replica editions) for the fiscal years ended December 27, 2015, and December 28, 2014, was approximately 214,700 (estimated) and 219,500, respectively. These figures follow the guidance of Office de Justification de la Diffusion, an agency based in Paris and a member of the International Federation of Audit Bureaux of Circulations that audits the circulation of most newspapers and magazines in France. The final 2015 figure will not be available until April 2016.

Paid subscribers to digital-only subscription packages, e-readers and replica editions totaled approximately 1,094,000 as of December 27, 2015, an increase of approximately 20% compared with December 28, 2014. This amount includes estimated paid subscribers through our group corporate and group education subscriptions (which collectively represent approximately 7% of total paid digital subscribers) and home-delivery subscribers who also subscribe to Times Insider (which represent approximately 2% of total paid digital subscribers). The number of paid subscribers through group subscriptions is derived using the value of the relevant contract and a discounted basic subscription rate. The actual number of users who have access to our products through group subscriptions is substantially higher.

According to comScore Media Metrix, an online audience measurement service, in 2015, NYTimes.com had a monthly average of approximately 62 million unique visitors in the United States on either desktop/laptop computers or mobile devices. In addition, NYTimes.com had a monthly average of approximately 13 million unique visitors on desktop/laptop computers outside the United States.

ADVERTISING

We have a comprehensive portfolio of advertising products and services that we provide across print, web and mobile platforms.

Our advertising revenue is divided into three main categories:

Display Advertising

Display advertising is principally from advertisers promoting products, services or brands, such as financial institutions, movie studios, department stores, American and international fashion and technology. In print, column-inch ads are priced according to established rates, with premiums for color and positioning. The Times had the largest market share in 2015 in print advertising revenue among a national newspaper set that consists of USA Today, The Wall Street Journal and The Times, according to MediaRadar, an independent agency that measures advertising sales volume and estimates advertising revenue.

On our web and mobile platforms, display advertising comprises banners, video, rich media and other interactive ads. Display advertising also includes branded content on The Times's platforms. Branded content is longer form marketing content that is distinct from the Times's editorial content. In 2015, display advertising (print and digital) represented approximately 91% of advertising revenues.

Classified Advertising

Classified advertising includes line ads sold in the major categories of real estate, help wanted, automotive and other. In print, classified advertisers pay on a per-line basis. On our web and mobile platforms, classified advertisers pay on either a per-listing basis for bundled listing packages, or as an add-on to their print ad. In 2015, classified advertising (print and digital) represented approximately 5% of advertising revenues.

Other Advertising

Other advertising primarily includes creative services fees associated with our branded content studio; revenues from preprinted advertising, also known as free-standing inserts; revenues generated from branded bags in which our newspapers are delivered; and advertising revenues from our News Services business. In 2015, other advertising (print and digital) represented approximately 4% of our advertising revenues.

Our business is affected in part by seasonal patterns in advertising, with generally higher advertising volume in the fourth quarter due to holiday advertising.

COMPETITION

Our print, web and mobile products compete for advertising and consumers with other media in their respective markets, including paid and free newspapers, broadcast, satellite and cable television, broadcast and satellite radio, magazines, other forms of media and direct marketing. Competition for advertising is generally based upon audience levels and demographics, advertising rates, service, targeting capabilities and advertising results, while competition for consumer revenue and readership is generally based upon platform, format, content, quality, service, timeliness and price.

The Times competes for advertising and circulation primarily with national newspapers such as The Wall Street Journal and USA Today; newspapers of general circulation in New York City and its suburbs; other daily and weekly newspapers and television stations and networks in markets in which The Times is circulated; and some national news and lifestyle magazines. The international print edition competes with international sources of English-language news, including The Wall Street Journal's European and Asian Editions, the Financial Times, Time, Bloomberg Business Week and The Economist.

As our industry continues to experience a shift from print to digital media, our products face competition for audience and advertising from a wide variety of digital alternatives, such as news and other information websites and mobile applications, news aggregation sites, sites that cover niche content, social media platforms, digital advertising networks and exchanges, real-time bidding and other programmatic buying channels and other new forms of media.



ABOUT US

About Us

BY SUNHERALD ADMINISTRATOR

SEPTEMBER 22, 2015 10:25 AM , UPDATED JANUARY 24, 2020 11:38 AM

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03:33

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SUN HERALD

205 DeBuys Road**Gulfport, MS 39507****(228) 896-2100****(800) 346-5022**

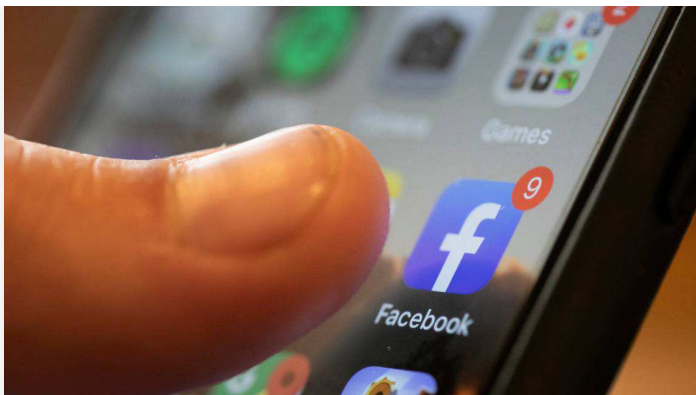
Mission Statement: The Sun Herald is South Mississippi's newspaper. As recognized with the 2006 Pulitzer Gold Medal for Public Service, the Sun Herald has dedicated itself to recording the history and telling the stories of the diverse communities comprising the Mississippi Gulf Coast for more than 125 years. As the flagship of a multi-media company, the Sun Herald reaches not only 137,000 print readers each week, but more than 263,000 South Mississippians read the Sun Herald or one of its sister publications in print or online every week. Through its web site (SunHerald.com), the Sun Herald shares the news of South Mississippi with more than a million unique visitors every month.

Founded: Launched as a weekly newspaper in Biloxi in 1884, the Herald expanded to the new city of Gulfport in 1905 and, in 1934, became the afternoon Daily Herald. In 1968, the Saturday edition was moved from evening to morning publication to make room for a new Sunday edition. In 1973, the newspaper's publisher launched a new morning newspaper, the South Mississippi Sun. In 1985, the morning Sun and afternoon Daily Herald were merged into an all-day Sun Herald, which one year later dropped the evening edition and became a 7-day morning newspaper. That same year, the newspaper became part of the Knight Ridder newspaper family, as part of Knight Ridder's purchase of the State Record Company of Columbia, SC, which had previously purchased the Daily Herald from the Wilkes family in 1968. With McClatchy Newspaper's purchase of Knight Ridder in 2006, the Sun Herald and its print and online readers became part of the McClatchy multi-media family.

Key Executives:

Blake Kaplan, General Manager and Executive Editor

[View Personnel Directory](#)**General Hiring Contact:** Human Resources Manager Natalie Piner at 228-896-2432 or e-mailnpiner@sunherald.com**Cao v. Apple
Apple Trial Exhibit****43**



NATIONAL

Teacher out of job after commenting on disturbing Facebook post, Georgia school says

BY TANASIA KENNEY

JULY 24, 2020 02:37 PM , UPDATED 1 HOUR 3 MINUTES AGO



A Georgia special education teacher is out of work after comments he made under a Facebook video showing an adult kneeling on a toddler's neck sparked backlash across social media.

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COVID-19 hits children's theater camp in Gulfport. What are implications for schools?

UPDATED 7 HOURS 56 MINUTES AGO

Six Coast restaurants cited for health dept. violations, four for the same reason

UPDATED 9 HOURS 5 MINUTES AGO

COVID-19 may force the owner of The Promenade to file for bankruptcy. What we know

UPDATED JULY 23, 2020 07:18 AM

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BRIAN ALLEE-WALSH



CORONAVIRUS

What will the Superdome look like for Saints games during COVID-19? Let's discuss.

JULY 24, 2020 3:41 PM

MS Governor Tate Reeves issues statewide COVID-19 limits on bars, social gatherings

UPDATED 1 HOUR 7 MINUTES AGO



EDUCATION

Harrison County changes traditional school opening plan after upset parents speak out

JULY 24, 2020 3:36 PM



HEALTH NEWS

Blue Jays to play in Buffalo minor league park amid pandemic

JULY 24, 2020 3:15 PM



NATIONAL

Homeowner digs up live World War II artillery while doing yard work, Chicago cops say

JULY 24, 2020 3:08 PM



JACKSON COUNTY

Pascagoula resident identified as man who died in a motel fire in Jackson County, authorities say

UPDATED 1 HOUR 49 MINUTES AGO

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 BILOXI SUN HERALD APP →

 VIEW NEWSLETTERS →

Market: The Mississippi Coast market includes the Biloxi-Gulfport-Pascagoula MSA and the Biloxi-Gulfport DMA. The six-county region includes 460,000 people in 15 incorporated cities and more than 25 census designated places. The area is known for its seafood, shipbuilding and tourism. Mississippi is the nation's third largest gaming market and the Mississippi Coast is home to 11 major casino resort properties. It is also home to Keesler Air Force Base, the electronic and cyberwarfare training center of the U.S. Air Force and the headquarters of the famed "Hurricane Hunters"; the US Naval Construction Battalion Center, home to the Atlantic Fleet Seabees; NASA's John C. Stennis Space Center; and several other major federal facilities.

Circulation Area: 6 counties in South Mississippi.

Site: Home delivery is available throughout Harrison, Hancock and west Jackson counties, along with southern Stone County. In addition, single copy sales reach north into Forrest County and extend from the Louisiana to the Alabama border. Additionally, the newspaper's E-edition serves readers in more remote areas of South Mississippi.

Website: <http://www.sunherald.com>

Online audience: 5 million page views per month; 500,000 unique monthly visitors.

Combined audience (print and online): 263,000 weekly

Pulitzer Prizes: 2006 Gold Medal for Public Service Journalism.

McClatchy News Ethics Policies

[These ethical guidelines for McClatchy newsrooms](#) outline the values and standards that guide our journalism. No policy can address every conflict that may arise in our day-to-day work. It's the responsibility of each McClatchy journalist to use good judgment and confer with news managers if the answer to an ethical question is not completely clear.

[COMMENTS](#) ▼

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TRENDING STORIES

'Terrified' MS parents beg Reeves, Dobbs to re-think opening schools during COVID-19

UPDATED JULY 23, 2020 07:21 AM

'The spread of the virus is bad.' Reeves has message for COVID-19 cynics: You're wrong

JULY 22, 2020 5:27 PM



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COMPANY TOWN

Janice Min to step down from Hollywood Reporter after remaking the trade publication



Janice Min in her Los Angeles office in 2010, when she joined the Hollywood Reporter. (Anne Cusack / Los Angeles Times)

By RYAN FAUGHNDER | STAFF WRITER

FEB. 6, 2017 | 2:05 PM



Cao v. Apple
Apple Trial Exhibit
44

Janice Min, the editor who transformed the Hollywood Reporter from a struggling trade publication into a glossy Tinseltown magazine, is moving on after nearly seven years.

Min, 47, who runs both the Hollywood Reporter and its music-focused sister trade Billboard, will leave at the end of this month for a new post at the publications' parent company Eldridge Industries to help guide the firm's investments in media, including potential acquisitions.

The move, which has been in the works for about two months, was announced to the Hollywood Reporter's more than 100 staffers Monday morning at an all-hands meeting. Matthew Belloni, the magazine's executive editor, will become editorial director, overseeing the publication's web, video, print and live events businesses.

Billboard will be run by Mike Bruno, who previously served as the music magazine's senior vice president for content.

Min joined the trade publication in 2010 when it was getting hammered with competition from online outlets and the decline of print advertising, after decades covering the details of film and TV industry news. The former US Weekly editor transformed the Hollywood Reporter by eliminating its weekday print edition in favor of a slick weekly magazine with a big photo budget.

The Hollywood Reporter says it has a print circulation of 74,000. It draws 16 million online visitors a month, according to comScore.

The management change has reignited speculation about a possible sale of the Hollywood Reporter and Billboard, though Eldridge and its deep-pocketed chairman Todd Boehly have said they aren't looking for a buyer. Eldridge recently secured a deal to sell Dick Clark Productions to Dalian Wanda Group for \$1 billion.

However, Boehly, a Dodgers co-owner and former Guggenheim president, is said to be interested in adding more media properties to his portfolio, including cable networks, and was at one point said to be interested in buying Hulu. The Hollywood Reporter-Billboard Media Group [in December acquired music publication](#) Spin, hip-hop magazine Vibe and indie rock blog Stereogum.

Belloni, a former entertainment lawyer who joined the Hollywood Reporter in 2006, said Min had decided to take on a new role after years of overseeing two print magazines and 24-hour news operations.

Belloni is known for his expertise in the business side of entertainment, while Min had valuable cachet with celebrities and other movers and shakers. But Belloni said he does not foresee major changes to the magazine's strategy of covering entertainment.

"The nice thing is that Janice and I have similar sensibilities," Belloni, 41, told The Times. "We have a formula that works for us, and I don't anticipate major changes to that formula."

Min's last official duty as co-president and chief creative officer of The Hollywood Reporter-Billboard Media Group is hosting Monday night's gala for Oscar nominees, expected to draw A-listers including Justin Timberlake, Emma Stone and Mel Gibson.

"I am confident the ethos of this place will go on and I will always be a phone call or email away," Min said in a note to staff. "Just not in person always, and not running those meetings anymore."

ryan.faughnder@latimes.com

[@rfaughnder](#)

COMPANY TOWN



From the Emmys to the Oscars.

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Ryan Faughnder

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Ryan Faughnder is a film business reporter for the Los Angeles Times' Company Town, covering the major Hollywood studios, including Walt Disney Co. He previously wrote for the Los Angeles Business Journal and Bloomberg News. He holds a master's in journalism from USC's Annenberg School and a bachelor's in English from UC Santa Barbara.

MORE FROM THE LOS ANGELES TIMES

COMPANY TOWN

Harry and Meghan sue unnamed paparazzi for taking photos of Archie at home

July 23, 2020

COMPANY TOWN

SAG-AFTRA ratifies film and TV contract despite opposition from Time's Up

July 23, 2020

COMPANY TOWN

Disney delays 'Mulan' indefinitely. AMC pushes back reopening again

July 23, 2020

COMPANY TOWN

TikTok announces \$200-million fund to help video creators

July 23, 2020

Around the Web

Ads by Revcontent



How Dogs Cry For Help: 3 Warning Signs Your Dog Is Crying For Help

DR. MARTY



3 Ways Your Cat Asks for Help

DR. MARTY



Tinnitus? (Ear Ringing) Do This Immediately to End It!

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SENIOR SAVINGS - LIFESTYLE



Costco Workers Reveal 14 Things They'd Never Buy

BETTERBE



20 Rare Photos of What Life Was Like Back in the '70s

PAST FACTORY



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'I don't believe it': Huntington Beach a symbol of mask resistance as doubters abound

CALIFORNIA

Sierra Club calls out the racism of John Muir

DODGERS

Plaschke: Dodgers fans, welcome to the Mookie Betts era

WORLD & NATION

Out of Portland tear gas, an apparition emerges, capturing the imagination of protesters

POLITICS

What happens to the U.S. economy if the \$600 federal unemployment benefit ends?

COMPANY TOWN >

AT&T calls launch of streamer HBO Max a success despite business challenges posed by COVID-19

COMPANY TOWN

'Walking Dead' producers hit roadblock in profit fight with AMC

July 22, 2020

COMPANY TOWN

Clint Eastwood calls out fake cannabis product endorsements

July 22, 2020

COMPANY TOWN

Watch parties and K-pop. How San Mateo streamer Rakuten Viki is growing in a pandemic

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HEARST
B A Y A R E A

MEDIA KIT 2020

Cao v. Apple
Apple Trial Exhibit
45

MISSION

Hearst Bay Area, Northern California's largest news media and services group, connects businesses large and small with their target audience, through a comprehensive suite of multi-touch solutions unmatched by local competitors.

SAN FRANCISCO BAY AREA

MARKET OVERVIEW

As one of the most sought-after markets in the nation, the San Francisco Bay Area and its population are consistent leaders in key demographics that matter most.



AFFLUENT CONSUMERS

Collectively have more than **\$371 billion** in effective buying income. Among all 210 U.S. DMAs, San Francisco is:

- # **1** In the number of owner-occupied households valued at \$1 million or more
- # **1** In the percentage of households with incomes of \$500,000 or more



TALENTED & GROWING WORK-FORCE

Employment **grew by 66,800 jobs**, ranking San Francisco fifth behind Dallas, New York, Los Angeles and Houston. SF grew more jobs than 43 individual states. (Oct 2018-Oct 2019)

- # **1** Percentage of persons employed in computer or mathematical occupations
- # **4** Percentage of persons employed in arts, entertainment and sports occupations.
- # **2** Percentage of persons employed in business financial and operations occupations
- # **3** Percentage of persons employed in management occupations

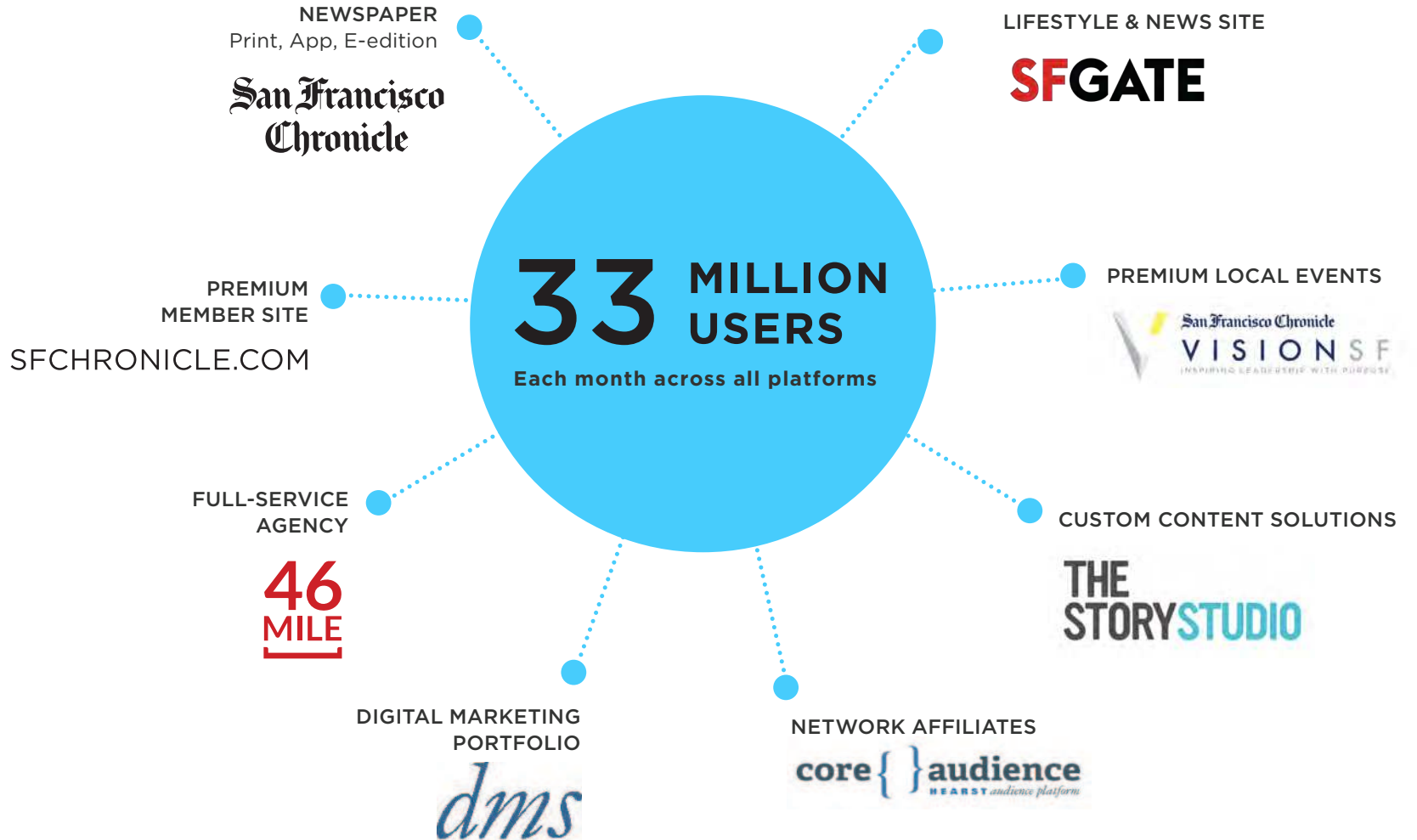


CUTTING-EDGE ECONOMY

In 2018, \$132 billion in venture capital was invested in the U.S., with 49.2% going to the Bay Area. The Bay Area saw more activity than New York, Boston, and Seattle combined.

\$64 BILLION in capital invested (39% of total U.S.vc)

OUR ECOSYSTEM OF SOLUTIONS



AUDIENCE OVERVIEW

UNMATCHED REACH

The Chronicle and SFGATE reach the Bay Area's most desirable prospects.

WEEKLY AUDIENCE

1.8 MILLION
unduplicated
audience SF DMA

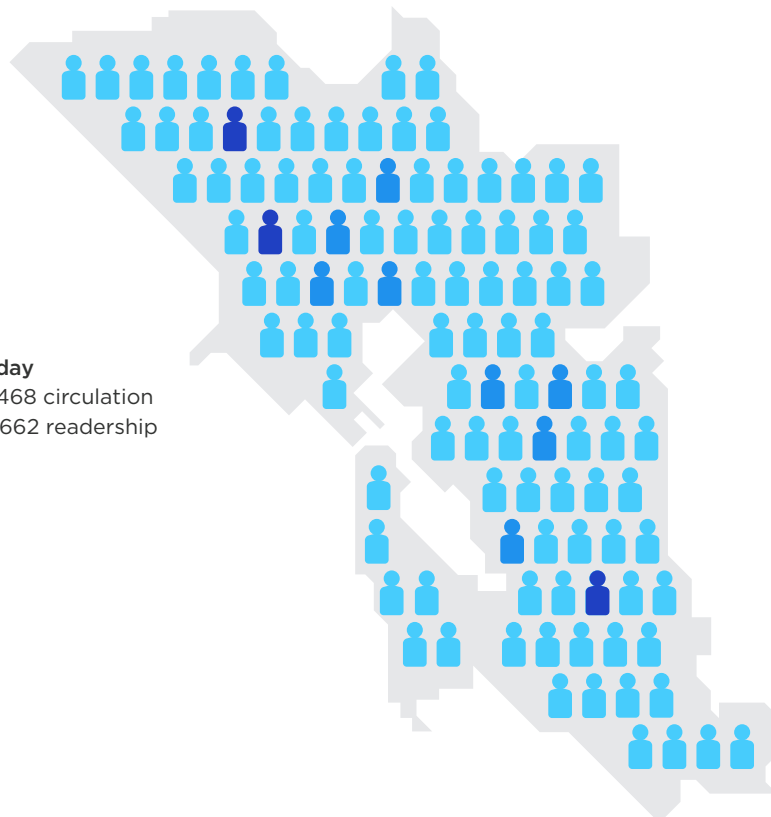
1.06 MILLION
SF Chronicle in print

Daily
173,514 circulation
460,529 readership

Sunday
210,468 circulation
607,662 readership

983,798
SFGATE.com

306,535
sfchronicle.com



MEDIAN HOUSEHOLD INCOME

\$120,468

Peak Earners & Buyers
56%

Employed White Collar Professionals
62%

Home Owners
48%

College Degree+
54%

SCALE OVERVIEW

BEYOND THE BAY REACH

The Chronicle and SFGATE reach a national and global audience.

**PRINT**

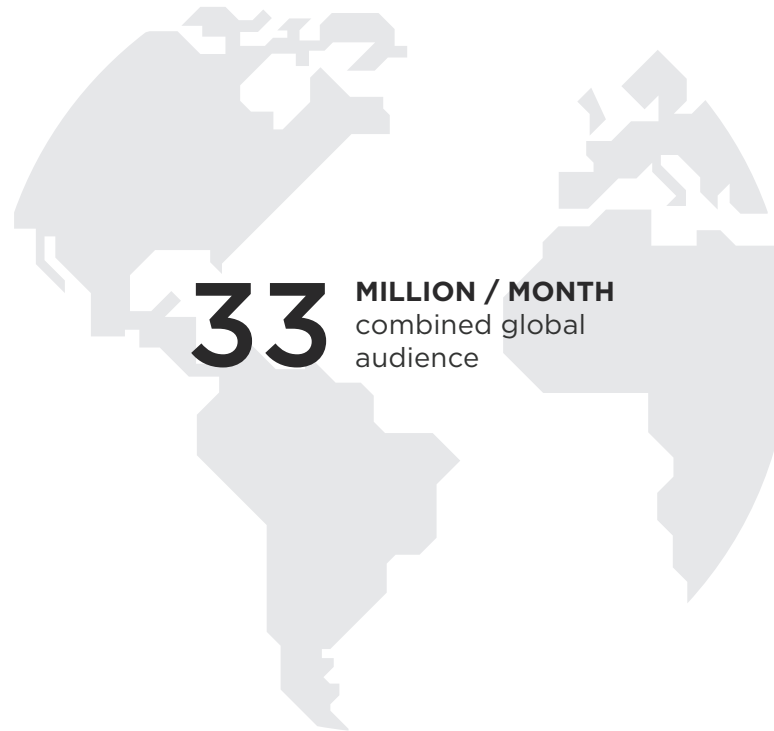
739,500
Readers / Month
unduplicated with websites

**SOCIAL****SFGATE**

477,900 Twitter Followers
600,100 Facebook Fans
110,000 Instagram Fans

SFCHRONICLE

188,900 Twitter Followers
222,400 Facebook Fans
94,000 Instagram Fans

**DIGITAL**

71% Mobile / 29% Desktop

SFGATE - SFDMA

59.6 Million Pageviews
3.0 Million Unique Visitors

SFGATE - GLOBAL

136.1 Million Pageviews
27.2 Million Unique Visitors

SFCHRONICLE - SFDMA

6.5 Million Pageviews
1.6 Million Unique Visitors

SFCHRONICLE - GLOBAL

14.9 Million Pageviews
5.4 Million Unique Visitors

EVENTS & PARTNERSHIPS

Thousands of thought
leaders and consumers

SAN FRANCISCO CHRONICLE

The Chronicle is world-class journalism, San Francisco style. With name-brand voices and a keen editorial eye, The Chronicle is an authority that still surprises.

1
San Francisco Bay
Area Newspaper

3
San Francisco Bay
Area Newspaper
Website

6 Pulitzer Prizes for
Journalistic Excellence

SAN FRANCISCO CHRONICLE

PRINT PRODUCT

The San Francisco Chronicle is read by more people each day than any other news source in Northern California. Available in print, digital e-edition replica and app.

CORE SECTIONS

- + Main News
- + Bay Area
- + Business Report
- + Sporting Green
- + Datebook

WEEKDAY SECTIONS

- + Datebook, Weekend (Thurs)
- + New Homes (Friday)

MONTHLY SECTIONS

- + SFis Homes

SUNDAY SECTIONS

- + Main News
- + Bay Area
- + Business
- + Sporting Green
- + Datebook (T)
- + Food & Wine
- + Real Estate (T)
- + Open Homes (T)
- + Culture Desk
- + Travel
- + Comics
- + Insight (+ Books) (T)

SPECIAL SECTIONS/MAGAZINES

- + Destinations
- + Sports (Playoffs, Super Bowl, etc)
- + Chronicle Wine Competition
- + Chronicle International Auto Show
- + Top 100 Restaurants
- + And More

(T) = Tabloid



Source: Online Audience: Comscore: Oct '16-Mar '17

SAN FRANCISCO CHRONICLE

DIGITAL PRODUCT

The San Francisco Chronicle's premium website and digital products are built on a foundation focusing on the most engaging ways to connect our best, enterprise, service-related journalism with our engaged readers.

COVERAGE

- + Coverage on City Hall, the tech industry, real estate, local sports teams and much more.
- + Interactive expert guides on everything from Bay Area hikes to each election's ballot initiatives.
- + Datebook curated events calendar to help plan nights and weekends.
- + Bookmarkable trackers including the latest car break-ins, earthquakes, fires and more across the Bay Area.
- + Android and iOS apps, with custom push notifications

POPULAR SECTIONS

BY ENGAGEMENT

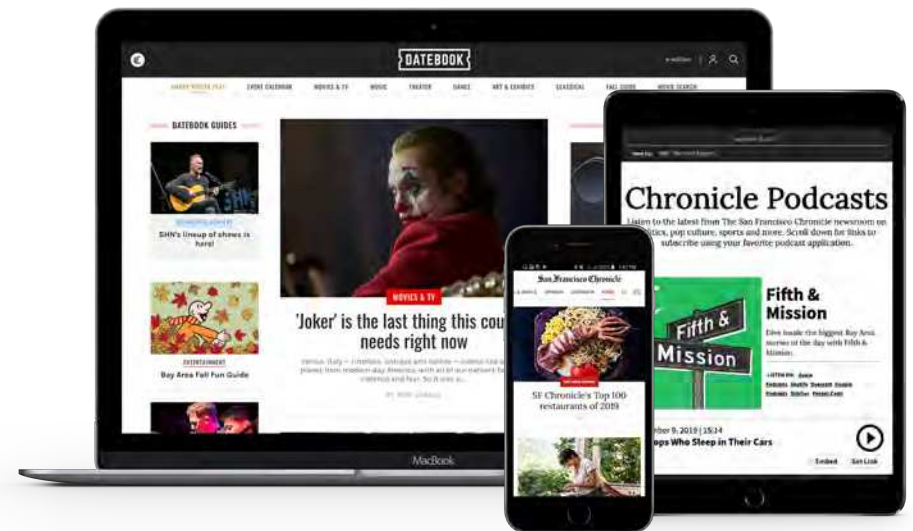
- + News
- + Sports
- + Home Page
- + Food
- + Business
- + Entertainment
- + Opinion
- + Travel
- + Living
- + Chronicle Vault

NEWSLETTERS (15+)

- + Bay Briefing
- + Morning Fix
- + Drinking with Esther
- + Bite Curious
- + Political Punch
- + And More

PODCASTS (11+)

- + 5th & Mission
- + Not Your Century
- + The Big Event
- + San Francisco City Insider
- + Warriors Off Court
- + And More

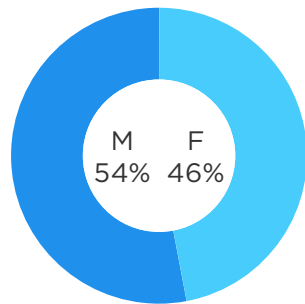


SAN FRANCISCO CHRONICLE

AUDIENCE

The go-to resource for news and lifestyle content in the Bay Area and beyond delivering an affluent, educated audience.

GENDER



AGE

18-24	9%
25-44	30%
45-54	15%
55+	47%

Median Age

53

DWELLING



Single family home

55%

HOME OWNERSHIP

Home Owner	52%
Renter	48%
Second Home Owner	14%

Median Home Value

\$1,049,224

FAMILY STRUCTURE



Married
47%

No Children
79%

EDUCATION

High school or less	20%
Some college	30%
College graduate	25%
Post graduate	25%

College Grad+

50%

EMPLOYMENT



Employed
6%

Whitecollar
81%

HOUSEHOLD INCOME

\$50,000 or Less	22%
\$50,000- \$75,000	13%
\$76,000- \$99,000	14%
\$100,000+	51%

Median HHI

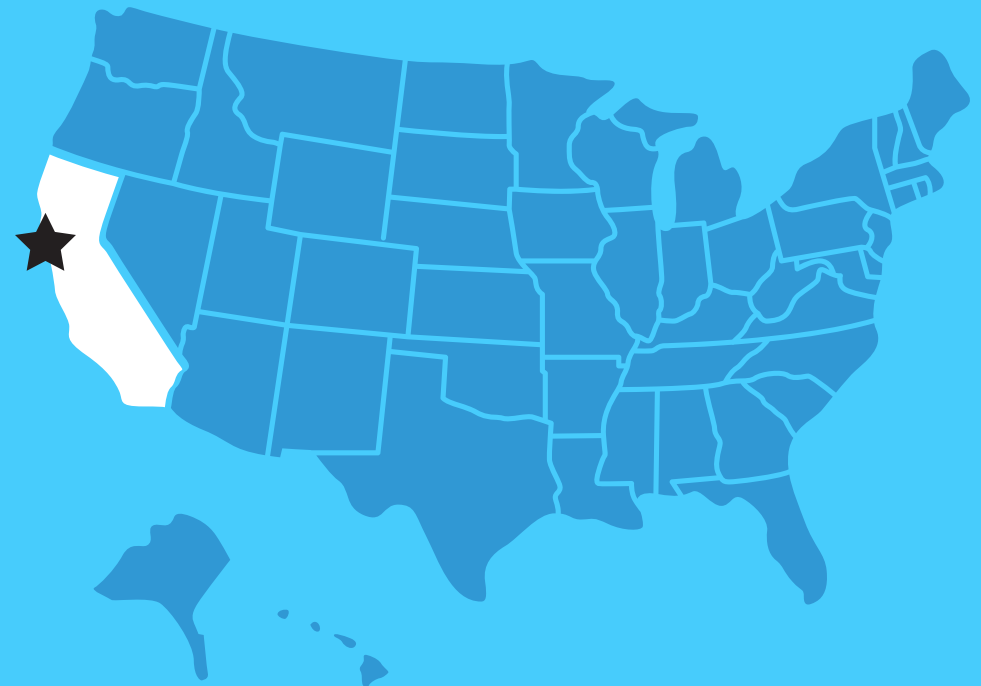
\$103,622

SFGATE

SFGATE provides a 360° view of San Francisco, wildly reflective of right now. Provocative, energetic, unapologetic, the GATE is in constant conversation with the world's most eclectic city.

1
San Francisco Bay Area Newspaper website

7
U.S.-based Newspaper Website



SFGATE

PRODUCT

SFGATE is the most-read local news site, covering the conversation in the Bay Area and curating relevant national news, with an informal and approachable voice that creates a must-read experience for anyone connected to the Bay Area.

136.1 MILLION PAGEVIEWS PER MONTH

Average page depth: **3.16**

157.4 MILLION MINUTES SPENT ON THE SITE PER MONTH

Average time spent: **3.7 MINS**

SECTIONS MAIN CHANNELS

- + Home Page
- + News
- + Business
- + Entertainment
- + Food
- + Sports
- + Classifieds
- + Real Estate
- + Living
- + Travel

POPULAR VERTICAL CONTENT BY ENGAGEMENT

- + Cost of Living
- + Real Estate Porn
- + Subculture
- + Sports + Culture intersection
- + Bay Area Bars, Eating Out and Chefs Take
- + Getting Around - Muni, Roadways, etc.
- + Travel - Deals and Experiences

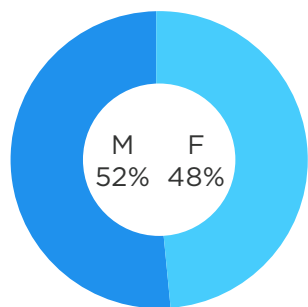


SFGATE

AUDIENCE

The top ranked site for in-the-moment and in-demand news throughout the Bay Area for an affluent, intelligent and engaged audience.

GENDER



AGE

18-24	9%
25-44	44%
45-54	15%
55+	32%

Median Age
40.4

DWELLING



Single family home
48%

HOME OWNERSHIP

Home Owner	47%
Renter	53%
Second Home or Investment Property	12%

Median Home Value
\$1,018,259

FAMILY STRUCTURE



Married
51%

No Children
69%

EDUCATION

High school or less	15%
Some college	25%
College graduate	31%
Post graduate	28%

College Grad+
59%

EMPLOYMENT



Employed
83%

White collar
89%

HOUSEHOLD INCOME

\$50,000 or Less	9%
\$50,000- \$75,000	13%
\$76,000- \$99,000	11%
\$100,000+	68%

Median HHI
\$142,438

CAPABILITIES

PRINT CAPABILITIES

PRINT PRODUCTS

The Chronicle provides a wide variety of daily and weekly sections and niche products that attract loyal readers throughout the Bay Area. Standard modular ad sizes available in all daily and weekday sections.



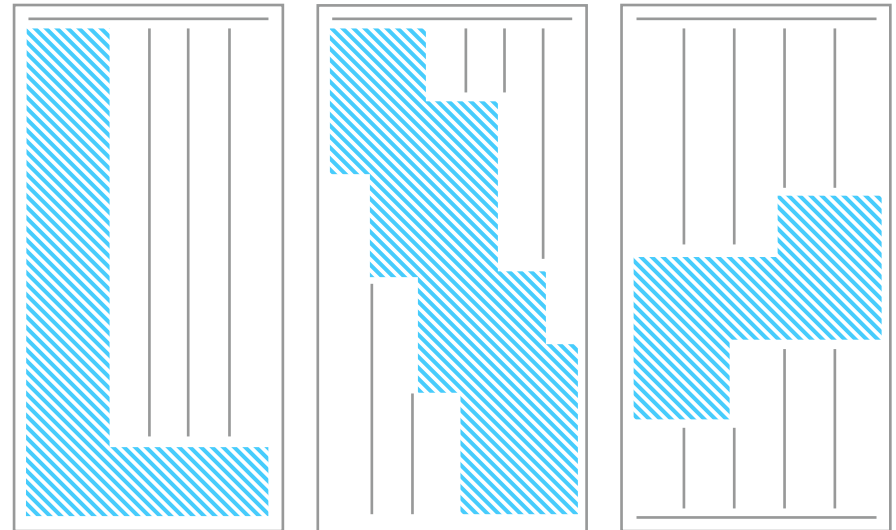
UNIQUE AD POSITIONS

Grab attention with creative shapes

Think beyond standard modular ROP ad sizes and give your message maximum visibility with a layout that's truly memorable.

HEAD-TURNING ADSCAPE FORMATS INCLUDE:

- + U-Shape
- + L-Shape
- + Bookends
- + Widget
- + Skybox
- + Shadow
- + Stairstep
- + Checkerboard
- + Upside Down T-Shape
- + And more



PRINT CAPABILITIES

PRINT PRODUCTS



FRONT PAGE/ SECTION FRONT ADS

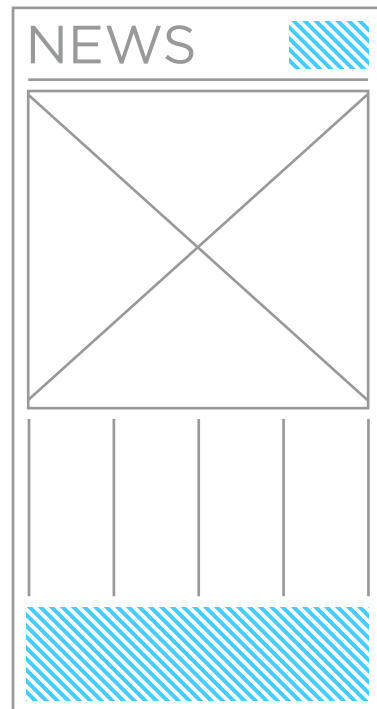
Capture audience attention immediately

Premium placements increase the visibility of your ad and ensure that it's seen by the customers you want everyday of the week.

Main News Front Page Strip:
9.75" x 2"

All other Broadsheet Fronts:
9.75" x 2.79"

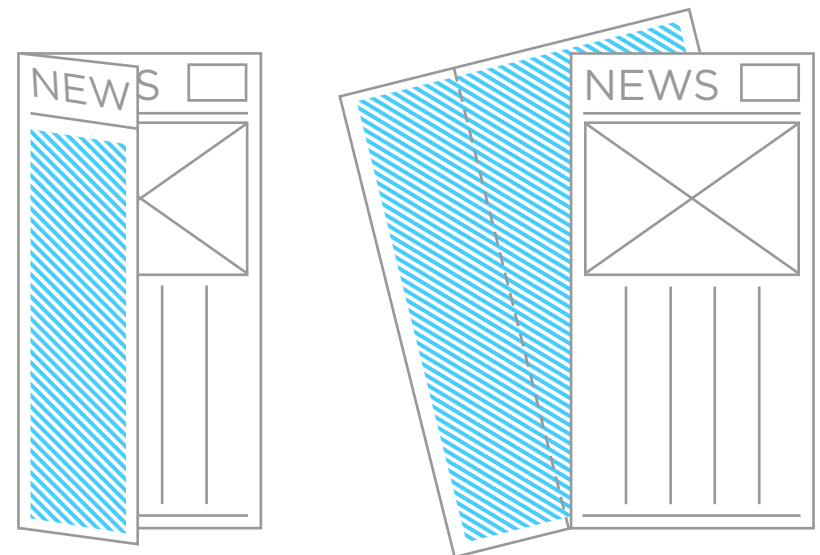
Skybox: 1.486" x 1.25"



SPADEAS

Gain extra attention in a premium position

Printed on both sides, covering half of a section's front page and all of the back, a full-color, full-size spadea delivers high impact brand messaging allowing for visually.



PRINT CAPABILITIES

PRINT PRODUCTS



PULL-OUT

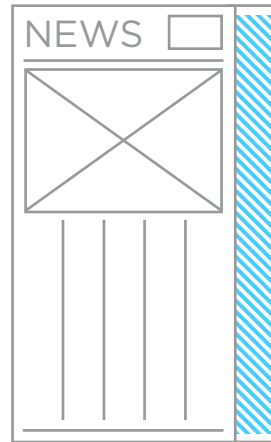
Colorful sections with an extended shelf life

EXTENDED PULL-OUTS

Even more space to tell your story in four broadsheet pages.

The Overhang: .88" x 20" (non-bleed)

Print area, image size: 11.25" x 20"

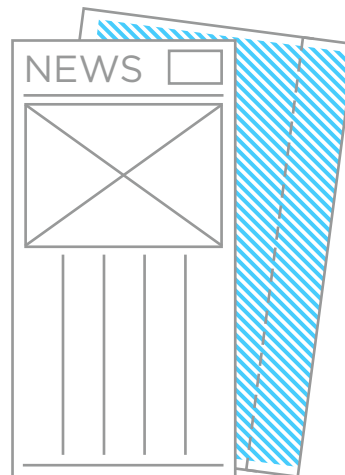


EXTRA-WIDE ROP PAGE

Stand out from the pack with an oversized broadsheet page.

VERTICAL BANNER

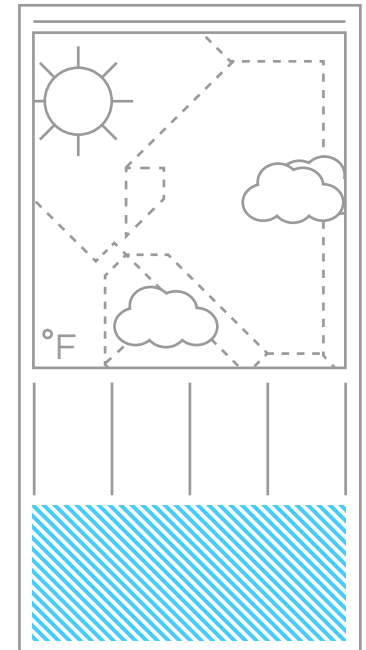
Put your message on the tab that extends from the newspaper and immediately catch the reader's eye.



WEATHER PAGE

Unique content sponsorship opportunity

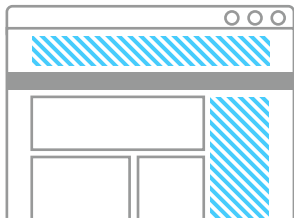
Premium placement and full color increase the visibility of your ad and ensure that it is seen by customers as they check the weather.



DIGITAL CAPABILITIES

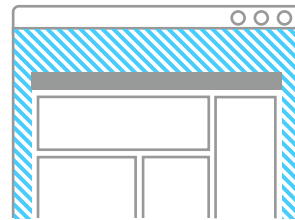
DIGITAL PRODUCTS

As the number one regional media brand, we are powerful enough to bring you a mass audience while flexible enough to feature unique solutions for targeting your audience.



DISPLAY ADS

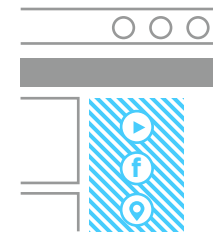
SFChronicle.com and SFGATE offers various IAB standard and rising star units across platforms. Campaigns are automatically optimized in-flight for performance.



HIGH IMPACT RICH MEDIA

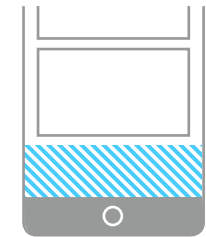
We provide rich media solutions that are effective and efficient in getting readers' attention. Placements include:

- + Wrap/Takeover
- + Roadblock
- + Synched Ad Units
- + Overlay
- + And more



INTERACTIVE CONTENT MODULE (ICM)

These custom units offer the ability to feature a variety of creative assets, such as Facebook share, video player, slideshow, email sign-up, store locator, and more, encouraging deeper engagement with target audiences.



MOBILE

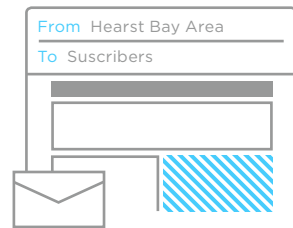
Over 50% of the SFChronicle.com and SFGATE audience accesses our responsive websites via smartphones and tablets. High-impact and fixed units available.

DIGITAL CAPABILITIES

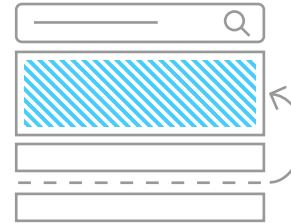
DIGITAL PRODUCTS

**EMAIL MARKETING**

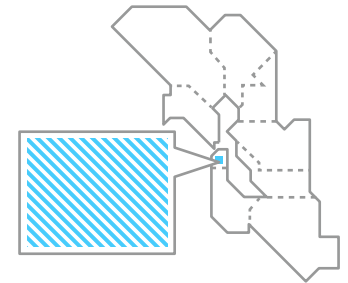
Pick a target audience, or a geographic area, and we will provide a qualified list of email addresses that you can use to market your business. We'll help you send newsletters, notices of new products, special offers, sales, and more to a group of consumers that fit your target market. Impression-based packages available.

**NEWSLETTER SPONSORSHIP**

Own one of The Chronicle's or SFGATE's editorially-driven email newsletters with 100% SOV. Impression-based sponsorships available.

**SEARCH**

We'll create and implement a strategy to get your business in front of customers where they're searching online, when they're searching. Take advantage of the full spectrum of search-related opportunities like Search Engine Optimization (SEO), Search Engine Marketing (SEM), search-optimized content, and more.

**TARGETING**

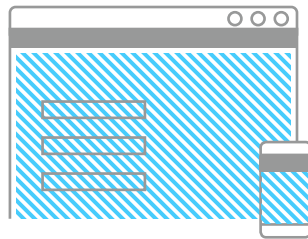
Increase the effectiveness of your campaigns by targeting consumers based on online behavior or by geo-fencing their location (specific zones, cities or neighborhoods).

DIGITAL CAPABILITIES

DIGITAL PRODUCTS

**SOCIAL MEDIA**

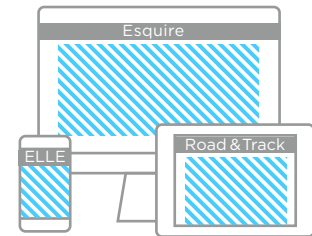
We'll create and execute an A-Z strategy garnering the most engagement and new followers for your social media platforms.

**PROGRAMMATIC**

We use individual data elements, such as location, contextual content, keyword search, browsing behavior, and more to create a custom audience for your campaign, optimizing along the way.

**CLASSIFIED ADS**

SFGATE offers a number of classified advertising solutions providing the opportunity for you to post traditional classified ads in print and online, generating new leads and more. Real Estate, Recruitment, and Auto opportunities available.

**HEARST PREMIUM NETWORK**

Our proprietary Core Audience solution gives your brand the ability to drive efficient reach and results across the most iconic publishing brands in the world.

CREATIVE CAPABILITIES

THE STORY STUDIO

Content and marketing solutions for our brand partners to connect on a personal level with their target audience online, in print, through video and/or audio.

THE STORYSTUDIO

WHO WE ARE:

We are content creators

We tell your stories and create content that matters.

We are data geeks and are lead by research

We use strategic insights to connect with your consumers.

Turn-Key Content Marketing

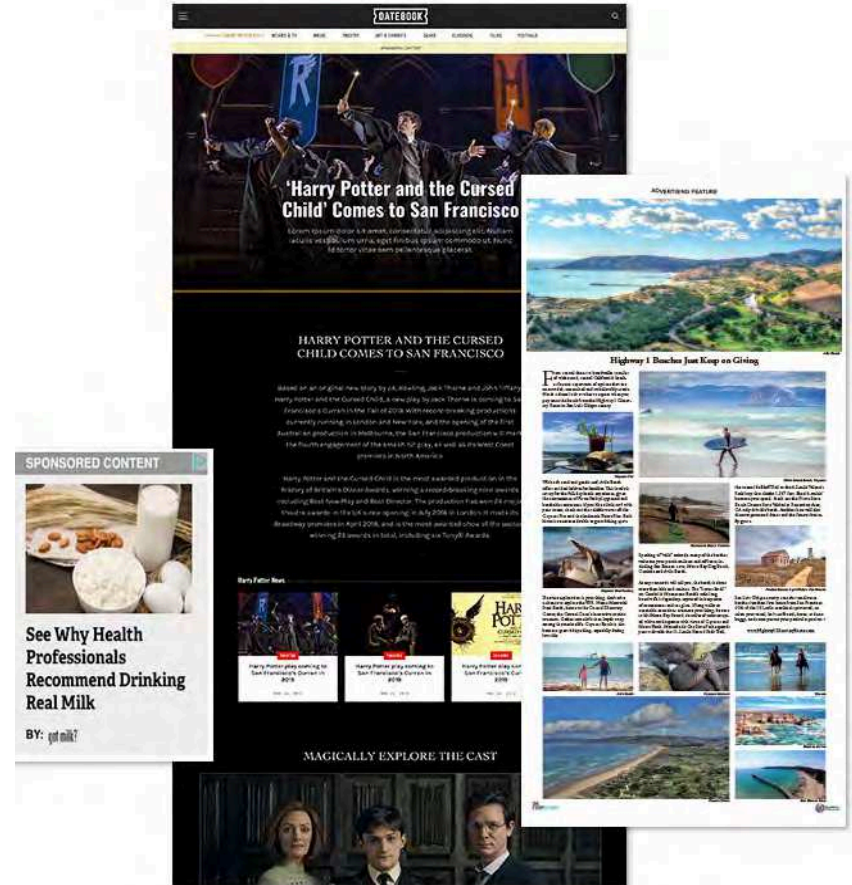
We create, distribute, promote, provide analytics, and optimize.

SAMPLE CLIENTELE:

AirBnB, CORT Furniture, PG&E, MGM Resorts, Monterey Tourism, Silicon Valley Community Foundation

CONTACT:

Alison Pfaff
alison@hearststorystudio.com



CREATIVE CAPABILITIES

46MILE

A full-service integrated marketing and media agency dedicated to bringing Madison Avenue expertise and resources to clients at the regional level. As the number one regional media brand, we are powerful enough to bring you a mass audience and flexible enough to feature unique solutions for niche audiences.

46 MILE

WHO WE ARE:

Data-driven agency helping businesses compete & thrive

- + Team with extensive experience in next-level integrated marketing, media, web development & social media
- + Develop actionable 12-18 month marketing strategies and then execute resulting advertising plans leveraging research, analytics, advertising technology, and other Hearst resources normally reserved for global brands

CLIENTS:

Leading Age of California,
Tamber Bey Vineyards,
The Crossroads Carmel,
Magnussen Toyota

CONTACT:

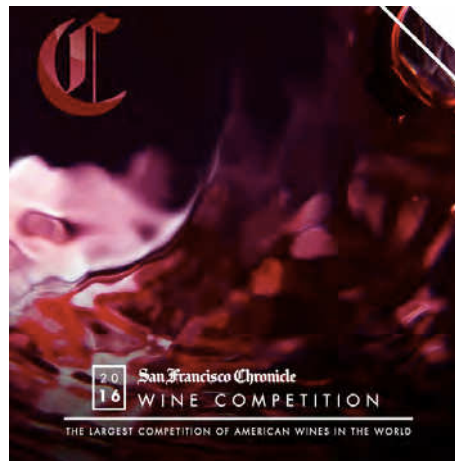
Phil Eaton
phillip.eaton@46mile.com



CREATIVE CAPABILITIES

EVENTS & LOCAL PARTNERSHIPS

We offer turnkey programs leveraging our influential audience and editorial prowess. Our editorial franchises generate awareness and leads for our partners. It's through these signature events and strategic local partnerships we bring a 1:1 connection to life.



THANK YOU

Our Hearst Bay Area account executives are experts at helping you expand your audience reach, build your brand, and increase your ROI. Contact us today.

Sean Jacobsen

SVP/ Chief Revenue Officer
801.244.2015
sean.jacobsen@hearst.com

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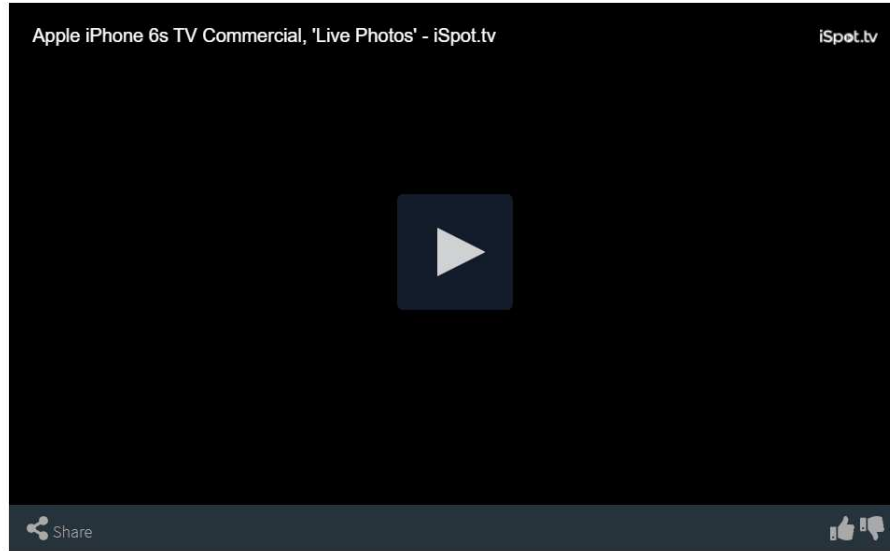
SOUTH BAY

Antoinette Santos

Multimedia Sales Manager, South Bay
415.777.6122
Antoinette.Santos@sfchronicle.com



Electronics & Communication / Mobile Devices / Apple iPhone



Apple iPhone 6s TV Commercial, 'Live Photos'

Ad ID: 1309209 30s 2016 (Inactive)

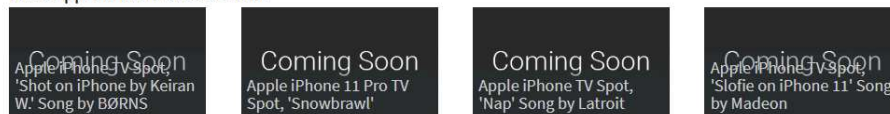
Apple introduces its Live Photos feature for the iPhone 6s. The feature allows you to view your photos in a unique way; when you touch a live photo, it comes alive, and when you let go, it goes back to being still -- almost as if you were being teleported through space and time, but less dangerous. So, whether you take a picture of your cat, children at a shark observatory, or your daughter making a snow angel, you can relive the moment with Apple Live Photos.

Advertiser	Apple iPhone
Advertiser Profiles	Facebook, Twitter, YouTube
Products	Apple iPhone 6s
Songs - Add	None have been identified for this spot
Mood	Active
Available At	Verizon
Actors - Add	Teresa Richards ... Mom watching child make snow angel, Karim Bailey ... Teacher at the aquarium in pink shirt, Max Bunzel ... Skier taking photo
Animals	Cats, Sharks
Agency	TBWA \ Chiat \ Day (Creative Agency), OMD West (Media Agency)

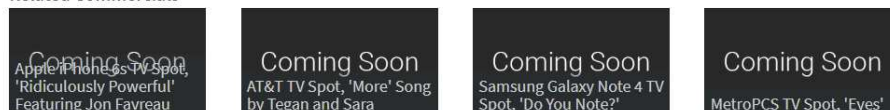
Screenshots



More Apple iPhone Commercials



Related Commercials



Full Metrics On This Ad

Here's your 10 days of free TV ad data

[Contact Us](#)

Media Measurement

National Airings	1,302
↳ First Airing	2/17/2016
↳ Last Airing	4/4/2016
Creatives	1
Recently Aired On	Better Call Saul on AMC
Est. Spend	\$19,754,874
TV Impressions	847,858,855
↳ National	795,318,974
↳ Local	31,214,485
↳ VOD/OTT	17,596,582

Attention & Performance Analytics

Attention Score	n/a
↳ Industry Avg.	96.0
Earned Online Views	980,189
Social Impressions	2,226,255
Sentiment	80% positive
Engagement Rating	8.0
Industry Share of Voice	
↳ Spend	n/a
↳ Impressions	n/a
↳ Engagement	n/a

Cao v. Apple
Apple Trial Exhibit
46

Related Advertisers

[Samsung Mobile](#)
[Google Phones](#)
[LG Mobile](#)
[Motorola](#)
[Microsoft Windows Phone](#)

Related Products

[Samsung Mobile Galaxy S4](#)
[Apple iPhone 6](#)
[Samsung Mobile Galaxy S III](#)
[Samsung Mobile Galaxy S5](#)
[Samsung Mobile Galaxy S6](#)

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[TV Attribution](#)
[Marketing Stack Integration](#)

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[Top Spenders](#)
[Free Reports](#)
[Alexa Skills](#)

The Buzz

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About Us

[Customers](#)
[Career](#)
[Contact Us](#)

Browse TV Ads

[Commercial Catalog](#)
[COVID-19 Minded TV Ads](#)
[Super Bowl Commercials](#)



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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of trademark application Serial No.: 86/868,731
For the mark LIVE PHOTOS
Published in the Official Gazette on September 19, 2017

GANG CAO,	:	
	:	
Opposer,	:	Opposition No. 91239006
	:	
v.	:	
	:	
APPLE INC.,	:	
	:	
Applicant.	:	
	:	

July 11, 2018

To: Applicant Apple Inc.
By and through its counsel of record,
Dale M. Cendali
Kirkland & Ellis LLP
601 Lexington Avenue
New York, NY 10022

**OPPOSER GANG CAO'S RESPONSES TO APPLICANT APPLE INC.'S SECOND SET
OF INTERROGATORIES TO OPPOSER MR. GANG CAO**

Pursuant to Fed. R. Civ. P. 26 and 33, Trademark Rule 2.120, and TBMP Rule 405, Opposer Mr. Gang Cao ("Opposer") hereby responds to Applicant Apple Inc.'s Second Set of Interrogatories ("Interrogatories").

Opposer makes the general and specific objections and responses herein (collectively, the "Responses") based solely on his current knowledge, understanding, and belief with respect to the facts and information available to Opposer as of the date of the Responses. Additional discovery, investigation, or analysis may lead to additions to, changes in, or other modifications

of these Responses. The Responses are given without prejudice to Opposer's right to amend and/or supplement these Responses at any time.

GENERAL OBJECTIONS

1. These Responses are made solely for the purposes of this action. Each Response is subject to all objections as to competence, relevance, materiality, propriety, and admissibility, and to any and all other objections on any grounds that would require the exclusion of any statements contained herein if such Interrogatory were asked of, or statements contained herein were made by, a witness present and testifying in court, all of which objections and grounds are expressly reserved and may be interposed at the time of trial.

2. Opposer's Responses shall not be deemed to constitute admissions that any particular document, thing, or information exists, is relevant, non-privileged, or admissible in evidence, or that any statement or characterization in the Interrogatories is accurate or complete. Any statement by Opposer contained in these Responses that non-privileged documents or information will be produced in response to a specific document request does not mean that any such documents or information actually exist, but only that they will be produced to the extent that they exist.

3. Opposer's Responses are made based upon a reasonable and diligent investigation conducted to date. Discovery and investigation in this matter are ongoing and Opposer reserves the right to amend his Responses and to raise any additional objections he may have in the future. Opposer's Responses are submitted without prejudice to Opposer's right to produce evidence of any subsequently discovered facts and to present in any proceeding and at trial any further information and documents obtained during discovery and preparation for trial. Opposer reserves his rights to provide further Responses and supplement as additional facts are

ascertained, including facts ascertained from documents produced by or information provided by Applicant in response to discovery in this case.

4. These Responses are made based upon the typical or usual interpretation of words contained in the Interrogatories, unless a specific definition or instruction has been provided.

5. Opposer objects to each Interrogatory to the extent that it seeks information protected by the attorney-client privilege, the work product doctrine, the common interest doctrine, the protection for trial preparation materials, or any other privilege or protection. Opposer does not waive any objection made in these Responses or any claim of privilege, whether expressly asserted or not, by responding to the Interrogatories, identifying documents, agreeing to produce documents, or producing any document or thing in response to the Interrogatories. The inadvertent production of any document, thing, or information shall not constitute a waiver of any attorney-client privilege, work product doctrine, or any other applicable privilege or protection.

6. Opposer objects to each Interrogatory to the extent it purports to require Opposer to provide information not required by or which exceeds the scope of permissible discovery under any applicable rules or which are overly broad, vague, ambiguous, unduly burdensome, request information requiring a disclosure protected by the attorney-client and/or work-product doctrine or seek the mental impressions, conclusions, opinions or legal theories of Opposer or his counsel.

7. These Responses are made on the basis of information presently available to Opposer upon reasonable investigation. As discovery is an on-going process, there may be further facts and/or documents affecting Opposer's Responses, of which he is presently unaware despite reasonable investigation and inquiry. Opposer reserves the right to modify and

supplement these Responses with such relevant information as may subsequently be discovered. Opposer's Responses are made without prejudice to Opposer's using or relying at trial on subsequently discovered information omitted from these Responses as a result of good faith oversight, error or mistake.

8. Opposer objects to each Interrogatory to the extent that it seeks information not in Opposer's possession, custody or control. Opposer's Responses are limited to information in his actual possession, custody or control.

9. Opposer objects to each Interrogatory to the extent that it seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence, or is not proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweigh its likely benefit.

10. Opposer objects to the Interrogatories to the extent they seek documents, things and/or information already in the public domain, already in the possession of Applicant, and/or reasonably available to Applicant from a source other than Opposer and in a more convenient, less burdensome, and less expensive manner.

11. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it seeks the production of confidential, business, financial, proprietary or sensitive information or trade secrets of third parties that is subject to a pre-existing protective order or confidentiality agreement or in which any third party has an expectation of privacy. Such information shall not be provided absent an express order from a court of competent jurisdiction or an authorization from the third party having the interest in the information's confidentiality.

12. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it requires interpretation and application of the legal contentions/conclusions of the parties. Opposer's Responses shall not be construed as providing legal conclusions concerning the meaning or application of any terms used in the Applicant's Interrogatories.

13. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it is unduly burdensome and oppressive on the grounds that it purports to require Opposer search facilities or inquire of employees other than those facilities and employees, if any, that reasonably would be expected to have responsive information. Opposer's Responses are based upon: (1) a reasonable search of facilities and files that reasonably could be expected to contain responsive information; and (2) inquiries of Opposer's employees and/or representatives, if any, who reasonably could be expected to possess responsive information.

14. Opposer objects to each Interrogatory to the extent that it is premature, particularly to the extent that it relates to expert discovery.

15. Opposer objects to Applicant's purported instructions to the extent that they exceed Opposer's obligations under the applicable rules. Opposer will respond hereto and produce documents consistent with his obligations under the applicable rules.

16. Opposer responds to each Interrogatory expressly subject to and conditioned upon each of the foregoing objections and privileges, each are which are incorporated by reference into each Response below.

17. Opposer objects to Applicant's purported instructions regarding "identify," "describe," and "state" as overly broad and unduly burdensome and to the extent that it seeks to impose obligations on Opposer beyond those required by the Federal Rules of Civil Procedure or of the TBMP. Opposer's responses are based on his understanding of how these terms are used

in common parlance.

18. Opposer objects to the definition of “document(s)” and to the extent it seeks to define the term more broadly than allowed under the Federal Rules of Civil Procedure and/or the Federal Rules of Evidence and/or the TBMP.

19. Opposer objects to the definitions of “concerning” and “referring and relating to” to the extent the purport to impose discovery obligations on Opposer beyond those set forth in Rules 26 through 37 of the Federal Rules of Civil Procedure and associated Rules of the TTAB.

REPONSES TO INTERROGATORIES

Interrogatory 31:

31. DESCRIBE the circumstances surrounding OPPOSER’s purchase of the domain name <livephoto.ca>, including the date on which such purchase occurred.

Response to Interrogatory 31: Subject to the foregoing general objections, Opposer responds that the domain name <livephoto.ca> was purchased from Duane Hepditch on January 31, 2011. An invoice has been produced.

Interrogatory 32:

32. DESCRIBE the purportedly unsuccessful attempts by OPPOSER to stop OPPOSER’S DOMAIN NAMES from redirecting to <create.ca>, as referenced in OPPOSER’s response to INTERROGATORY No. 8 in APPLE’S FIRST INTERROGATORIES.

Response to Interrogatory 32: Subject to the foregoing general objections, Opposer responds that after purchasing the domains and completing the domain transfer process in 2011, Opposer changed the domain setting configurations in an attempt to remove the redirecting, but was unsuccessful.

Interrogatory 33:

33. DESCRIBE OPPOSER'S "investigation" of the OPPOSER'S DOMAIN NAMES' redirection of visitors to <create.ca>, as referenced in OPPOSER's response to INTERROGATORY No. 8 in APPLE'S FIRST INTERROGATORIES, including the date on which OPPOSER'S DOMAIN NAMES no longer directed visitors to the for-sale landing page at <create.ca>.

Response to Interrogatory 33: Subject to the foregoing general objections, Opposer responds that the previous owner contacted Opposer on September 13, 2015 and requested that the redirecting be removed. Opposer informed the previous owner that he would contact <create.ca> to take down the contact and for-sale page. The previous owner identified himself as the owner of <create.ca> and indicated he would handle. After a few days, the redirecting remained, so Opposer changed the domain settings, in particular the value of "type" "web settings" section to "5) DNS Hosting-Free," and edited the DNS zone file and input the IP address of Opposer's web server. Opposer informed the previous owner on September 28, 2015 that the redirecting issue was believed to be resolved.

Interrogatory 34:

34. DESCRIBE the "future developed apps" referenced in OPPOSER'S response to INTERROGATORY No. 17 of APPLE'S FIRST INTERROGATORIES, including, but not limited to, the features and functionality of the "future developed apps."

Response to Interrogatory 34: Opposer also identifies the response to this Interrogatory as

Confidential. 

Interrogatory 35:

35. STATE the factual basis for OPPOSER's denial of REQUEST FOR ADMISSION No. 37 in APPLE'S FIRST REQUESTS FOR ADMISSION that Exhibit Q thereto "accurately depicts the content available at <livephoto.ca> on July 4, 2013."

Response to Interrogatory 35: Subject to the foregoing general objections, Opposer asserts that the URL of Exhibit Q begins "create.ca...." Further, Opposer's ownership of "OPPOSER'S DOMAIN NAMES" does not give him knowledge of whether a third-party's archival website correctly and accurately portrays the content of a website on certain dates.

Interrogatory 36:

36. STATE the factual basis for OPPOSER's denial of REQUEST FOR ADMISSION No. 38 in APPLE'S FIRST REQUESTS FOR ADMISSION that Exhibit R thereto "accurately depicts the content available at <livephoto.ca> on December 20, 2014."

Response to Interrogatory 36: Subject to the foregoing general objections, Opposer asserts that the URL of Exhibit R begins "create.ca...." Further, Opposer's ownership of "OPPOSER'S DOMAIN NAMES" does not give him knowledge of whether a third-party's archival website correctly and accurately portrays the content of a website on certain dates.

Interrogatory 37:

37. STATE the factual basis for OPPOSER's denial of REQUEST FOR ADMISSION No. 50 in APPLE'S FIRST REQUESTS FOR ADMISSION that "OPPOSER'S PRODUCTS do not record video."

Response to Interrogatory 37: Subject to the foregoing general objections, Opposer's response to APPLE'S FIRST SET OF INTERROGATORIES, including Interrogatory No. 5, points out that "'Spin Explorer' is an interactive video player app that enables continuous interactive video

control with a spin gesture on, for example, an iPhone or iPad. The Spin Explorer and Spin Explorer 2 apps both record video, and are both available in the Apple App Store for download. See <https://itunes.apple.com/us/app/spin-explorer-2/id1387180933?mt=8> (Spin Explorer 2), <https://itunes.apple.com/us/app/spin-explorer/id1254344513?mt=8> (Spin Explorer), and <http://spinexplorer.com/> (app web site).

Interrogatory 38:

38. STATE the factual basis for OPPOSER's denial of REQUEST FOR ADMISSION No. 51 in APPLE'S FIRST REQUESTS FOR ADMISSION that "OPPOSER'S PRODUCTS do not display video."

Response to Interrogatory 38: Subject to the foregoing general objections, Opposer's response to APPLE'S FIRST SET OF INTERROGATORIES, including Interrogatory No. 5, points out that "'Spin Explorer' is an interactive video player app that enables continuous interactive video control with a spin gesture on an iPhone or iPad. The Spin Explorer and Spin Explorer 2 apps both display video, and are both available in the Apple App Store for download. See <https://itunes.apple.com/us/app/spin-explorer-2/id1387180933?mt=8> (Spin Explorer 2), <https://itunes.apple.com/us/app/spin-explorer/id1254344513?mt=8> (Spin Explorer), and <http://spinexplorer.com/> (app web site).

Interrogatory 39:

39. STATE the factual basis for OPPOSER's denial of REQUEST FOR ADMISSION No. 52 in APPLE'S FIRST REQUESTS FOR ADMISSION that "OPPOSER'S PRODUCTS do not record and display video simultaneously."

Response to Interrogatory 39: Subject to the foregoing general objections, Opposer's response to APPLE'S FIRST SET OF INTERROGATORIES, including Interrogatory No. 5, points out

that “Spin Explorer” is an interactive video player app that enables continuous interactive video control with a spin gesture on an iPhone or iPad. The Spin Explorer and Spin Explorer 2 apps both record and display video simultaneously. The apps allow users to view video captured in real time at the time the video is captured. Both available in the Apple App Store for download. See <https://itunes.apple.com/us/app/spin-explorer-2/id1387180933?mt=8> (Spin Explorer 2), <https://itunes.apple.com/us/app/spin-explorer/id1254344513?mt=8> (Spin Explorer), and <http://spinexplorer.com/> (app web site).

Interrogatory 40:

40. STATE the factual basis for OPPOSER’s denial of REQUEST FOR ADMISSION No. 53 in APPLE’S FIRST REQUESTS FOR ADMISSION that “OPPOSER’S PRODUCTS do not record sound.”

Response to Interrogatory 40: Subject to the foregoing general objections, the Spin Explorer 2 app records sound, and the app is available in the Apple App Store for download. See <https://itunes.apple.com/us/app/spin-explorer-2/id1387180933?mt=8> (Spin Explorer 2), and <http://spinexplorer.com/> (app web site).

Interrogatory 41:

41. STATE the factual basis for OPPOSER’s denial of REQUEST FOR ADMISSION No. 57 in APPLE’S FIRST REQUESTS FOR ADMISSION that “OPPOSER’S PRODUCTS do not compete with the APPLE PRODUCTS.”

Response to Interrogatory 41: Subject to the foregoing general objections, Opposer responds that OPPOSER’S PRODUCTS and APPLE PRODUCTS are available for purchase and download from the same source, in particular Apple’s App Store. All involve user-interactive control over photos, video, and/or sound.

As to objections, respectfully submitted this 11th day of July, 2018.

/s/: Joseph W. Berenato, III

Joseph W. Berenato, III (jberenato@bw-iplaw.com)

David S. Taylor (dtaylor@bw-iplaw.com)

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Phone: (240) 330 4520

Facsimile (301) 896 0607

Attorneys for Opposer Gang Cao

Verification

Gang Cao verifies that to his personal knowledge or upon information deemed to be sufficient after reasonable investigation, these responses as accurate.

Dated: July 11, 2018



Gang Cao

CERTIFICATE OF SERVICE

I hereby certify that I caused a copy of the foregoing Opposer Gang Cao's Responses to Applicant Apple Inc.'s Second Set of Interrogatories to Opposer Gang Cao to be served by electronic mail to the email addresses below on July 11, 2018, addressed as follows:

Email Addresses (per TTABVUE):

dale.cendali@kirkland.com
bonnie.jarrett@kirkland.com
hunter.vanaria@kirkland.com
erika.dillon@kirkland.com

Mail Address (per TTABVUE)

Dale M. Cendali, Esq.
Kirkland & Ellis LLP
601 Lexington Avenue
New York, NY 10022
Tel: (212) 446-4800
Fax: (212) 446-4900

By: Joseph W. Berenato, III/
Joseph W. Berenato, III
Berenato & White, LLC
6550 Rock Spring Drive
Suite 240
Bethesda, Maryland 20817
Tel: (240) 330-4520
Fax: (301) 896-0607
jberenato@bw-iplaw.com
Attorney for Opposer

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE TRADEMARK TRIAL AND APPEAL BOARD**

In the matter of trademark application Serial No.: 86/868,731
For the mark LIVE PHOTOS
Published in the Official Gazette on September 19, 2017

GANG CAO,	:	
	:	
Opposer,	:	Opposition No. 91239006
	:	
v.	:	
	:	
APPLE INC.,	:	
	:	
Applicant.	:	
	:	

November 2, 2018

To: Applicant Apple Inc.
By and through its counsel of record,
Dale M. Cendali
Kirkland & Ellis LLP
601 Lexington Avenue
New York, NY 10022

**OPPOSER GANG CAO’S OBJECTIONS AND RESPONSES TO APPLICANT APPLE
INC.’S THIRD SET OF INTERROGATORIES TO OPPOSER MR. GANG CAO**

Pursuant to Fed. R. Civ. P. 26 and 33, Trademark Rule 2.120, and TBMP Rule 405, Opposer Mr. Gang Cao (“Opposer”) hereby responds to Applicant Apple Inc.’s Third Set of Interrogatories (“Interrogatories”).

Opposer makes the general and specific objections and responses herein (collectively, the "Responses") based solely on his current knowledge, understanding, and belief with respect to the facts and information available to Opposer as of the date of the Responses. Additional discovery, investigation, or analysis may lead to additions to, changes in, or other modifications

<i>Cao v. Apple</i> Apple Trial Exhibit 48

of these Responses. The Responses are given without prejudice to Opposer's right to amend and/or supplement these Responses at any time.

GENERAL OBJECTIONS

1. These Responses are made solely for the purposes of this action. Each Response is subject to all objections as to competence, relevance, materiality, propriety, and admissibility, and to any and all other objections on any grounds that would require the exclusion of any statements contained herein if such Interrogatory were asked of, or statements contained herein were made by, a witness present and testifying in court, all of which objections and grounds are expressly reserved and may be interposed at the time of trial.

2. Opposer's Responses shall not be deemed to constitute admissions that any particular document, thing, or information exists, is relevant, non-privileged, or admissible in evidence, or that any statement or characterization in the Interrogatories is accurate or complete. Any statement by Opposer contained in these Responses that non-privileged documents or information will be produced in response to a specific document request does not mean that any such documents or information actually exist, but only that they will be produced to the extent that they exist.

3. Opposer's Responses are made based upon a reasonable and diligent investigation conducted to date. Discovery and investigation in this matter are ongoing and Opposer reserves the right to amend his Responses and to raise any additional objections he may have in the future. Opposer's Responses are submitted without prejudice to Opposer's right to produce evidence of any subsequently discovered facts and to present in any proceeding and at trial any further information and documents obtained during discovery and preparation for trial. Opposer reserves his rights to provide further Responses and supplement as additional facts are

ascertained, including facts ascertained from documents produced by or information provided by Applicant in response to discovery in this case.

4. These Responses are made based upon the typical or usual interpretation of words contained in the Interrogatories, unless a specific definition or instruction has been provided.

5. Opposer objects to each Interrogatory to the extent that it seeks information protected by the attorney-client privilege, the work product doctrine, the common interest doctrine, the protection for trial preparation materials, or any other privilege or protection. Opposer does not waive any objection made in these Responses or any claim of privilege, whether expressly asserted or not, by responding to the Interrogatories, identifying documents, agreeing to produce documents, or producing any document or thing in response to the Interrogatories. The inadvertent production of any document, thing, or information shall not constitute a waiver of any attorney-client privilege, work product doctrine, or any other applicable privilege or protection.

6. Opposer objects to each Interrogatory to the extent it purports to require Opposer to provide information not required by or which exceeds the scope of permissible discovery under any applicable rules or which are overly broad, vague, ambiguous, unduly burdensome, request information requiring a disclosure protected by the attorney-client and/or work-product doctrine or seek the mental impressions, conclusions, opinions or legal theories of Opposer or his counsel.

7. These Responses are made on the basis of information presently available to Opposer upon reasonable investigation. As discovery is an on-going process, there may be further facts and/or documents affecting Opposer's Responses, of which he is presently unaware despite reasonable investigation and inquiry. Opposer reserves the right to modify and

supplement these Responses with such relevant information as may subsequently be discovered. Opposer's Responses are made without prejudice to Opposer's using or relying at trial on subsequently discovered information omitted from these Responses as a result of good faith oversight, error or mistake.

8. Opposer objects to each Interrogatory to the extent that it seeks information not in Opposer's possession, custody or control. Opposer's Responses are limited to information in his actual possession, custody or control.

9. Opposer objects to each Interrogatory to the extent that it seeks information that is neither relevant nor reasonably calculated to lead to the discovery of admissible evidence, or is not proportional to the needs of the case, considering the importance of the issues at stake in the action, the amount in controversy, the parties' relative access to relevant information, the parties' resources, the importance of the discovery in resolving the issues, and whether the burden or expense of the proposed discovery outweigh its likely benefit.

10. Opposer objects to the Interrogatories to the extent they seek documents, things and/or information already in the public domain, already in the possession of Applicant, and/or reasonably available to Applicant from a source other than Opposer and in a more convenient, less burdensome, and less expensive manner.

11. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it seeks the production of confidential, business, financial, proprietary or sensitive information or trade secrets of third parties that is subject to a pre-existing protective order or confidentiality agreement or in which any third party has an expectation of privacy. Such information shall not be provided absent an express order from a court of competent jurisdiction or an authorization from the third party having the interest in the information's confidentiality.

12. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it requires interpretation and application of the legal contentions/conclusions of the parties. Opposer's Responses shall not be construed as providing legal conclusions concerning the meaning or application of any terms used in the Applicant's Interrogatories.

13. Opposer objects to each and every Definition, Instruction and Interrogatory to the extent it is unduly burdensome and oppressive on the grounds that it purports to require Opposer search facilities or inquire of employees other than those facilities and employees, if any, that reasonably would be expected to have responsive information. Opposer's Responses are based upon: (1) a reasonable search of facilities and files that reasonably could be expected to contain responsive information; and (2) inquiries of Opposer's employees and/or representatives, if any, who reasonably could be expected to possess responsive information.

14. Opposer objects to each Interrogatory to the extent that it is premature, particularly to the extent that it relates to expert discovery.

15. Opposer objects to Applicant's purported instructions to the extent that they exceed Opposer's obligations under the applicable rules. Opposer will respond hereto and produce documents consistent with his obligations under the applicable rules.

16. Opposer responds to each Interrogatory expressly subject to and conditioned upon each of the foregoing objections and privileges, each are which are incorporated by reference into each Response below.

17. Opposer objects to Applicant's purported instructions to "describe" as overly broad and unduly burdensome and to the extent that it seeks to impose obligations on Opposer beyond those required by the Federal Rules of Civil Procedure or of the TBMP. Opposer's responses are based on his understanding of how these terms are used in common parlance.

18. Opposer objects to the definition of “document(s)” and to the extent it seeks to define the term more broadly than allowed under the Federal Rules of Civil Procedure and/or the Federal Rules of Evidence and/or the TBMP.

19. Opposer objects to the definition of “concerning” to the extent it purports to impose discovery obligations on Opposer beyond those set forth in Rules 26 through 37 of the Federal Rules of Civil Procedure and associated Rules of the TTAB.

RESPONSES TO INTERROGATORIES

Interrogatory 42:

42. DESCRIBE in detail the transaction leading to the purchase of one or both of OPPOSER’S DOMAIN NAMES, including but not limited to, (1) whether OPPOSER first approached Duane Hepditch, or whether Duane Hepditch first approached OPPOSER; (2) whether OPPOSER and Duane Hepditch exchanged offers and, if so, what those offers were; (3) whether some consideration other than money was considered or discussed; and (4) whether some consideration other than money was ultimately exchanged.

Response to Interrogatory 42: Opposer objects to Applicant’s instructions regarding “DESCRIBE” as overly broad and unduly burdensome and to the extent that they seek to impose obligations on Opposer beyond those required by the Federal Rules of Civil Procedure. Opposer further objects to this interrogatory because it seeks information that is not relevant to any party’s claim or defense and is not proportional to the needs of the case.

Subject to the foregoing general and specific objections, Opposer responds as follows:

- (1) Opposer was interested in seeking to register domain names comprised of the term(s) ‘livephoto’. Opposer learned that the <livephoto.com> and <livephoto.ca> domain names were owned and offered for sale by Duane Hepditch. Opposer approached Duane Hepditch for the purpose of purchasing the <livephoto.com> and <livephoto.ca> domain names.

- (2) Duane Hepditch asked for an offer. In response, Opposer offered CAD \$3,500 to purchase the <livephoto.com> domain name and expressed being not sure of purchasing <livephoto.ca> domain name. Duane Hepditch counter offered CAD \$4,200. Opposer accepted Duane Hepditch's counter offer of CAD \$4,200.
- (3) No consideration other than money was considered or discussed.
- (4) No consideration other than money was ultimately exchanged

Interrogatory 43:

43. DESCRIBE OPPOSER's reason for purchasing OPPOSER'S DOMAIN NAMES in January 2011.

Response to Interrogatory 43: Opposer objects to Applicant's instructions regarding "DESCRIBE" as overly broad and unduly burdensome and to the extent that they seek to impose obligations on Opposer beyond those required by the Federal Rules of Civil Procedure and the TBMP. Opposer further objects to this interrogatory because it seeks information that is not relevant to any party's claim or defense and is not proportional to the needs of the case.

Subject to the foregoing general and specific objections, Opposer responds as follows: Opposer purchased the domain names in January 2011 for the purpose of promoting and offering photo and video related products and services.

Interrogatory 44:

44. DESCRIBE the reason for any and all differences between the document produced by OPPOSER and marked as Bates number CAO0145, reflecting a copy of an invoice from Duane Hepditch for the amount of \$0.00 to purchase OPPOSER'S DOMAIN NAMES on or around January 31, 2011, and the document produced by OPPOSER and marked as Bates number CAO0400, reflecting a copy of an invoice from Duane Hepditch for the amount of \$4,200.00 to purchase OPPOSER'S DOMAIN NAMES on or around January 31, 2011.

Response to Interrogatory 44: Opposer objects to Applicant's instructions regarding "DESCRIBE" as overly broad and unduly burdensome and to the extent that they seek to impose

obligations on Opposer beyond those required by the Federal Rules of Civil Procedure and the TBMP. Opposer further objects to this interrogatory because it seeks information that is not relevant to any party's claim or defense and is not proportional to the needs of the case.

Subject to the foregoing general and specific objections, Opposer responds that the \$0.00 amount appearing on both the documents marked Bates number CAO0145 and CAO0400 does not reflect the purchase price of the <livephoto.com> and <livephoto.ca> domain names. The document marked as Bates number CAO0145 includes a redaction of the purchase price of CAD \$4,200 of the <livephoto.com> and <livephoto.ca> domain names. The document marked as Bates number CAO0400 is the unredacted invoice from Duane Hepditch.

Interrogatory 45:

45. DESCRIBE exactly when and how OPPOSER plans to implement the "Service Strategy" described in the SPINFUN MARKETING PLAN.

Response to Interrogatory 45: Opposer objects to Applicant's instructions regarding "DESCRIBE" as overly broad and unduly burdensome and to the extent that they seek to impose obligations on Opposer beyond those required by the Federal Rules of Civil Procedure and the TBMP.

Subject to the foregoing general and specific objections, Opposer responds as follows:

- (1) The "Download links to App Store" feature is planned to be implemented on <livephoto.com> and <livephoto.ca> by in-house web development resource after the pending opposition is resolved;
- (2) Customer support service is planned to be implemented on <livephoto.com> and <livephoto.ca> by in-house web development resource after the pending opposition is resolved;

- (3) The Q&A list and user forum feature is planned to be implemented on <livephoto.com> and <livephoto.ca> by in-house web development resource after the pending opposition is resolved;
- (4) The Instruction documents, tutorials and User Guides features are planned to be implemented on <livephoto.com> and <livephoto.ca> by in-house web development resource after the pending opposition is resolved;
- (5) The deep links to content in smartphone and tablet feature is planned to be implemented on <livephoto.com> and <livephoto.ca> by in-house web development resource after the pending opposition is resolved.

DATED this 2nd day of November, 2018.

Respectfully submitted,

Seed IP Law Group LLP

/Jennifer R. Ashton/

Marc C. Levy

Jennifer R. Ashton

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MarcL@Seedip.com

JenniferA@Seedip.com

Litcal@Seedip.com

Telephone (206) 622-4900

Facsimile: (206) 682-6031

Attorneys for Opposer Gang Cao

Verification

Gang Cao verifies that to his personal knowledge or upon information deemed to be sufficient after reasonable investigation, these responses as accurate.

Dated: November 1, 2018



Gang Cao

CERTIFICATE OF SERVICE

I hereby certify that on this 2nd day of November, 2018, I caused a copy of the foregoing **OPPOSER GANG CAO'S OBJECTIONS AND RESPONSES TO APPLICANT APPLE INC.'S THIRD SET OF INTERROGATORIES TO OPPOSER GANG CAO** was served upon Applicant's counsel by U.S. mail and email, addressed as follows:

Dale M. Cendali
Kirkland & Ellis LLP
601 Lexington Avenue
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dale.cendali@kirkland.com
bonnie.jarrett@kirkland.com
hunter.vanaria@kirkland.com
erika.dillon@kirkland.com

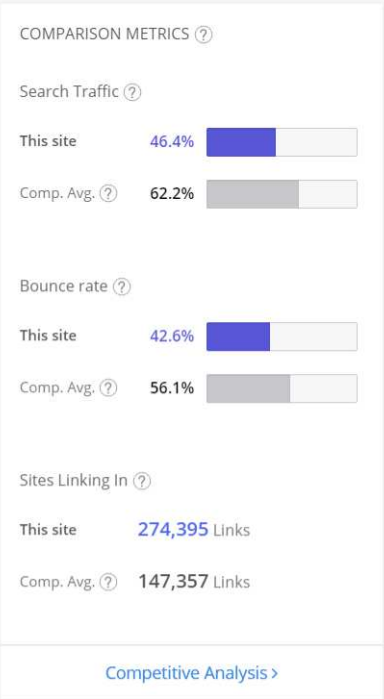
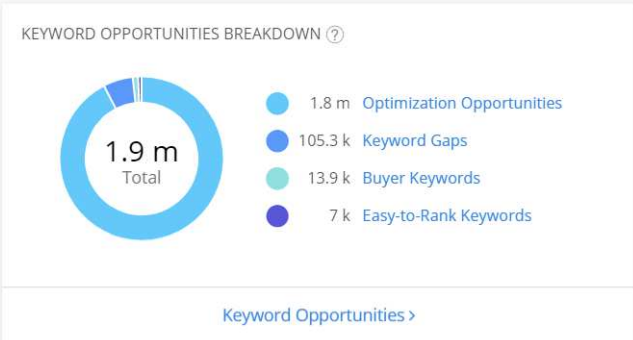
/Jennifer Ruppert/
Jennifer Ruppert

apple.com Competitive Analysis, Marketing Mix and Traffic

apple.com vs. cnet.com imore.com stackexchange.com amazon.com

Cao v. Apple
Apple Trial Exhibit
49

OVERVIEW



SIMILAR SITES BY AUDIENCE OVERLAP

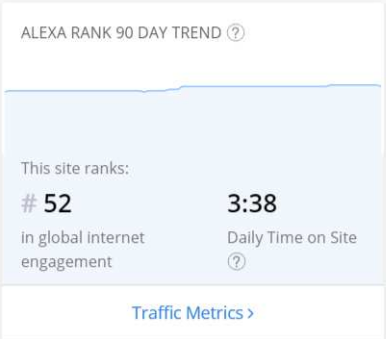
Similar sites	Overlap score
twitter.com	38.1
amazon.com	36.5
quora.com	34.9
microsoft.com	34.4

[Audience Report >](#)

TOP KEYWORDS BY TRAFFIC

Keyword	Search Traffic	Share of Voice
google translate	3.32%	11.62%
google maps	2.12%	11.12%
gmail	0.96%	3.06%
google drive	0.94%	9.52%
apple	0.83%	50.83%

[Top Keywords >](#)



KEYWORD OPPORTUNITIES

Keyword Gaps

Keywords driving traffic to competitors, but not to this site

Keyword	Avg. Traffic to Competitors	Search Popularity
raspberry pi	58	65
gmail login	51	73
fitbit versa	50	62
echo show	50	53

[View all Keywords](#) [Boost traffic by filling gaps](#)

Easy-to-Rank Keywords

Popular keywords within this site's competitive power

Keyword	Relevance to this site	Search Popularity
hotmail	80	86
whatsapp web	39	85
goo	77	72
pornhub	70	86

[View all Keywords](#) [How to find easy keywords](#)

Buyer Keywords

Keywords that show a high purchase intent

Keyword	Avg. Traffic to Competitors	Organic Competition
find my phone	86	67
find my iphone	69	14
apple store	69	17
app store	68	78

Optimization Opportunities

Very popular keywords already driving some traffic to this site.

Keyword	Search Popularity	Organic Share of Voice
iggy azalea kream	28	0.61%
bran van 3000	23	1.31%
الفون	27	0.62%
yellowcard ocean avenue	25	0.83%

[View all Keywords](#)

[Optimizing for buyer keywords](#)

[View all Keywords](#)

[Improving existing content](#)



How to Analyze Competitor Keywords

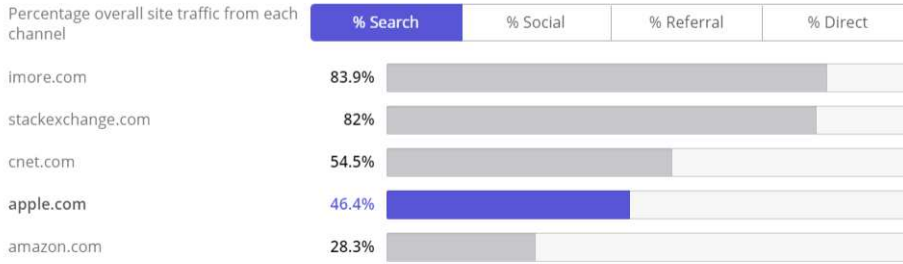
A competitor keyword analysis is a great way to find the best keyword opportunities, and solidify your content marketing and SEO strategy.

[Read](#)

COMPETITIVE ANALYSIS

Traffic Sources

Percentage overall site traffic from each channel



[View all Site Comparisons](#)

[How to increase search traffic](#)

Referral Sites

Sites by how many other sites drive traffic to them

Referral Sites ?

amazon.com	509.6 k
apple.com	274.4 k
cnet.com	62.9 k
stackexchange.com	13.8 k
imore.com	3.2 k

[View all Referral Sites in Competitor Backlink Checker](#)

Top Keywords

apple.com	Search Traffic ?	Share of Voice ?
google translate	3.32%	11.62%
google maps	2.12%	11.12%
gmail	0.96%	3.06%
google drive	0.94%	9.52%
apple	0.83%	50.83%

[View all Keywords](#)



E-Book: Maximize Your Brand's Competitive Potential

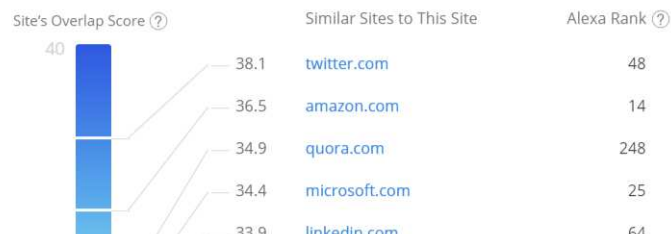
Competition exists in all industries. But how do you get ahead of the competition when they are working to do the same?

[Download](#)

AUDIENCE ANALYSIS

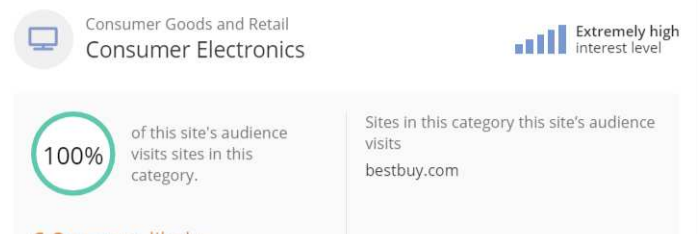
Audience Overlap

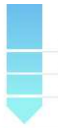
Similar sites that share the same visitors and search keywords with this site.



Site's Audience Interests

Categories of interest shared by this site's audience.





[View all Similar Sites](#)

6.9x more likely

to visit sites in this category compared to all internet users.



Internet Videos

High Interest level



87% of this site's audience visits sites in this category.

Sites in this category this site's audience visits

- youtube.com
- vimeo.com
- hulu.com

1.5x more likely

to visit sites in this category compared to all internet users.

[View all Interests](#)



The Importance of Targeting in Marketing

Vague and generic messages are far less likely to resonate with audiences than specific, direct communication

[Read](#)

TRAFFIC STATISTICS

Alexa Rank

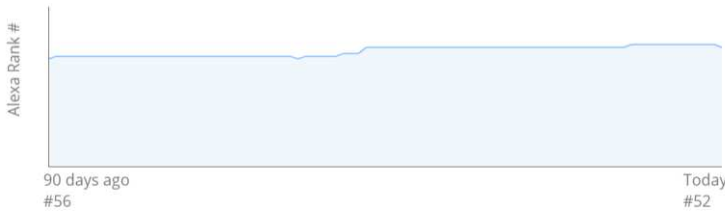
Estimate ?

This site ranks:

52

In global internet traffic and engagement over the past 90 days

↗ 4



Country Alexa Rank

us United States

25

[Improving your Alexa Rank](#)

Audience Geography

Estimate ?

All visitors to this site in the past 30 days



Visitors by Country

us United States	29.5%
JP Japan	14.2%
IN India	7.8%
KR South Korea	4.4%
CA Canada	3.0%
TW Taiwan	2.8%
BR Brazil	2.5%
AU Australia	2.2%
TR Turkey	2.0%
MX Mexico	1.9%

[More](#)

Site Metrics

Estimate ?

All visitors to this site

Engagement

Past 90 Days

3.57 ↘ 0.83%

3:38 ↗ 2%

42.6% ↘ 4%

Daily Pageviews per Visitor Daily Time on Site [?] Bounce rate [?]

Traffic Sources

Past 30 Days



Site Flow

Past 60 Days

Visited just before [?]

Visited right after [?]

Percentage	Source	Percentage	Source
40.2%	google.com	33.9%	google.com
3.45%	youtube.com	5.19%	youtube.com
1.96%	facebook.com	3.07%	facebook.com
1.4%	icloud.com	2.53%	microsoft.com
0.91%	microsoft.com	1.13%	icloud.com

274,395

Total Sites Linking In [?]

[View All in Sites Linking In](#)

DEVELOPER TOOLS

Looking for programmatic access to our data? Try our **APIs**

[Check our API's](#)



apple.com

+ COMPARE

DOWNLOAD

July 2020 Overview

discover the innovative world of apple and shop everything iphone, ipad, apple watch, mac, and apple tv, plus explore accessories, entertainment, and expert device support.

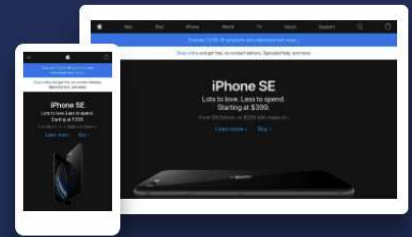
Year Founded 1977

Headquarters Cupertino, CA, United States

Related Mobile Apps Google Play & App Store

Estimated Employees > 10,000

See more



- Overview
- Referrals
- Search
- Social
- Display
- Audience
- Competitors

Global Rank

Country Rank

Category Rank

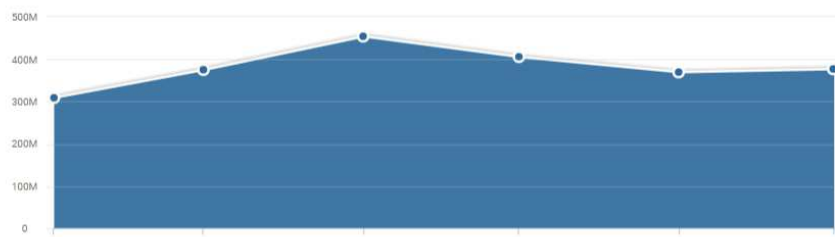
Traffic Overview

Estimated Data Verify Your Website

Total Visits to apple.com

Growth & total visits to apple.com over time

On desktop & mobile web, in the last 6 months



Engagement

Total Visits	376.92M ▲ 2.00%
Avg. Visit Duration	00:03:41
Pages per Visit	3.48
Bounce Rate	54.09%

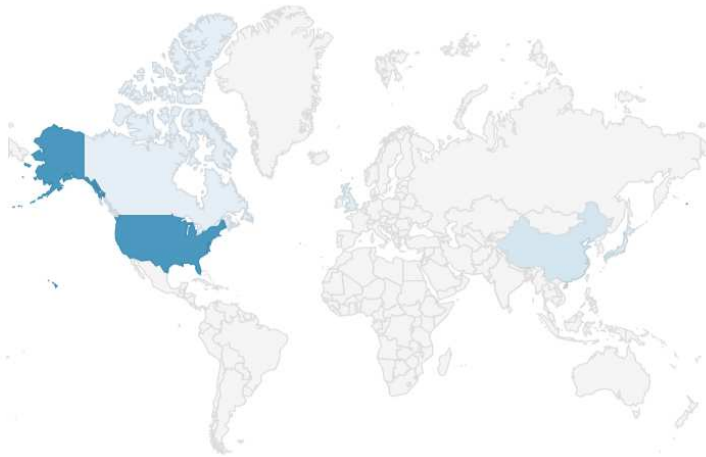
Cao v. Apple
 Apple Trial Exhibit
 50

Feb '20 Mar '20 Apr '20 May '20 Jun '20 Jul '20

Traffic to apple.com by country ^①

Visits to apple.com by country

🖥️ On desktop



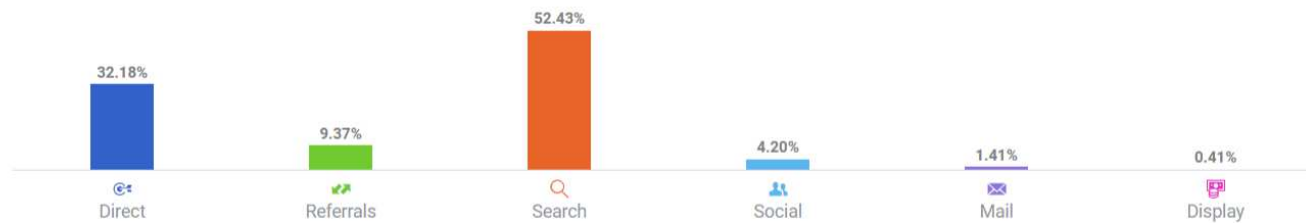
United States	34.87%	▲ 5.73%
China	7.02%	▲ 3.06%
Japan	5.50%	▼ 6.34%
United Kingdom	4.65%	▼ 1.60%
Canada	3.91%	▲ 3.30%

[See 247 more countries](#)

Traffic Sources for apple.com ^①

apple.com's marketing strategy is focused on Search with 52.43% of traffic coming from this channel, followed by Direct with 32.18%

🖥️ On desktop



Referrals ^①





Top Referring Sites: ①

icloud.com	10.84%	▲ 7.03%
apple.com.cn	7.33%	▼ 7.18%
accounts.spotify...	4.72%	▲ 36.94%
genius.com	1.67%	▲ 1.49%
coursera.org	1.57%	▲ 0.39%

[See 995 More Referring Sites](#)



Top Destination Sites: ①

icloud.com	24.12%	▲ 10.83%
microsoft.com	20.11%	▲ 5.69%
apple.com.cn	9.18%	▼ 20.45%
store.storeimage...	4.29%	▲ 12.10%
paypal.com	4.18%	▲ 19.03%

[See 995 More Destination Sites](#)

Search ①



95.14% Organic

Top 5 Organic keywords

Out of 17,728: ①

apple	6.91%	▼ 1.93%
itunes	5.81%	▲ 3.13%



4.86% Paid

Top 5 Paid keywords

Out of 528: ①

apple	3.95%	▼ 7.46%
apple store	0.66%	▼ 12.07%

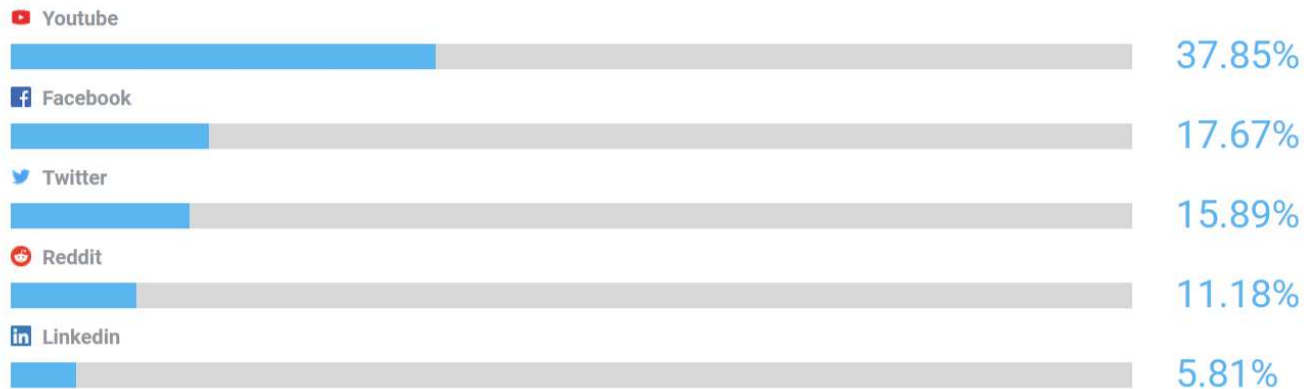


apple id	1.63%		iphone	0.47%
	▼ 3.89%			▲ 11.62%
apple store	1.51%		ipad	0.44%
	▼ 2.36%			▲ 2.66%
apple tv	1.43%		apple tv	0.38%
	▲ 22.74%			▲ 111.3%

SUCCESS STORY Learn how Gruppo MutuiOnline **dramatically increased traffic share** from industry keywords

[Download PDF](#)

Social ^①



[See More Social Traffic](#)

Display Advertising ^①

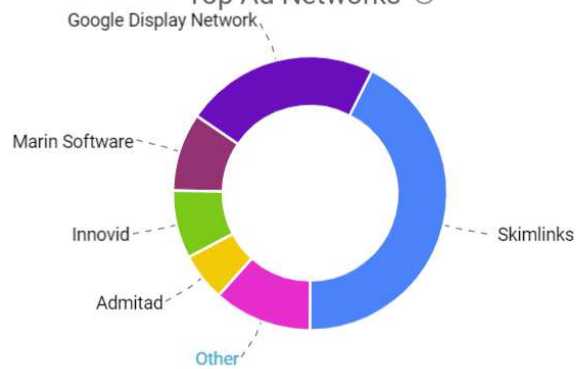


Top Publishers ^①

- macworld.co.uk
- slickdeals.net
- twitch.tv
- youtube.com
- imdb.com

[See 859 More Publishers](#)

Top Ad Networks ^①



Audience Interests ^①

Categories ^①



Computers Electronics And Technology > Programming And Developer Software



Computers Electronics And Technology > Computers Electronics And Technology



News And Media



Games > Video Games Consoles And Accessories



Computers Electronics And
Technology > Social
Networks And Online
Communities

Also visited websites ①

icloud.com

google.com

play.google.com

mail.google.com

youtube.com

See 2,445 More Visited Websites











Topics ①

internet apple google apps music
social network search internet tools google
us news windows software business blog
social finance mac community shopping news online

Competitors & Similar Sites ①

Similarity

Rank

 icloud.com	 twitter.com	 microsoft.com	 en.wikipedia.org	 play.google.com
 instagram.com	 macrumors.com	 hp.com	 apple...	 facebook.com

[See More Similar Sites](#)

Related Mobile Apps ^①

 App Store



Apple News

 | App Store | 0.0 USD



Apple Events

 | App Store | 0.0 USD



Apple TV Remote

 | App Store | 0.0 EGP



Apple Music

 | App Store | 0.0 HKD



Apple Support

 | App Store | 0.0 KRW



Apple Wallet

 | App Store | 0.0 HKD



Apple TV

 | App Store | 0.0 USD



Apple Music for Artists

 | App Store | 0.0 USD

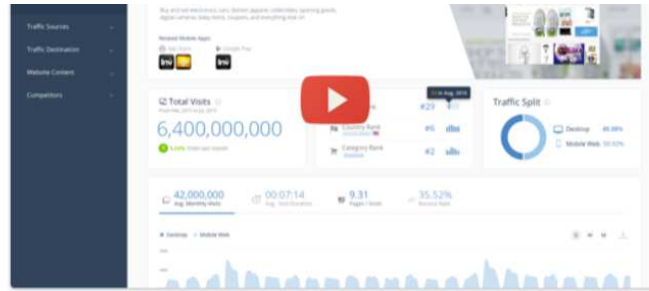


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Outbrain Asaf Hochman, Senior Director of Product Marketing Outbrain

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- ✓ Discover new opportunities while reducing risk by learning from your competitor's mistakes

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 6s – Technical Specifications

 Languages


Finish

- Rose Gold
- Gold
- Silver
- Space Gray

Capacity¹

- 16GB
- 32GB
- 64GB
- 128GB

Size and Weight²

- Height: 5.44 inches (138.3 mm)
- Width: 2.64 inches (67.1 mm)
- Depth: 0.28 inch (7.1 mm)
- Weight: 5.04 ounces (143 grams)

Display

- Retina HD display with 3D Touch
- 4.7-inch (diagonal) widescreen LCD Multi-Touch display with IPS technology
- 1334-by-750-pixel resolution at 326 ppi
- 1400:1 contrast ratio (typical)
- 500 cd/m2 max brightness (typical)
- Full sRGB standard
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating on front
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Chip

- A9 chip with 64-bit architecture
- Embedded M9 motion coprocessor

Camera

- 12-megapixel camera
- Live Photos with stabilization
- Autofocus with Focus Pixels
- Optical image stabilization (iPhone 6s Plus only)
- True Tone flash
- Panorama (up to 63 megapixels)
- Auto HDR for photos
- Exposure control
- Burst mode
- Timer mode
- f/2.2 aperture
- Five-element lens

Cao v. Apple
Apple Trial Exhibit
51

- 5x digital zoom
- Hybrid IR filter
- Backside illumination sensor
- Sapphire crystal lens cover
- Auto image stabilization
- Local tone mapping
- Noise reduction
- Face detection
- Photo geotagging

Video Recording

- 4K video recording at 30 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video (iPhone 6s Plus only)
- True Tone flash
- Slo-mo video support for 1080p at 120 fps and 720p at 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Noise reduction
- Take 8-megapixel still photos while recording 4K video
- Playback zoom
- 3x digital zoom
- Face detection
- Video geotagging

FaceTime HD Camera

- 5-megapixel photos
- 720p HD video recording
- Retina Flash
- f/2.2 aperture
- Auto HDR for photos and videos
- Backside illumination sensor
- Exposure control
- Burst mode
- Timer mode
- Face detection

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Complete purchases made with Apple Pay on your Mac
- Receive and redeem rewards using rewards cards

Learn more about Apple Pay

Cellular and Wireless

- **Model A1633**^{*}
 - LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - CDMA EV-DO Rev. A (800, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1688**^{*}
 - LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - CDMA EV-DO Rev. A (800, 1700/2100, 1900, 2100 MHz)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)

- All models
 - 802.11ac Wi-Fi with MIMO
 - Bluetooth 4.2 wireless technology
 - NFC

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling³

- FaceTime video calling over Wi-Fi or cellular

Audio Calling³

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC (8 to 320 Kbps), Protected AAC (from iTunes Store), HE-AAC, MP3 (8 to 320 Kbps), MP3 VBR, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+), Apple Lossless, AIFF, and WAV
- User-configurable maximum volume limit

TV and Video

- AirPlay Mirroring, photos, audio, and video out to Apple TV (2nd generation or later)
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)
- Video formats supported: H.264 video up to 4K, 30 frames per second, High Profile level 4.2 with AAC-LC audio up to 160 Kbps, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 48kHz, stereo or multichannel audio, in .m4v, .mp4, and .mov file formats; MPEG-4 video up to 2.5 Mbps, 640 by 480 pixels, 30 frames per second, Simple Profile with AAC-LC audio up to 160 Kbps per channel, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 48kHz, stereo or multichannel audio, in .m4v, .mp4, and .mov file formats; Motion JPEG (M-JPEG) up to 35 Mbps, 1280 by 720 pixels, 30 frames per second, audio in ulaw, PCM stereo audio in .avi file format

Siri⁵

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions in Messages, Mail, QuickType, and more
- Activate with only your voice using “Hey Siri”
- Listen and identify songs

Learn more about Siri

External Buttons and Connectors

- Touch ID sensor
- Volume up/down
- Ring/Silent
- On/Off – Sleep/Wake
- 3.5 mm headphone jack
- Lightning connector
- Microphones
- Built-in speaker

Power and Battery⁶

- Talk time: Up to 14 hours on 3G
- Internet use: Up to 10 hours on 3G, up to 10 hours on LTE, up to 11 hours on Wi-Fi
- HD video playback: Up to 11 hours
- Audio playback: Up to 50 hours
- Standby time: Up to 10 days
- Built-in rechargeable lithium-ion battery
- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 11

With new features and capabilities that let you get more done quickly and easily, iOS 11 makes iPhone more powerful, personal, and intelligent than ever.

See what's new in iOS 11

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 6s. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- Software TTY
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- iBooks
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Files

- Find My iPhone
- Find My Friends
- Settings

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Numbers
- Keynote
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips

Headphones

- EarPods with 3.5 mm Headphone Plug
- Storage and travel case

SIM Card

- Nano-SIM
iPhone 6s and iPhone 6s Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 6s (Model A1633, A1688): M3, T4

Mail Attachment Support

- **Viewable document types**
.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics

System Requirements

- Apple ID (required for some features)
- Internet access⁷

Syncing with iTunes on a Mac or PC requires:

- Mac: OS X 10.9.5 or later
- PC: Windows 7 or later
- iTunes 12.5 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori,

Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh

- **QuickType keyboard support with predictive input**

English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish

- **Siri languages**

English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)

- **Dictation languages**

English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **Definition dictionary support**

English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish

- **Bilingual dictionary support**

Chinese (Simplified), Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish

- **Spell check**

English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 11
- EarPods with 3.5 mm Headphone Plug
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone 6s and iPhone 6s Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Mercury-free LED-backlit display
- Arsenic-free display glass
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable aluminum enclosure
- Power adapter outperforms strictest global energy efficiency standards
- Speaker enclosure with 30 percent post-consumer recycled plastic

Apple and the Environment

Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 8GB to 11GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
2. Size and weight vary by configuration and manufacturing process.
3. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
4. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
5. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
6. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
7. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here to see complete list.](#)

Published Date: Feb 3, 2020

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 6s Plus – Technical Specifications

 Languages


Finish

- Rose Gold
- Gold
- Silver
- Space Gray

Capacity¹

- 16GB
- 32GB
- 64GB
- 128GB

Size and Weight²

- Height: 6.23 inches (158.2 mm)
- Width: 3.07 inches (77.9 mm)
- Depth: 0.29 inch (7.3 mm)
- Weight: 6.77 ounces (192 grams)

Display

- Retina HD display with 3D Touch
- 5.5-inch (diagonal) widescreen LCD Multi-Touch display with IPS technology
- 1920-by-1080-pixel resolution at 401 ppi
- 1300:1 contrast ratio (typical)
- 500 cd/m² max brightness (typical)
- Full sRGB standard
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating on front
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Chip

- A9 chip with 64-bit architecture
- Embedded M9 motion coprocessor

Camera

- 12-megapixel camera
- Live Photos with stabilization
- Autofocus with Focus Pixels
- Optical image stabilization (iPhone 6s Plus only)
- True Tone flash
- Panorama (up to 63 megapixels)
- Auto HDR for photos
- Exposure control
- Burst mode
- Timer mode
- f/2.2 aperture

- Five-element lens
- 5x digital zoom
- Hybrid IR filter
- Backside illumination sensor
- Sapphire crystal lens cover
- Auto image stabilization
- Local tone mapping
- Noise reduction
- Face detection
- Photo geotagging

Video Recording

- 4K video recording at 30 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video (iPhone 6s Plus only)
- True Tone flash
- Slo-mo video support for 1080p at 120 fps and 720p at 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Noise reduction
- Take 8-megapixel still photos while recording 4K video
- Playback zoom
- 3x digital zoom
- Face detection
- Video geotagging

FaceTime HD Camera

- 5-megapixel photos
- 720p HD video recording
- Retina Flash
- f/2.2 aperture
- Auto HDR for photos and videos
- Backside illumination sensor
- Exposure control
- Burst mode
- Timer mode
- Face detection

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Complete purchases made with Apple Pay on your Mac
- Receive and redeem rewards using rewards cards

Learn more about Apple Pay

Cellular and Wireless

- **Model A1634***
 - LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - CDMA EV-DO Rev. A (800, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1687***
 - LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - CDMA EV-DO Rev. A (800, 1700/2100, 1900, 2100 MHz)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)

- All models
 - 802.11ac Wi-Fi with MIMO
 - Bluetooth 4.2 wireless technology
 - NFC

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling³

- FaceTime video calling over Wi-Fi or cellular

Audio Calling³

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC (8 to 320 Kbps), Protected AAC (from iTunes Store), HE-AAC, MP3 (8 to 320 Kbps), MP3 VBR, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+), Apple Lossless, AIFF, and WAV
- User-configurable maximum volume limit

TV and Video

- AirPlay Mirroring, photos, audio, and video out to Apple TV (2nd generation or later)
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)
- Video formats supported: H.264 video up to 4K, 30 frames per second, High Profile level 4.2 with AAC-LC audio up to 160 Kbps, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 48kHz, stereo or multichannel audio, in .m4v, .mp4, and .mov file formats; MPEG-4 video up to 2.5 Mbps, 640 by 480 pixels, 30 frames per second, Simple Profile with AAC-LC audio up to 160 Kbps per channel, 48kHz, stereo audio or Dolby Audio up to 1008 Kbps, 48kHz, stereo or multichannel audio, in .m4v, .mp4, and .mov file formats; Motion JPEG (M-JPEG) up to 35 Mbps, 1280 by 720 pixels, 30 frames per second, audio in ulaw, PCM stereo audio in .avi file format

Siri⁵

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions in Messages, Mail, QuickType, and more
- Activate with only your voice using “Hey Siri”
- Listen and identify songs

Learn more about Siri

External Buttons and Connectors

- Touch ID sensor
- Volume up/down
- Ring/Silent
- On/Off – Sleep/Wake
- 3.5 mm headphone jack
- Lightning connector
- Microphones
- Built-in speaker

Power and Battery⁶

- Talk time: Up to 24 hours on 3G
- Internet use: Up to 12 hours on 3G, up to 12 hours on LTE, up to 12 hours on Wi-Fi
- HD video playback: Up to 14 hours
- Audio playback: Up to 80 hours
- Standby time: Up to 16 days
- Built-in rechargeable lithium-ion battery
- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 11

With new features and capabilities that let you get more done quickly and easily, iOS 11 makes iPhone more powerful, personal, and intelligent than ever.

See what's new in iOS 11

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 6s. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- Software TTY
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- iBooks
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Files

- Find My iPhone
- Find My Friends
- Settings

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Numbers
- Keynote
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips

Headphones

- EarPods with 3.5 mm Headphone Plug
- Storage and travel case

SIM Card

- Nano-SIM
iPhone 6s and iPhone 6s Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 6s Plus (Model A1634, A1687): M3, T4

Mail Attachment Support

- **Viewable document types**
.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics

System Requirements

- Apple ID (required for some features)
- Internet access⁷

Syncing with iTunes on a Mac or PC requires:

- Mac: OS X 10.9.5 or later
- PC: Windows 7 or later
- iTunes 12.5 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori,

Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh

- **QuickType keyboard support with predictive input**

English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish

- **Siri languages**

English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)

- **Dictation languages**

English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **Definition dictionary support**

English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish

- **Bilingual dictionary support**

Chinese (Simplified), Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish

- **Spell check**

English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 11
- EarPods with 3.5 mm Headphone Plug
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone 6s and iPhone 6s Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Mercury-free LED-backlit display
- Arsenic-free display glass
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable aluminum enclosure
- Power adapter outperforms strictest global energy efficiency standards
- Speaker enclosure with 30 percent post-consumer recycled plastic

Apple and the Environment

Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 8GB to 11GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
2. Size and weight vary by configuration and manufacturing process.
3. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
4. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
5. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
6. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings.
See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
7. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here to see complete list.](#)

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 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 7 – Technical Specifications

 Languages


Finish

- Rose Gold
- Gold
- Silver
- Black
- Jet Black¹
- (PRODUCT)RED™

Capacity²

- 32GB
- 128GB
- 256GB

(PRODUCT)RED™ is exclusively available in 128GB and 256GB models.

Size and Weight³

- Height: 5.44 inches (138.3 mm)
- Width: 2.64 inches (67.1 mm)
- Depth: 0.28 inch (7.1 mm)
- Weight: 4.87 ounces (138 grams)

Display

- Retina HD display
- 4.7-inch (diagonal) widescreen LCD
- Multi-Touch display with IPS technology
- 1334-by-750-pixel resolution at 326 ppi
- 1400:1 contrast ratio (typical)
- Wide color display (P3)
- 625 cd/m² max brightness (typical)
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Splash, Water, and Dust Resistant⁴

- Rated IP67 (maximum depth of 1 meter up to 30 minutes) under IEC standard 60529

Chip

- A10 Fusion chip

Camera

- 12MP camera
- f/1.8 aperture
- Digital zoom up to 5x
- Optical image stabilization
- Six-element lens

- Quad-LED True Tone flash
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Backside illumination sensor
- Hybrid IR filter
- Autofocus with Focus Pixels
- Tap to focus with Focus Pixels
- Live Photos with stabilization
- Wide color capture for photos and Live Photos
- Improved local tone mapping
- Exposure control
- HDR for photos
- Auto image stabilization
- Burst mode
- Timer mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 30 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video
- 2x optical zoom; digital zoom up to 6x (iPhone 7 Plus only)
- Quad-LED True Tone flash
- Slo-mo video support for 1080p at 120 fps and 720p at 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video geotagging
- Video formats recorded: HEVC and H.264

FaceTime HD Camera

- 7MP camera
- 1080p HD video recording
- Retina Flash
- $f/2.2$ aperture
- Wide color capture for photos and Live Photos
- HDR for photos
- Backside illumination sensor
- Auto image stabilization
- Burst mode
- Exposure control
- Timer mode

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- Model A1660^{*}
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - CDMA EV-DO Rev. A (800, 1900, 2100 MHz)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)

- **Model A1778⁴**
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)
 - TD-LTE (Bands 38, 39, 40, 41)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
 - 802.11ac Wi-Fi with MIMO
 - Bluetooth 4.2 wireless technology
 - NFC with reader mode
 - Express Cards

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁵

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁵

- FaceTime audio
- Voice over LTE (VoLTE)⁶
- Wi-Fi calling⁶

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁷
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁷

Siri⁸

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Home/Touch ID sensor
- Volume up/down
- Ring/Silent switch
- Side button
- Built-in stereo speaker
- Built-in microphone
- Lightning connector

Power and Battery⁹

Lasts up to 2 hours longer than iPhone 6s

- Talk time (wireless): Up to 14 hours on 3G
- Standby: Up to 10 days
- Internet use: Up to 12 hours on 3G, Up to 12 hours on LTE, Up to 14 hours on Wi-Fi
- Wireless video playback: Up to 13 hours
- Wireless audio playback: Up to 40 hours
- Built-in rechargeable lithium-ion battery
- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 12

iOS is the world's most personal and secure mobile operating system, packed with powerful features that help you get the most out of every day.

See what's new in iOS 12

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 7. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My iPhone

- Find My Friends
- Settings
- Files
- Measure

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Shortcuts

Headphones

- EarPods with Lightning Connector

SIM Card

- Nano-SIM
iPhone 7 and iPhone 7 Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 7 (Model A1660, A1778): M3, T4

Mail Attachment Support

- **Viewable document types**
.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹⁰

Syncing with iTunes on a Mac or PC requires:

- Mac: OS X 10.11.6 or later
- PC: Windows 7 or later
- iTunes 12.8 or later on Mac and iTunes 12.9 or later on PC (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish,

Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori, Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh

- **QuickType keyboard support with predictive input**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), Dutch, French, German, Hindi, Italian, Japanese, Korean, Portuguese, Russian, Spanish
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 12
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone 7 and iPhone 7 Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- Brominated flame retardant-free
- PVC-free
- Recyclable aluminum enclosure

Apple and the Environment

Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

Apple GiveBack

If you're ready for your next iPhone, Apple GiveBack is a great way to let go of your old one. If it's in good shape, you can trade it in for Apple Store credit. If it's not eligible for credit, we'll recycle it responsibly at no cost to you.


Good for you. Good for the planet.
See how it works

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. The high-gloss finish of the jet black iPhone 7 is achieved through a precision nine-step anodization and polishing process. Its surface is equally as hard as other anodized Apple products; however, its high shine may show fine micro-abrasions with use. If you are concerned about this, we suggest you use one of the many cases available to protect your iPhone.
2. Available space is less and varies due to many factors. A standard configuration uses approximately 10GB to 12GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
3. Size and weight vary by configuration and manufacturing process.
4. iPhone 7 and iPhone 7 Plus are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529 (maximum depth of 1 meter up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
5. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
6. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
7. Standard Dynamic Range video content only.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
10. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here to see complete list.](#)

Published Date: Mar 30, 2019

 > Support

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iPhone 7 Plus – Technical Specifications

Languages



Finish

- Rose Gold
- Gold
- Silver
- Black
- Jet Black¹
- (PRODUCT)RED™

Capacity²

- 32GB
- 128GB
- 256GB

(PRODUCT)RED™ is exclusively available in 128GB and 256GB models.

Size and Weight³

- Height: 6.23 inches (158.2 mm)
- Width: 3.07 inches (77.9 mm)
- Depth: 0.29 inch (7.3 mm)
- Weight: 6.63 ounces (188 grams)

Display

- Retina HD display
- 5.5-inch (diagonal) widescreen LCD
- Multi-Touch display with IPS technology
- 1920-by-1080-pixel resolution at 401 ppi
- 1300:1 contrast ratio (typical)
- Wide color display (P3)
- 625 cd/m2 max brightness (typical)
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Splash, Water, and Dust Resistant⁴

- Rated IP67 (maximum depth of 1 meter up to 30 minutes) under IEC standard 60529

Chip

- A10 Fusion chip

Camera

- Dual 12MP wide-angle and telephoto cameras
- Wide-angle: f/1.8 aperture
- Telephoto: f/2.8 aperture
- 2x optical zoom; digital zoom up to 10x
- Portrait mode
- Optical image stabilization

- Six-element lens
- Quad-LED True Tone flash
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Backside illumination sensor
- Hybrid IR filter
- Autofocus with Focus Pixels
- Tap to focus with Focus Pixels
- Live Photos with stabilization
- Wide color capture for photos and Live Photos
- Improved local tone mapping
- Exposure control
- HDR for photos
- Auto image stabilization
- Burst mode
- Timer mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 30 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video
- 2x optical zoom; digital zoom up to 6x (iPhone 7 Plus only)
- Quad-LED True Tone flash
- Slo-mo video support for 1080p at 120 fps and 720p at 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video geotagging
- Video formats recorded: HEVC and H.264

FaceTime HD Camera

- 7MP camera
- 1080p HD video recording
- Retina Flash
- $f/2.2$ aperture
- Wide color capture for photos and Live Photos
- HDR for photos
- Backside illumination sensor
- Auto image stabilization
- Burst mode
- Exposure control
- Timer mode

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- Model A1661*
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)
 - TD-LTE (Bands 38, 39, 40, 41)
 - TD-SCDMA 1900 (F), 2000 (A)
 - CDMA EV-DO Rev. A (800, 1900, 2100 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

- **Model A1784⁴**

FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 27, 28, 29, 30)

TD-LTE (Bands 38, 39, 40, 41)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

- **All models**

802.11ac Wi-Fi with MIMO

Bluetooth 4.2 wireless technology

NFC with reader mode

Express Cards

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁵

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁵

- FaceTime audio
- Voice over LTE (VoLTE)⁶
- Wi-Fi calling⁶

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁷
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁷

Siri⁸

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Home/Touch ID sensor
- Volume up/down
- Ring/Silent switch
- Side button
- Built-in stereo speaker
- Built-in microphone
- Lightning connector

Power and Battery⁹

Lasts up to 1 hour longer than iPhone 6s Plus

- Talk time (wireless): Up to 21 hours on 3G
- Standby: Up to 16 days
- Internet use: Up to 13 hours on 3G, Up to 13 hours on LTE, Up to 15 hours on Wi-Fi
- Wireless video playback: Up to 14 hours
- Wireless audio playback: Up to 60 hours
- Built-in rechargeable lithium-ion battery

- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 12

iOS is the world's most personal and secure mobile operating system, packed with powerful features that help you get the most out of every day.

See what's new in iOS 12

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 7. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch

- Tips
- Find My iPhone
- Find My Friends
- Settings
- Files
- Measure

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Shortcuts

Headphones

- EarPods with Lightning Connector

SIM Card

- Nano-SIM
iPhone 7 and iPhone 7 Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 7 Plus (Model A1661, A1784): M3, T4

Mail Attachment Support

- **Viewable document types**
.jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote); .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint); .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹⁰

Syncing with iTunes on a Mac or PC requires:

- Mac: OS X 10.11.6 or later
- PC: Windows 7 or later
- iTunes 12.8 or later on Mac and iTunes 12.9 or later on PC (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean,

Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori, Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh

- **QuickType keyboard support with predictive input**

English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish

- **Siri languages**

English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)

- **Dictation languages**

English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **Definition dictionary support**

English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish

- **Thesaurus**

English (UK, U.S.)

- **Bilingual dictionary support with English**

Arabic, Chinese (Simplified, Traditional), Dutch, French, German, Hindi, Italian, Japanese, Korean, Portuguese, Russian, Spanish

- **Spell check**

English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 12
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. [Learn more](#)

iPhone 7 and iPhone 7 Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- Brominated flame retardant-free
- PVC-free
- Recyclable aluminum enclosure

Apple and the Environment

Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

Apple GiveBack

If you're ready for your next iPhone, Apple GiveBack is a great way to let go of your old one. If it's in good shape, you can trade it in for Apple Store credit. If it's not eligible for credit, we'll recycle it responsibly at no cost to you. Good for you. Good for the planet.


See how it works

* To identify your iPhone model number, see <http://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. The high-gloss finish of the jet black iPhone 7 is achieved through a precision nine-step anodization and polishing process. Its surface is equally as hard as other anodized Apple products; however, its high shine may show fine micro-abrasions with use. If you are concerned about this, we suggest you use one of the many cases available to protect your iPhone.
2. Available space is less and varies due to many factors. A standard configuration uses approximately 10GB to 12GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
3. Size and weight vary by configuration and manufacturing process.
4. iPhone 7 and iPhone 7 Plus are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529 (maximum depth of 1 meter up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
5. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
6. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
7. Standard Dynamic Range video content only.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
10. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here to see complete list.](#)

Published Date: Mar 30, 2019

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 8 – Technical Specifications

Languages 

Finish

- Gold
- Silver
- Space Gray
- (PRODUCT)RED™

Capacity¹

- 64GB
- 128GB
- 256GB

Size and Weight²

- Height: 5.45 inches (138.4 mm)
- Width: 2.65 inches (67.3 mm)
- Depth: 0.29 inch (7.3 mm)
- Weight: 5.22 ounces (148 grams)

Display

- Retina HD display
- 4.7-inch (diagonal) widescreen LCD Multi-Touch display with IPS technology
- 1334-by-750-pixel resolution at 326 ppi
- 1400:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- 3D Touch
- 625 nits max brightness (typical)
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Splash, Water, and Dust Resistant³

- Rated IP67 (maximum depth of 1 meter up to 30 minutes) under IEC standard 60529

Chip

- A11 Bionic chip
- Neural Engine

Camera

- Single 12MP Wide camera
- Wide: f/1.8 aperture
- Digital zoom up to 5x
- Optical image stabilization
- Six-element lens
- LED True Tone flash with Slow Sync
- Panorama (up to 63MP)

- Live Photos with stabilization
- Wide color capture for photos and Live Photos
- Auto HDR for photos
- Auto image stabilization
- Burst mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video
- 2x optical zoom in; digital zoom up to 6x (iPhone 8 Plus only)
- LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video formats recorded: HEVC and H.264

FaceTime HD Camera

- 7MP camera
- f/2.2 aperture
- 1080p HD video recording at 30 fps
- Retina Flash
- Wide color capture for photos and Live Photos
- Auto HDR for photos
- Auto image stabilization
- Burst mode

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- **Model A1863***
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 TD-SCDMA 1900 (F), 2000 (A)
 CDMA EV-DO Rev. A (800, 1900, 2100 MHz)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1905***
Models A1905 and A1897 do not support CDMA networks, such as those used by Verizon and Sprint.
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
 802.11ac Wi-Fi with MIMO
 Bluetooth 5.0 wireless technology
 NFC with reader mode
 Express Cards

Location

- Built-in GPS/GNSS

- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁴

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁴

- FaceTime audio
- Voice over LTE (VoLTE)⁵
- Wi-Fi calling⁵

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Stereo playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- Supports Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Home/Touch ID sensor
- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speaker
- Lightning connector
- Built-in microphone

Power and Battery⁸

Lasts about the same as iPhone 7

- Talk time (wireless): Up to 14 hours
- Internet use: Up to 12 hours
- Video playback (wireless): Up to 13 hours
- Audio playback (wireless): Up to 40 hours
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher (sold separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 13

iOS is the world's most personal and secure mobile operating system, packed with powerful features and designed to protect your privacy.

See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 8. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My
- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie

- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Nano-SIM
- iPhone 8 and iPhone 8 Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 8 (Model A1863, A1905): M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹¹
- Syncing to a Mac or a PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.9 or later (free download from itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY,
 Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key,
 Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria,
 Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10 Key), Spanish (Latin America,
 Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla,
 Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng),
 Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish,
 Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian,
 Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari),
 Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin),
 Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia,
 Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali
 (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili,

Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh

- **QuickType keyboard support with predictive inputs**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 13
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. [Learn more](#)

iPhone 8 and iPhone 8 Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Highly recyclable aluminum

Apple and the Environment

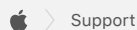
Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see support.apple.com/kb/HT3939. For details on LTE support, contact your carrier and see apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 11GB to 14GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone 8 and iPhone 8 Plus are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529 (maximum depth of 1 meter up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
5. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see apple.com/iphone/LTE.
6. Standard Dynamic Range video content only.
7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
9. Testing conducted by Apple in August 2017 using preproduction iPhone 8 and iPhone 8 Plus units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1718, 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
10. Qi wireless chargers sold separately.
11. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. View complete list.

Published Date: Oct 2, 2019





Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 8 Plus – Technical Specifications

 Languages


Finish

- Gold
- Silver
- Space Gray
- (PRODUCT)RED™

Capacity¹

- 64GB
- 128GB
- 256GB

Size and Weight²

- Height: 6.24 inches (158.4 mm)
- Width: 3.07 inches (78.1 mm)
- Depth: 0.30 inch (7.5 mm)
- Weight: 7.13 ounces (202 grams)

Display

- Retina HD display
- 5.5-inch (diagonal) widescreen LCD Multi-Touch display with IPS technology
- 1920-by-1080-pixel resolution at 401 ppi
- 1300:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- 3D Touch
- 625 nits max brightness (typical)
- Dual-domain pixels for wide viewing angles
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously
- Display Zoom
- Reachability

Splash, Water, and Dust Resistant³

- Rated IP67 (maximum depth of 1 meter up to 30 minutes) under IEC standard 60529

Chip

- A11 Bionic chip
- Neural Engine

Camera

- Dual 12MP Wide and Telephoto cameras
- Wide: f/1.8 aperture
- Telephoto: f/2.8 aperture
- 2x optical zoom in; digital zoom up to 10x
- Portrait mode
- Portrait Lighting with five effects (Natural, Studio, Contour, Stage, Stage Mono)
- Optical image stabilization

- Six-element lens
- LED True Tone flash with Slow Sync
- Panorama (up to 63MP)
- Live Photos with stabilization
- Wide color capture for photos and Live Photos
- Auto HDR for photos
- Auto image stabilization
- Burst mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video
- 2x optical zoom in; digital zoom up to 6x (iPhone 8 Plus only)
- LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video formats recorded: HEVC and H.264

FaceTime HD Camera

- 7MP camera
- f/2.2 aperture
- 1080p HD video recording at 30 fps
- Retina Flash
- Wide color capture for photos and Live Photos
- Auto HDR for photos
- Auto image stabilization
- Burst mode

Touch ID

- Fingerprint sensor built into the Home button

Apple Pay

- Pay with your iPhone using Touch ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- **Model A1864***
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 TD-SCDMA 1900 (F), 2000 (A)
 CDMA EV-DO Rev. A (800, 1900, 2100 MHz)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1897***
Models A1905 and A1897 do not support CDMA networks, such as those used by Verizon and Sprint.
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
 802.11ac Wi-Fi with MIMO
 Bluetooth 5.0 wireless technology
 NFC with reader mode
 Express Cards

Location

- Built-in GPS/GNSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁴

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁴

- FaceTime audio
- Voice over LTE (VoLTE)⁵
- Wi-Fi calling⁵

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Stereo playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- Supports Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Home/Touch ID sensor
- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speaker
- Lightning connector
- Built-in microphone

Power and Battery⁸

Lasts about the same as iPhone 7 Plus

- Talk time (wireless): Up to 21 hours
- Internet use: Up to 13 hours
- Video playback (wireless): Up to 14 hours
- Audio playback (wireless): Up to 60 hours
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher (sold separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Touch ID fingerprint sensor
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 13

iOS is the world's most personal and secure mobile operating system, packed with powerful features and designed to protect your privacy.

See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 8. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My
- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Nano-SIM
- iPhone 8 and iPhone 8 Plus are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone 8 Plus (Model A1864, A1897): M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹¹
- Syncing to a Mac or a PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.9 or later (free download from itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY,
 Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key,
 Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria,
 Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10 Key), Spanish (Latin America,
 Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla,
 Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng),
 Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish,
 Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian,
 Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari),
 Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin),
 Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia,
 Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali
 (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili,

Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh

- **QuickType keyboard support with predictive inputs**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 13
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. [Learn more](#)

iPhone 8 and iPhone 8 Plus embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free LED-backlit display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Highly recyclable aluminum

Apple and the Environment

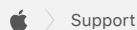
Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see support.apple.com/kb/HT3939. For details on LTE support, contact your carrier and see apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 11GB to 14GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone 8 and iPhone 8 Plus are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529 (maximum depth of 1 meter up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
5. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see apple.com/iphone/LTE.
6. Standard Dynamic Range video content only.
7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
9. Testing conducted by Apple in August 2017 using preproduction iPhone 8 and iPhone 8 Plus units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1718, 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
10. Qi wireless chargers sold separately.
11. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. View complete list.

Published Date: Oct 18, 2019



Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 11 – Technical Specifications

 Languages


Finish

- Black
- Green
- Yellow
- Purple
- (PRODUCT)RED™
- White

Capacity¹

- 64GB
- 128GB
- 256GB

Size and Weight²

- Width: 2.98 inches (75.7 mm)
- Height: 5.94 inches (150.9 mm)
- Depth: 0.33 inch (8.3 mm)
- Weight: 6.84 ounces (194 grams)

Display

- Liquid Retina HD display
- 6.1-inch (diagonal) all-screen LCD Multi-Touch display with IPS technology
- 1792-by-828-pixel resolution at 326 ppi
- 1400:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- Haptic Touch
- 625 nits max brightness (typical)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone 11 display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 6.06 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP68 (maximum depth of 2 meter up to 30 minutes) under IEC standard 60529

Chip

- A13 Bionic chip
- Third-generation Neural Engine

Camera

- Dual 12MP Ultra Wide and Wide cameras
- Ultra Wide: f/2.4 aperture and 120° field of view
- Wide: f/1.8 aperture
- 2x optical zoom out; digital zoom up to 5x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Optical image stabilization (Wide)
- Five-element lens (Ultra Wide); six-element lens (Wide)

- Brighter True Tone flash with Slow Sync
- Panorama (up to 63MP)
- 100% Focus Pixels (Wide)
- Night mode
- Auto Adjustments
- Next-generation Smart HDR for photos
- Wide color capture for photos and Live Photos
- Advanced red-eye correction
- Auto image stabilization
- Burst mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 30 fps
- Optical image stabilization for video (Wide)
- 2x optical zoom out; digital zoom up to 3x
- Audio zoom
- Brighter True Tone flash
- QuickTake video with subject tracking
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (4K, 1080p, and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 12MP camera
- $f/2.2$ aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Animoji and Memoji
- 4K video recording at 24 fps, 30fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- Slo-mo video support for 1080p at 120 fps
- Next-generation Smart HDR for photos
- Extended dynamic range for video at 30 fps
- Cinematic video stabilization (4K, 1080p, and 720p)
- Wide color capture for photos and Live Photos
- Retina Flash
- Auto image stabilization
- Burst mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- Model A2111*
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 66, 71)
 - TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)
 - CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

▪ All models

Gigabit-class LTE with 2x2 MIMO and LAA⁴

802.11ax Wi-Fi 6 with 2x2 MIMO

Bluetooth 5.0 wireless technology

Ultra Wideband chip for spatial awareness⁵

NFC with reader mode

Express Cards with power reserve

Location

- Built-in GPS/GNSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁶

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁶

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Spatial audio playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- Supports Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁷
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁷

Siri⁸

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speakers
- Lightning connector
- Built-in microphones

Power and Battery⁹

- Lasts up to 1 hour longer than iPhone XR
- Video playback: Up to 17 hours
- Video playback (streamed): Up to 10 hours
- Audio playback: Up to 65 hours
- Fast-charge capable: Up to 50% charge in 30 minutes¹⁰ with 18W adapter or higher (sold separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹¹)
- Charging via USB to computer system or power adapter

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

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See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 11. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My

- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Numbers
- Keynote
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹²
- iPhone 11 is not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹³
- Syncing to a Mac or PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.10 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Non-operating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY,
 Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key,
 Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria,
 Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10 Key), Spanish (Latin America,
 Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla,
 Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng),

Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia, Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh

- **QuickType keyboard support with predictive input**

English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese

- **Siri languages**

English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)

- **Dictation languages**

English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghainese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **Definition dictionary support**

English, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Korean, Spanish, Danish, Dutch, Hebrew, Hindi, Norwegian, Portuguese, Russian, Swedish, Thai, Turkish

- **Thesaurus**

English (UK, U.S.)

- **Bilingual dictionary support with English**

Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese

- **Spell check**

English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 13
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. [Learn more](#)

iPhone 11 embodies Apple's continuing environmental progress. It is designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable low-carbon aluminum

Apple and the Environment

Read our Product Environmental Reports for detailed information on the environmental performance of every

Apple product.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 11GB to 14GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone 11 is splash, water, and dust resistant and was tested under controlled laboratory conditions with a rating of IP68 under IEC standard 60529 (maximum depth of 2 meters up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. Data plan required. Gigabit-class LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see apple.com/iphone/LTE.
5. Ultra Wideband availability varies by region. See apple.com/ios/feature-availability for details.
6. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
7. Standard Dynamic Range video content only.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
10. Testing conducted by Apple in August 2019 using preproduction iPhone 11, iPhone 11 Pro, and iPhone 11 Pro Max units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1947 and 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
11. Qi wireless chargers sold separately.
12. Use of eSIM requires a wireless service plan (which may include restrictions on switching service providers and roaming, even after contract expiration). Not all carriers support eSIM. Use of eSIM in iPhone may be disabled when purchased from some carriers. See your carrier for details. To learn more, visit <https://support.apple.com/kb/HT209044>.
13. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. View complete list.

Published Date: Mar 20, 2020

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone 11 Pro – Technical Specifications

 Languages


Finish

- Gold
- Space Gray
- Silver
- Midnight Green

Capacity¹

- 64GB
- 256GB
- 512GB

Size and Weight²

- Width: 2.81 inches (71.4 mm)
- Height: 5.67 inches (144.0 mm)
- Depth: 0.32 inch (8.1 mm)
- Weight: 6.63 ounces (188 grams)

Display

- Super Retina XDR display
- 5.8-inch (diagonal) all-screen OLED Multi-Touch display
- HDR display
- 2436-by-1125-pixel resolution at 458 ppi
- 2,000,000:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- Haptic Touch
- 800 nits max brightness (typical); 1200 nits max brightness (HDR)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone 11 Pro display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 5.85 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP68 (maximum depth of 4 meters up to 30 minutes) under IEC standard 60529

Chip

- A13 Bionic chip
- Third-generation Neural Engine

Camera

- Triple 12MP Ultra Wide, Wide, and Telephoto cameras
- Ultra Wide: f/2.4 aperture and 120° field of view
- Wide: f/1.8 aperture
- Telephoto: f/2.0 aperture
- 2x optical zoom in, 2x optical zoom out; digital zoom up to 10x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Dual optical image stabilization (Wide and Telephoto)

- Five-element lens (Ultra Wide); six-element lens (Wide and Telephoto)
- Brighter True Tone flash with Slow Sync
- Panorama (up to 63MP)
- 100% Focus Pixels (Wide)
- Night mode
- Auto Adjustments
- Next-generation Smart HDR for photos
- Wide color capture for photos and Live Photos
- Advanced red-eye correction
- Photo geotagging
- Auto image stabilization
- Burst mode
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 60 fps
- Optical image stabilization for video (Wide and Telephoto)
- 2x optical zoom in, 2x optical zoom out; digital zoom up to 6x
- Audio zoom
- Brighter True Tone flash
- QuickTake video with subject tracking
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (4K, 1080p, and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 12MP camera
- $f/2.2$ aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Animoji and Memoji
- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- Slo-mo video support for 1080p at 120 fps
- Next-generation Smart HDR for photos
- Extended dynamic range for video at 30 fps
- Cinematic video stabilization (4K, 1080p, and 720p)
- Wide color capture for photos and Live Photos
- Retina Flash
- Auto image stabilization
- Burst mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- Model A2160*
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 66, 71)
 - TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)
 - CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

- **Model A2161***

FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 66, 71)

TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)

CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

- **All models**

Gigabit-class LTE with 4x4 MIMO and LAA⁴

802.11ax Wi-Fi 6 with 2x2 MIMO

Bluetooth 5.0 wireless technology

Ultra Wideband chip for spatial awareness⁵

NFC with reader mode

Express Cards with power reserve

Location

- Built-in GPS/GNSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁶

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁶

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Spatial audio playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- High Dynamic Range with Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁷
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁷

Siri⁸

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using "Hey Siri"
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Volume up/down
- Ring/Silent switch
- Side button
- Built-in stereo speakers
- Lightning connector
- Built-in microphones

Power and Battery⁹

- Lasts up to 4 hours longer than iPhone XS
- Video playback: Up to 18 hours
- Video playback (streamed): Up to 11 hours
- Audio playback: Up to 65 hours

- 18W adapter included
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher¹¹

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 13

iOS is the world's most personal and secure mobile operating system, packed with powerful features and designed to protect your privacy.

See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 11 Pro. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks

- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My
- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹²
- iPhone 11 Pro and iPhone 11 Pro Max are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹³
- Syncing to a Mac or PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.10 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2–Set, 10 Key), Spanish (Latin America, Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla, Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng), Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia, Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh
- **QuickType keyboard support with predictive input**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghainese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Korean, Spanish, Danish, Dutch, Hebrew, Hindi, Norwegian, Portuguese, Russian, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

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- iPhone with iOS 13
- EarPods with Lightning Connector
- USB–C to Lightning Cable
- 18W USB–C Power Adapter
- Documentation

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Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone 11 Pro and iPhone 11 Pro Max embody Apple’s continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass

- Mercury-free display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable stainless steel

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Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

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2. Size and weight vary by configuration and manufacturing process.
3. iPhone 11 Pro and iPhone 11 Pro Max are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP68 under IEC standard 60529 (maximum depth of 4 meters up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
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5. Ultra Wideband availability varies by region. See apple.com/ios/feature-availability for details.
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7. Standard Dynamic Range video content only.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
10. Qi wireless chargers sold separately.
11. Testing conducted by Apple in August 2019 using preproduction iPhone 11, iPhone 11 Pro, and iPhone 11 Pro Max units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1947 and 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
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13. Wireless broadband recommended; fees may apply.

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iPhone 11 Pro Max – Technical Specifications

Languages 

Finish

- Gold
- Space Gray
- Silver
- Midnight Green

Capacity¹

- 64GB
- 256GB
- 512GB

Size and Weight²

- Width: 3.06 inches (77.8 mm)
- Height: 6.22 inches (158.0 mm)
- Depth: 0.32 inch (8.1 mm)
- Weight: 7.97 ounces (226 grams)

Display

- Super Retina XDR display
- 6.5-inch (diagonal) all-screen OLED Multi-Touch display
- HDR display
- 2688-by-1242-pixel resolution at 458 ppi
- 2,000,000:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- Haptic Touch
- 800 nits max brightness (typical); 1200 nits max brightness (HDR)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone 11 Pro Max display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 6.46 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP68 (maximum depth of 4 meters up to 30 minutes) under IEC standard 60529

Chip

- A13 Bionic chip
- Third-generation Neural Engine

Camera

- Triple 12MP Ultra Wide, Wide, and Telephoto cameras
- Ultra Wide: $f/2.4$ aperture and 120° field of view
- Wide: $f/1.8$ aperture
- Telephoto: $f/2.0$ aperture
- 2x optical zoom in, 2x optical zoom out; digital zoom up to 10x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Dual optical image stabilization (Wide and Telephoto)

- Five-element lens (Ultra Wide); six-element lens (Wide and Telephoto)
- Brighter True Tone flash with Slow Sync
- Panorama (up to 63MP)
- 100% Focus Pixels (Wide)
- Night mode
- Auto Adjustments
- Next-generation Smart HDR for photos
- Wide color capture for photos and Live Photos
- Advanced red-eye correction
- Photo geotagging
- Auto image stabilization
- Burst mode
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 60 fps
- Optical image stabilization for video (Wide and Telephoto)
- 2x optical zoom in, 2x optical zoom out; digital zoom up to 6x
- Audio zoom
- Brighter True Tone flash
- QuickTake video with subject tracking
- Slo-mo video support for 1080p at 120 fps or 240 fps
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- Take 8MP still photos while recording 4K video
- Playback zoom
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- 12MP camera
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 - CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

▪ **Model A2161***

FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 66, 71)

TD-LTE (Bands 34, 38, 39, 40, 41, 42, 46, 48)

CDMA EV-DO Rev. A (800, 1900 MHz)

UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)

GSM/EDGE (850, 900, 1800, 1900 MHz)

▪ **All models**

Gigabit-class LTE with 4x4 MIMO and LAA⁴

802.11ax Wi-Fi 6 with 2x2 MIMO

Bluetooth 5.0 wireless technology

Ultra Wideband chip for spatial awareness⁵

NFC with reader mode

Express Cards with power reserve

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- Built-in GPS/GNSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

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- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁶

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

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- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
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- User-configurable maximum volume limit

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- Side button
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- Lightning connector
- Built-in microphones

Power and Battery⁹

- Lasts up to 5 hours longer than iPhone XS Max
- Video playback: Up to 20 hours
- Video playback (streamed): Up to 12 hours
- Audio playback: Up to 80 hours

- 18W adapter included
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter
- Fast-charge capable: Up to 50% charge in 30 minutes¹⁰ with 18W adapter or higher¹¹

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 13

iOS is the world's most personal and secure mobile operating system, packed with powerful features and designed to protect your privacy.

See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone 11 Pro. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks

- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My
- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹²
- iPhone 11 Pro and iPhone 11 Pro Max are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹³
- Syncing to a Mac or PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.10 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key, Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2–Set, 10 Key), Spanish (Latin America, Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla, Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng), Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian, Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari), Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin), Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia, Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili, Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh
- **QuickType keyboard support with predictive input**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghainese (China mainland), Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Korean, Spanish, Danish, Dutch, Hebrew, Hindi, Norwegian, Portuguese, Russian, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 13
- EarPods with Lightning Connector
- USB–C to Lightning Cable
- 18W USB–C Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone 11 Pro and iPhone 11 Pro Max embody Apple’s continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass

- Mercury-free display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable stainless steel

Apple and the Environment

Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 11GB to 14GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone 11 Pro and iPhone 11 Pro Max are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP68 under IEC standard 60529 (maximum depth of 4 meters up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. Data plan required. Gigabit-class LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see apple.com/iphone/LTE.
5. Ultra Wideband availability varies by region. See apple.com/ios/feature-availability for details.
6. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
7. Standard Dynamic Range video content only.
8. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
9. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
10. Qi wireless chargers sold separately.
11. Testing conducted by Apple in August 2019 using preproduction iPhone 11, iPhone 11 Pro, and iPhone 11 Pro Max units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1947 and 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
12. Use of eSIM requires a wireless service plan (which may include restrictions on switching service providers and roaming, even after contract expiration). Not all carriers support eSIM. Use of eSIM in iPhone may be disabled when purchased from some carriers. See your carrier for details. To learn more, visit <https://support.apple.com/kb/HT209044>.
13. Wireless broadband recommended; fees may apply.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

Some features may not be available for all countries or all areas. View complete list.

Published Date: Mar 20, 2020

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone X – Technical Specifications

Languages 

Finish

- Space Gray
- Silver

Capacity¹

- 64GB
- 256GB

Size and Weight²

- Height: 5.65 inches (143.6 mm)
- Width: 2.79 inches (70.9 mm)
- Depth: 0.30 inch (7.7 mm)
- Weight: 6.14 ounces (174 grams)

Display

- Super Retina HD display
- 5.8-inch (diagonal) all-screen OLED Multi-Touch display
- HDR display
- 2436-by-1125-pixel resolution at 458 ppi
- 1,000,000:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- 3D Touch
- 625 cd/m2 max brightness (typical)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone X display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 5.85 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP67 under IEC standard 60529

Chip

- A11 Bionic chip with 64-bit architecture
- Neural engine
- Embedded M11 motion coprocessor

Camera

- 12MP wide-angle and telephoto cameras
- Wide-angle: f/1.8 aperture
- Telephoto: f/2.4 aperture
- Optical zoom; digital zoom up to 10x
- Portrait mode
- Portrait Lighting (beta)
- Dual optical image stabilization

- Six-element lens
- Quad-LED True Tone flash with Slow Sync
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Backside illumination sensor
- Hybrid IR filter
- Autofocus with Focus Pixels
- Tap to focus with Focus Pixels
- Live Photos with stabilization
- Wide color capture for photos and Live Photos
- Improved local tone mapping
- Body and face detection
- Exposure control
- Noise reduction
- Auto HDR for photos
- Auto image stabilization
- Burst mode
- Timer mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Optical image stabilization for video
- Optical zoom; 6x digital zoom
- Quad-LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Body and face detection
- Noise reduction
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video geotagging
- Video formats recorded: HEVC and H.264

TrueDepth Camera

- 7MP camera
- Portrait mode
- Portrait Lighting (beta)
- Animoji
- 1080p HD video recording
- Retina Flash
- f/2.2 aperture
- Wide color capture for photos and Live Photos
- Auto HDR
- Backside illumination sensor
- Body and face detection
- Auto image stabilization
- Burst mode
- Exposure control
- Timer mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Complete purchases made with Apple Pay on your Mac
- Receive and redeem rewards using rewards cards

Learn more about Apple Pay

Cellular and Wireless

- **Model A1865***
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 TD-SCDMA 1900 (F), 2000 (A)
 CDMA EV-DO Rev. A (800, 1900, 2100 MHz)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1901***
Model A1901 does not support CDMA networks, such as those used by Verizon and Sprint.
 FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 17, 18, 19, 20, 25, 26, 28, 29, 30, 66)
 TD-LTE (Bands 34, 38, 39, 40, 41)
 UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
 802.11ac Wi-Fi with MIMO
 Bluetooth 5.0 wireless technology
 NFC with reader mode

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁴

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁴

- FaceTime audio
- Voice over LTE (VoLTE)⁵
- Wi-Fi calling⁵

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- High Dynamic Range with Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions in Messages, Mail, QuickType, and more
- Activate with only your voice using “Hey Siri”
- Listen and identify songs

Learn more about Siri**External Buttons and Connectors**

- Volume up/down
- Ring/Silent switch
- Side button
- Built-in stereo speaker
- Built-in microphone
- Lightning connector

Power and Battery⁸

- Lasts up to 2 hours longer than iPhone 7
- Talk time (wireless): Up to 21 hours

- Internet use: Up to 12 hours
- Video playback (wireless): Up to 13 hours
- Audio playback (wireless): Up to 60 hours
- Fast-charge capable: Up to 50% charge 30 minutes⁹
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi-certified chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 11

With new features and capabilities that let you get more done quickly and easily, iOS 11 makes iPhone more powerful, personal, and intelligent than ever.

See what's new in iOS 11

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone X. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- Software TTY
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- iBooks
- Home
- Weather
- Reminders
- Clock
- TV

- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My iPhone
- Find My Friends
- Settings
- Files

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Numbers
- Keynote
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips

Headphones

- EarPods with Lightning Connector

SIM Card

- Nano-SIM
- iPhone X is not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- iPhone X (Model A1865, A1901): M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics

System Requirements

- Apple ID (required for some features)
- Internet access¹¹
- Syncing with iTunes on a Mac or PC requires:
 - Mac: OS X 10.10.5 or later
 - PC: Windows 7 or later
 - iTunes 12.7 or later (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke),

Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori, Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh

- **QuickType keyboard support with predictive input**

English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish

- **Siri languages**

English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)

- **Dictation languages**

English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese

- **Definition dictionary support**

English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish

- **Bilingual dictionary support**

Chinese (Simplified), Dutch, French, German, Italian, Japanese, Korean, Portuguese, Russian, Spanish

- **Spell check**

English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 11
- EarPods with Lightning Connector
- Lightning to 3.5 mm Headphone Jack Adapter
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone X embodies Apple's continuing environmental progress. It is designed with the following features to reduce environmental impact:

- Mercury-free
- Arsenic-free display glass
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Highly recyclable stainless steel

Apple and the Environment


Learn more about Apple's dedication to reducing the environmental impact of our products and process. Or read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 8GB to 11GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone X is splash, water, and dust resistant and was tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529. Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
5. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
6. Standard Dynamic Range video content only.
7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
9. Testing conducted by Apple in August 2017 using preproduction iPhone X units and software and accessory Apple USB-C Power Adapters (29W Model A1540, 61W Model A1718, 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
10. Compatible Qi-certified wireless chargers sold separately.
11. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here to see complete list.](#)

Published Date: Aug 9, 2019

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone XR – Technical Specifications

 Languages


Finish

- (PRODUCT)RED™
- Yellow
- White
- Coral
- Black
- Blue

Capacity¹

- 64GB
- 128GB
- 256GB

Size and Weight²

- Width: 2.98 inches (75.7 mm)
- Height: 5.94 inches (150.9 mm)
- Depth: 0.33 inch (8.3 mm)
- Weight: 6.84 ounces (194 grams)

Display

- Liquid Retina HD display
- 6.1-inch (diagonal) all-screen LCD Multi-Touch display with IPS technology
- 1792-by-828-pixel resolution at 326 ppi
- 1400:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- Haptic Touch
- 625 nits max brightness (typical)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone XR display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 6.06 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP67 (maximum depth of 1 meter up to 30 minutes) under IEC standard 60529

Chip

- A12 Bionic chip
- Second-generation Neural Engine

Camera

- 12MP Wide camera
- $f/1.8$ aperture
- Digital zoom up to 5x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with three effects (Natural, Studio, Contour)
- Optical image stabilization
- Six-element lens

- LED True Tone flash with Slow Sync
- Panorama (up to 63MP)
- Autofocus with Focus Pixels
- Smart HDR for photos
- Wide color capture for photos and Live Photos
- Advanced red-eye correction
- Auto image stabilization
- Burst mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 30 fps
- Optical image stabilization for video
- Digital zoom up to 3x
- LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 7MP camera
- f/2.2 aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with six effects (Natural, Studio, Contour, Stage, Stage Mono, High-Key Mono)
- Animoji and Memoji
- 1080p HD video recording at 30 fps or 60 fps
- Smart HDR for photos
- Extended dynamic range for video at 30 fps
- Cinematic video stabilization (1080p and 720p)
- Wide color capture for photos and Live Photos
- Retina Flash
- Auto image stabilization
- Burst mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- **Model A1984***
 - FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 32, 66, 71)
 - TD-LTE (Bands 34, 38, 39, 40, 41)
 - CDMA EV-DO Rev. A (800, 1900 MHz)
 - UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
 - GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
 - LTE Advanced⁴
 - 802.11ac Wi-Fi with 2x2 MIMO
 - Bluetooth 5.0 wireless technology

- NFC with reader mode
- Express Cards with power reserve

Location

- Built-in GPS/GNSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁵

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁵

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Wider stereo playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- Supports Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speaker
- Lightning connector
- Built-in microphones

Power and Battery⁸

- Lasts up to 1.5 hours longer than iPhone 8 Plus
- Talk time (wireless): Up to 25 hours
- Internet use: Up to 15 hours
- Video playback (wireless): Up to 16 hours
- Audio playback (wireless): Up to 65 hours
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher (sold separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 13

iOS is the world's most personal and secure mobile operating system, packed with powerful features and designed to protect your privacy.

See what's new in iOS 13

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone XR. With built-in support for vision, hearing, mobility, and learning, you can fully enjoy the world's most personal device. Learn more

Features include:

- Voice Control
- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My
- Settings
- Files
- Measure
- Shortcuts

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Numbers
- Keynote
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹¹
- iPhone XR is not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹²
- Syncing to a Mac or a PC requires:
 - macOS Catalina 10.15 using the Finder
 - macOS El Capitan 10.11.6 through macOS Mojave 10.14.6 using iTunes 12.8 or later
 - Windows 7 or later using iTunes 12.9 or later (free download from itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
 English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France),
 German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech,
 Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese
 (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
 English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin QWERTY,
 Pinyin 10 Key, Shuangpin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin QWERTY, Pinyin 10 Key,
 Shuangpin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria,
 Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean (2-Set, 10 Key), Spanish (Latin America,
 Mexico, Spain), Albanian, Arabic (Modern Standard, Najdi), Armenian, Assamese, Azerbaijani, Bangla,
 Belarusian, Bodo, Bulgarian, Burmese, Cantonese – Traditional (Cangjie, Handwriting, Stroke, Sucheng),
 Catalan, Cherokee, Croatian, Czech, Danish, Dhivehi, Dogri, Dutch, Emoji, Estonian, Faroese, Filipino, Finnish,
 Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Latin, Transliteration), Hungarian,
 Icelandic, Indonesian, Irish, Kannada, Kashmiri (Arabic, Devanagari), Kazakh, Khmer, Konkani (Devanagari),
 Kurdish (Arabic, Latin), Kyrgyz, Lao, Latvian, Lithuanian, Macedonian, Maithili (Bangla), Malay (Arabic, Latin),
 Malayalam, Maltese, Manipuri (Bangla, Meetei Mayek), Maori, Marathi, Mongolian, Nepali, Norwegian, Odia,
 Pashto, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Sanskrit, Santali
 (Devanagari, Ol Chiki), Serbian (Cyrillic, Latin), Sindhi (Arabic, Devanagari), Sinhala, Slovak, Slovenian, Swahili,

Swedish, Tajik, Tamil (Anjal, Tamil 99), Telugu, Thai, Tibetan, Tongan, Turkish, Turkmen, Ukrainian, Urdu, Uyghur, Uzbek (Arabic, Cyrillic, Latin), Vietnamese, Welsh

- **QuickType keyboard support with predictive inputs**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic (Najdi), Cantonese (Traditional), Dutch, Hindi (Devanagari, Latin), Portuguese (Brazil, Portugal), Russian, Swedish, Thai, Turkish, Vietnamese
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), French, German, Italian, Japanese, Spanish, Korean, Dutch, Hindi, Portuguese, Russian, Thai, Vietnamese
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 13
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. [Learn more](#)

iPhone XR embodies Apple's continuing environmental progress. It is designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free display
- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable low-carbon aluminum

Apple and the Environment

Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see support.apple.com/kb/HT3939. For details on LTE support, contact your carrier and see apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 11GB to 14GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them. Storage capacity subject to change based on software version and may vary by device.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone XR is splash, water, and dust resistant and was tested under controlled laboratory conditions with a rating of IP67 under IEC standard 60529 (maximum depth of 1 meter up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. Data plan required. LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see apple.com/iphone/LTE.
5. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
6. Standard Dynamic Range video content only.
7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See apple.com/batteries and apple.com/iphone/battery.html for more information.
9. Testing conducted by Apple in August 2018 using preproduction iPhone XR units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1718, 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
10. Qi wireless chargers sold separately.
11. Use of eSIM requires a wireless service plan (which may include restrictions on switching service providers and roaming, even after contract expiration). Not all carriers support eSIM. Use of eSIM in iPhone may be disabled when purchased from some carriers. See your carrier for details. To learn more, visit support.apple.com/kb/HT209044.
12. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [View complete list.](#)

Published Date: Mar 20, 2020

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone XS – Technical Specifications

 Languages


Finish

- Gold
- Space Gray
- Silver

Capacity¹

- 64GB
- 256GB
- 512GB

Size and Weight²

- Width: 2.79 inches (70.9 mm)
- Height: 5.65 inches (143.6 mm)
- Depth: 0.30 inch (7.7 mm)
- Weight: 6.24 ounces (177 grams)

Display

- Super Retina HD display
- 5.8-inch (diagonal) all-screen OLED Multi-Touch display
- HDR display
- 2436-by-1125-pixel resolution at 458 ppi
- 1,000,000:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- 3D Touch
- 625 cd/m2 max brightness (typical)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone XS display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 5.85 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP68 (maximum depth of 2 meters up to 30 minutes) under IEC standard 60529

Chip

- A12 Bionic chip
- Next-generation Neural Engine

Camera

- Dual 12MP wide-angle and telephoto cameras
- Wide-angle: f/1.8 aperture
- Telephoto: f/2.4 aperture
- 2x optical zoom; digital zoom up to 10x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with five effects (Natural, Studio, Contour, Stage, Stage Mono)
- Dual optical image stabilization
- Six-element lens

- Quad-LED True Tone flash with Slow Sync
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Backside illumination sensor
- Hybrid IR filter
- Autofocus with Focus Pixels
- Tap to focus with Focus Pixels
- Smart HDR for photos
- Wide color capture for photos and Live Photos
- Local tone mapping
- Advanced red-eye correction
- Exposure control
- Auto image stabilization
- Burst mode
- Timer mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 30 fps
- Optical image stabilization for video
- 2x optical zoom; digital zoom up to 6x
- Quad-LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video geotagging
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 7MP camera
- $f/2.2$ aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with five effects (Natural, Studio, Contour, Stage, Stage Mono)
- Animoji and Memoji
- 1080p HD video recording at 30 fps or 60 fps
- Smart HDR for photos
- Extended dynamic range for video at 30 fps
- Cinematic video stabilization (1080p and 720p)
- Wide color capture for photos and Live Photos
- Retina Flash
- Backside illumination sensor
- Auto image stabilization
- Burst mode
- Exposure control
- Timer mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- **Model A1920***
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 46)
CDMA EV-DO Rev. A (800, 1900 MHz)
UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1921***
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 46)
CDMA EV-DO Rev. A (800, 1900 MHz)
UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
Gigabit-class LTE with 4x4 MIMO and LAA⁴
802.11ac Wi-Fi with 2x2 MIMO
Bluetooth 5.0 wireless technology
NFC with reader mode
Express Cards with power reserve

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁵

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁵

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Wider stereo playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- High Dynamic Range with Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using “Hey Siri”
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speaker
- Lightning connector
- Built-in microphones

Power and Battery⁸

- Lasts up to 30 minutes longer than iPhone X

- Talk time (wireless): Up to 20 hours
- Internet use: Up to 12 hours
- Video playback (wireless): Up to 14 hours
- Audio playback (wireless): Up to 60 hours
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher (available separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 12

iOS is the world's most personal and secure mobile operating system, packed with powerful features that help you get the most out of every day.

See what's new in iOS 12

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone XS. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather
- Reminders
- Clock

- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My iPhone
- Find My Friends
- Settings
- Files
- Measure

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Shortcuts
- Support

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹¹
- iPhone XS and iPhone XS Max are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹²
- Syncing with iTunes on a Mac or PC requires:
 - Mac: OS X 10.11.6 or later
 - PC: Windows 7 or later
 - iTunes 12.8 or later on Mac and iTunes 12.9 or later on PC (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: -4° to 113° F (-20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori, Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh
- **QuickType keyboard support with predictive input**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), Dutch, French, German, Hindi, Italian, Japanese, Korean, Portuguese, Russian, Spanish
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

- iPhone with iOS 12
- EarPods with Lightning Connector
- Lightning to USB Cable
- USB Power Adapter
- Documentation

iPhone and the Environment

Apple takes a complete product life cycle approach to determining our environmental impact. Learn more

iPhone XS and iPhone XS Max embody Apple's continuing environmental progress. They are designed with the following features to reduce environmental impact:

- Arsenic-free display glass
- Mercury-free display

- Brominated flame retardant-free
- PVC-free
- Beryllium-free
- Recyclable stainless steel

Apple and the Environment


Read our Product Environmental Reports for detailed information on the environmental performance of every Apple product.

* To identify your iPhone model number, see <https://support.apple.com/kb/HT3939>. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE. Cellular technology support is based on iPhone model number and configuration for either CDMA or GSM networks.

1. Available space is less and varies due to many factors. A standard configuration uses approximately 10GB to 12GB of space (including iOS and preinstalled apps) depending on the model and settings. Preinstalled apps use about 4GB, and you can delete these apps and restore them.
2. Size and weight vary by configuration and manufacturing process.
3. iPhone XS and iPhone XS Max are splash, water, and dust resistant and were tested under controlled laboratory conditions with a rating of IP68 under IEC standard 60529 (maximum depth of 2 meters up to 30 minutes). Splash, water, and dust resistance are not permanent conditions and resistance might decrease as a result of normal wear. Do not attempt to charge a wet iPhone; refer to the user guide for cleaning and drying instructions. Liquid damage not covered under warranty.
4. Data plan required. Gigabit-class LTE, LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
5. FaceTime calling requires a FaceTime-enabled device for the caller and recipient and a Wi-Fi connection. Availability over a cellular network depends on carrier policies; data charges may apply.
6. Standard Dynamic Range video content only.
7. Siri may not be available in all languages or in all areas, and features may vary by area. Internet access required. Cellular data charges may apply.
8. All battery claims depend on network configuration and many other factors; actual results will vary. Battery has limited recharge cycles and may eventually need to be replaced by Apple service provider. Battery life and charge cycles vary by use and settings. See www.apple.com/batteries and www.apple.com/iphone/battery.html for more information.
9. Testing conducted by Apple in August 2018 using preproduction iPhone XS and iPhone XS Max units and software and accessory Apple USB-C Power Adapters (18W Model A1720, 29W Model A1540, 30W Model A1882, 61W Model A1718, 87W Model A1719). Fast-charge testing conducted with drained iPhone units. Charge time varies with environmental factors; actual results will vary.
10. Qi wireless chargers sold separately.
11. Use of eSIM requires a wireless service plan (which may include restrictions on switching service providers and roaming, even after contract expiration). Not all carriers support eSIM. Use of eSIM in iPhone may be disabled when purchased from some carriers. See your carrier for details. To learn more, visit <https://support.apple.com/kb/HT209044>.
12. Wireless broadband recommended; fees may apply.

Some features may not be available for all countries or all areas. [Click here](#) to see complete list.

Published Date: Jan 6, 2020

 > Support

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Mac

iPad

iPhone

Watch

TV

Music

Support



iPhone XS Max – Technical Specifications

 Languages


Finish

- Gold
- Space Gray
- Silver

Capacity¹

- 64GB
- 256GB
- 512GB

Size and Weight²

- Width: 3.05 inches (77.4 mm)
- Height: 6.20 inches (157.5 mm)
- Depth: 0.30 inch (7.7 mm)
- Weight: 7.34 ounces (208 grams)

Display

- Super Retina HD display
- 6.5-inch (diagonal) all-screen OLED Multi-Touch display
- HDR display
- 2688-by-1242-pixel resolution at 458 ppi
- 1,000,000:1 contrast ratio (typical)
- True Tone display
- Wide color display (P3)
- 3D Touch
- 625 cd/m² max brightness (typical)
- Fingerprint-resistant oleophobic coating
- Support for display of multiple languages and characters simultaneously

The iPhone XS Max display has rounded corners that follow a beautiful curved design, and these corners are within a standard rectangle. When measured as a standard rectangular shape, the screen is 6.46 inches diagonally (actual viewable area is less).

Splash, Water, and Dust Resistant³

- Rated IP68 (maximum depth of 2 meters up to 30 minutes) under IEC standard 60529

Chip

- A12 Bionic chip
- Next-generation Neural Engine

Camera

- Dual 12MP wide-angle and telephoto cameras
- Wide-angle: f/1.8 aperture
- Telephoto: f/2.4 aperture
- 2x optical zoom; digital zoom up to 10x
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with five effects (Natural, Studio, Contour, Stage, Stage Mono)

- Dual optical image stabilization
- Six-element lens
- Quad-LED True Tone flash with Slow Sync
- Panorama (up to 63MP)
- Sapphire crystal lens cover
- Backside illumination sensor
- Hybrid IR filter
- Autofocus with Focus Pixels
- Tap to focus with Focus Pixels
- Smart HDR for photos
- Wide color capture for photos and Live Photos
- Local tone mapping
- Advanced red-eye correction
- Exposure control
- Auto image stabilization
- Burst mode
- Timer mode
- Photo geotagging
- Image formats captured: HEIF and JPEG

Video Recording

- 4K video recording at 24 fps, 30 fps, or 60 fps
- 1080p HD video recording at 30 fps or 60 fps
- 720p HD video recording at 30 fps
- Extended dynamic range for video up to 30 fps
- Optical image stabilization for video
- 2x optical zoom; digital zoom up to 6x
- Quad-LED True Tone flash
- Slo-mo video support for 1080p at 120 fps or 240 fps
- Time-lapse video with stabilization
- Cinematic video stabilization (1080p and 720p)
- Continuous autofocus video
- Take 8MP still photos while recording 4K video
- Playback zoom
- Video geotagging
- Video formats recorded: HEVC and H.264
- Stereo recording

TrueDepth Camera

- 7MP camera
- f/2.2 aperture
- Portrait mode with advanced bokeh and Depth Control
- Portrait Lighting with five effects (Natural, Studio, Contour, Stage, Stage Mono)
- Animoji and Memoji
- 1080p HD video recording at 30 fps or 60 fps
- Smart HDR for photos
- Extended dynamic range for video at 30 fps
- Cinematic video stabilization (1080p and 720p)
- Wide color capture for photos and Live Photos
- Retina Flash
- Backside illumination sensor
- Auto image stabilization
- Burst mode
- Exposure control
- Timer mode

Face ID

- Enabled by TrueDepth camera for facial recognition

Apple Pay

- Pay with your iPhone using Face ID in stores, within apps, and on the web
- Send and receive money in Messages
- Complete purchases made with Apple Pay on your Mac

Learn more about Apple Pay

Cellular and Wireless

- **Model A1920***
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 46)
CDMA EV-DO Rev. A (800, 1900 MHz)
UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
GSM/EDGE (850, 900, 1800, 1900 MHz)
- **Model A1921***
FDD-LTE (Bands 1, 2, 3, 4, 5, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 29, 30, 32, 66, 71)
TD-LTE (Bands 34, 38, 39, 40, 41, 46)
CDMA EV-DO Rev. A (800, 1900 MHz)
UMTS/HSPA+/DC-HSDPA (850, 900, 1700/2100, 1900, 2100 MHz)
GSM/EDGE (850, 900, 1800, 1900 MHz)
- **All models**
Gigabit-class LTE with 4x4 MIMO and LAA⁴
802.11ac Wi-Fi with 2x2 MIMO
Bluetooth 5.0 wireless technology
NFC with reader mode
Express Cards with power reserve

Location

- Assisted GPS, GLONASS, Galileo, and QZSS
- Digital compass
- Wi-Fi
- Cellular
- iBeacon microlocation

Video Calling⁵

- FaceTime video calling over Wi-Fi or cellular

Audio Calling⁵

- FaceTime audio
- Voice over LTE (VoLTE)⁴
- Wi-Fi calling⁴

Audio Playback

- Audio formats supported: AAC-LC, HE-AAC, HE-AAC v2, Protected AAC, MP3, Linear PCM, Apple Lossless, FLAC, Dolby Digital (AC-3), Dolby Digital Plus (E-AC-3), Dolby Atmos, and Audible (formats 2, 3, 4, Audible Enhanced Audio, AAX, and AAX+)
- Wider stereo playback
- User-configurable maximum volume limit

Video Playback

- Video formats supported: HEVC, H.264, MPEG-4 Part 2, and Motion JPEG
- High Dynamic Range with Dolby Vision and HDR10 content
- AirPlay Mirroring, photos, and video out to Apple TV (2nd generation or later)⁶
- Video mirroring and video out support: Up to 1080p through Lightning Digital AV Adapter and Lightning to VGA Adapter (adapters sold separately)⁶

Siri⁷

- Use your voice to send messages, set reminders, and more
- Get intelligent suggestions on your Lock screen and in Messages, Mail, QuickType, and more
- Activate hands-free with only your voice using "Hey Siri"
- Use your voice to run shortcuts from your favorite apps

Learn more about Siri

External Buttons and Connectors

- Volume up/down
- Ring/Silent
- Side button
- Built-in stereo speaker
- Lightning connector
- Built-in microphone

Power and Battery⁸

- Lasts up to 1.5 hours longer than iPhone X
- Talk time (wireless): Up to 25 hours
- Internet use: Up to 13 hours
- Video playback (wireless): Up to 15 hours
- Audio playback (wireless): Up to 65 hours
- Fast-charge capable: Up to 50% charge in 30 minutes⁹ with 18W adapter or higher (available separately)
- Built-in rechargeable lithium-ion battery
- Wireless charging (works with Qi chargers¹⁰)
- Charging via USB to computer system or power adapter

Sensors

- Face ID
- Barometer
- Three-axis gyro
- Accelerometer
- Proximity sensor
- Ambient light sensor

Operating System

iOS 12

iOS is the world's most personal and secure mobile operating system, packed with powerful features that help you get the most out of every day.

See what's new in iOS 12

Accessibility

Accessibility features help people with disabilities get the most out of their new iPhone XS. With built-in support for vision, hearing, physical and motor skills, and learning and literacy, you can fully enjoy the world's most personal device. Learn more

Features include:

- VoiceOver
- Zoom
- Magnifier
- RTT and TTY support
- Siri and Dictation
- Type to Siri
- Switch Control
- Closed Captions
- AssistiveTouch
- Speak Screen

Built-in Apps

- Camera
- Photos
- Health
- Messages
- Phone
- FaceTime
- Mail
- Music
- Wallet
- Safari
- Maps
- Siri
- Calendar
- iTunes Store
- App Store
- Notes
- News
- Contacts
- Books
- Home
- Weather

- Reminders
- Clock
- TV
- Stocks
- Calculator
- Voice Memos
- Compass
- Podcasts
- Watch
- Tips
- Find My iPhone
- Find My Friends
- Settings
- Files
- Measure

Free Apps from Apple

Pages, Numbers, Keynote, iMovie, GarageBand, iTunes U, Clips, and Apple Store app are preinstalled.

- iMovie
- Pages
- Keynote
- Numbers
- iTunes U
- GarageBand
- Apple Store
- Trailers
- Apple TV Remote
- iTunes Remote
- Music Memos
- Clips
- Shortcuts

Headphones

- EarPods with Lightning Connector

SIM Card

- Dual SIM (nano-SIM and eSIM)¹¹
- iPhone XS and iPhone XS Max are not compatible with existing micro-SIM cards.

Rating for Hearing Aids

- M3, T4

Mail Attachment Support

- **Viewable document types**
 .jpg, .tiff, .gif (images); .doc and .docx (Microsoft Word); .htm and .html (web pages); .key (Keynote);
 .numbers (Numbers); .pages (Pages); .pdf (Preview and Adobe Acrobat); .ppt and .pptx (Microsoft PowerPoint);
 .txt (text); .rtf (rich text format); .vcf (contact information); .xls and .xlsx (Microsoft Excel); .zip; .ics; .usdz
 (USDZ Universal)

System Requirements

- Apple ID (required for some features)
- Internet access¹²
- Syncing with iTunes on a Mac or PC requires:
 - Mac: OS X 10.11.6 or later
 - PC: Windows 7 or later
 - iTunes 12.8 or later on Mac and iTunes 12.9 or later on PC (free download from www.itunes.com/download)

Environmental Requirements

- Operating ambient temperature: 32° to 95° F (0° to 35° C)
- Nonoperating temperature: –4° to 113° F (–20° to 45° C)
- Relative humidity: 5% to 95% noncondensing
- Operating altitude: tested up to 10,000 feet (3000 m)

Languages

- **Language support**
English (Australia, UK, U.S.), Chinese (Simplified, Traditional, Traditional Hong Kong), French (Canada, France), German, Italian, Japanese, Korean, Spanish (Latin America, Mexico, Spain), Arabic, Catalan, Croatian, Czech, Danish, Dutch, Finnish, Greek, Hebrew, Hindi, Hungarian, Indonesian, Malay, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Slovak, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **QuickType keyboard support**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese – Simplified (Handwriting, Pinyin, Stroke), Chinese – Traditional (Cangjie, Handwriting, Pinyin, Stroke, Sucheng, Zhuyin), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese (Kana, Romaji), Korean, Spanish (Latin America, Mexico, Spain), Arabic (Modern Standard, Najdi), Armenian, Azerbaijani, Belarusian, Bengali, Bulgarian, Catalan, Cherokee, Croatian, Czech, Danish, Dutch, Emoji, Estonian, Filipino, Finnish, Flemish, Georgian, Greek, Gujarati, Hawaiian, Hebrew, Hindi (Devanagari, Transliteration), Hinglish, Hungarian, Icelandic, Indonesian, Irish, Kannada, Latvian, Lithuanian, Macedonian, Malay, Malayalam, Maori, Marathi, Norwegian, Odia, Persian, Polish, Portuguese (Brazil, Portugal), Punjabi, Romanian, Russian, Serbian (Cyrillic, Latin), Slovak, Slovenian, Swahili, Swedish, Tamil (Script, Transliteration), Telugu, Thai, Tibetan, Turkish, Ukrainian, Urdu, Vietnamese, Welsh
- **QuickType keyboard support with predictive input**
English (Australia, Canada, India, Singapore, UK, U.S.), Chinese (Simplified, Traditional), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian, Japanese, Korean, Russian, Spanish (Latin America, Mexico, Spain), Portuguese (Brazil, Portugal), Thai, Turkish
- **Siri languages**
English (Australia, Canada, India, Ireland, New Zealand, Singapore, South Africa, UK, U.S.), Spanish (Chile, Mexico, Spain, U.S.), French (Belgium, Canada, France, Switzerland), German (Austria, Germany, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong), Arabic (Saudi Arabia, United Arab Emirates), Danish (Denmark), Dutch (Belgium, Netherlands), Finnish (Finland), Hebrew (Israel), Malay (Malaysia), Norwegian (Norway), Portuguese (Brazil), Russian (Russia), Swedish (Sweden), Thai (Thailand), Turkish (Turkey)
- **Dictation languages**
English (Australia, Canada, India, Indonesia, Ireland, Malaysia, New Zealand, Philippines, Saudi Arabia, Singapore, South Africa, United Arab Emirates, UK, U.S.), Spanish (Argentina, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Spain, Uruguay, U.S.), French (Belgium, Canada, France, Luxembourg, Switzerland), German (Austria, Germany, Luxembourg, Switzerland), Italian (Italy, Switzerland), Japanese, Korean, Mandarin (China mainland, Taiwan), Cantonese (China mainland, Hong Kong, Macao), Arabic (Kuwait, Qatar, Saudi Arabia, United Arab Emirates), Catalan, Croatian, Czech, Danish, Dutch (Belgium, Netherlands), Finnish, Greek, Hebrew, Hindi (India), Hungarian, Indonesian, Malaysian, Norwegian, Polish, Portuguese (Brazil, Portugal), Romanian, Russian, Shanghaiese (China mainland), Slovakian, Swedish, Thai, Turkish, Ukrainian, Vietnamese
- **Definition dictionary support**
English, Chinese (Simplified, Traditional), Danish, Dutch, French, German, Hebrew, Hindi, Italian, Japanese, Korean, Norwegian, Portuguese, Russian, Spanish, Swedish, Thai, Turkish
- **Thesaurus**
English (UK, U.S.)
- **Bilingual dictionary support with English**
Arabic, Chinese (Simplified, Traditional), Dutch, French, German, Hindi, Italian, Japanese, Korean, Portuguese, Russian, Spanish
- **Spell check**
English, French, German, Italian, Spanish, Danish, Dutch, Finnish, Korean, Norwegian, Polish, Portuguese, Russian, Swedish, Turkish

In the Box

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4. Data plan required. Gigabit-class LTE, LTE Advanced, LTE, VoLTE, and Wi-Fi calling are available in select markets and through select carriers. Speeds are based on theoretical throughput and vary based on site conditions and carrier. For details on LTE support, contact your carrier and see www.apple.com/iphone/LTE.
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12. Wireless broadband recommended; fees may apply.

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UPDATE
JANUARY 8, 2017

iPhone at ten: the revolution continues



iPhone has defined an era of mobile computing.

January 9 marks the tenth anniversary of iPhone’s blockbuster debut. At Macworld 2007 in San Francisco, Steve Jobs introduced the world to iPhone as three products in one — “a widescreen iPod with touch controls, a revolutionary mobile phone and a breakthrough internet communications device.” In the ten years since, iPhone has enriched the lives of people around the world with over one billion units sold. It quickly grew into a revolutionary platform for hardware, software and services

Cao v. Apple
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52

integration, and inspired new products, including iPad and Apple Watch, along with millions of apps that have become essential to people's daily lives.



Steve Jobs introduced the original iPhone on January 9, 2007.

"iPhone is an essential part of our customers' lives, and today more than ever it is redefining the way we communicate, entertain, work and live," said Tim Cook, Apple's CEO. "iPhone set the standard for mobile computing in its first decade and we are just getting started. The best is yet to come."





iPhone has pushed the boundaries of innovation since 2007.

"It is amazing that from the very first iPhone through to today's newest iPhone 7 Plus, it has remained the gold standard by which all other smartphones are judged. For many of us, iPhone has become the most essential device in our lives and we love it," said Philip Schiller, Apple's senior vice president of Worldwide Marketing. "iPhone is how we make voice and FaceTime calls, how we shoot and share Live Photos and 4K videos, how we listen to streaming music, how we use social media, how we play games, how we get directions and find new places, how we pay for things, how we surf the web, do email, manage our contacts and calendars, how we listen to podcasts, watch TV, movies and sports, and how we manage our fitness and health. iPhone has become all of these things and more. And I believe we are just getting started."



Newsroom

iPhone's innovative features continue to enrich the lives of its users around the world.

Archive

iPhone 7 and iPhone 7 Plus Innovations

- The world's most popular camera is even better with a 12-megapixel lens, optical image stabilization, an f/1.8 aperture that captures 50 percent more light as well as wide color capture, all allowing for more vibrant colors with more detail even in low light, while iPhone 7 Plus also offers a dual-lens camera with Portrait mode and up to 2X optical zoom.
- The A10 Fusion chip is the most powerful chip ever in a smartphone, with processing performance 120 times faster and the graphics performance 240 times faster in iPhone 7 than the original iPhone.
- Stereo speakers provide amazing and immersive sound that is two times louder than iPhone 6s, with increased dynamic range of sound and a higher-quality speakerphone.
- An entirely reengineered enclosure resulting in the first water-resistant iPhone that offers protection against spills, splashes and dust like never before.
- The brightest, most colorful Retina HD display ever in an iPhone, with a wide color gamut for cinema-standard colors, greater color saturation and the best color management in the smartphone industry.

iOS 10 was the biggest iOS release ever, with innovations including:

- bringing the power of the App Store to Messages;
- a Memories feature in Photos;
- SiriKit for developers so apps can talk to Siri;
- a new Home app that allows users to easily and securely set up, manage and control their home all in one place;
- an improved Maps app that is even simpler and more intuitive to use;
- greater clarity and simplicity to every aspect of the Apple Music experience; and
- support for breaking news notifications and paid subscriptions in the News app.

Media

iPhone tenth anniversary

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Apple Store

- Find a Store
- Genius Bar
- Today at Apple
- Apple Camp
- Field Trip
- Apple Store App
- Refurbished and Clearance
- Financing
- Reuse and Recycling
- Order Status
- Shopping Help

For Education

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- Shop for College

For Business

- Apple and Business
- Shop for Business

Account

- Manage Your Apple ID
- Apple Store Account
- iCloud.com

Apple Values


- Accessibility
- Education
- Environment
- Inclusion and Diversity
- Privacy
- Supplier Responsibility

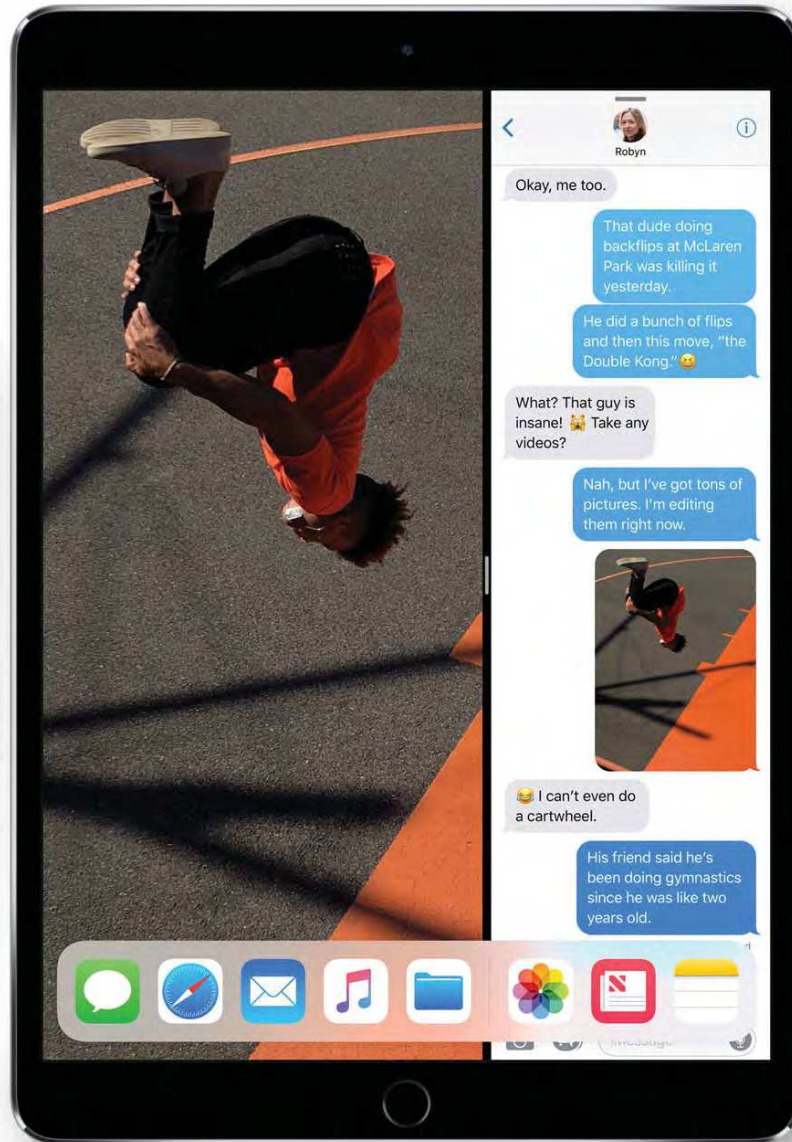
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53

iOS 11

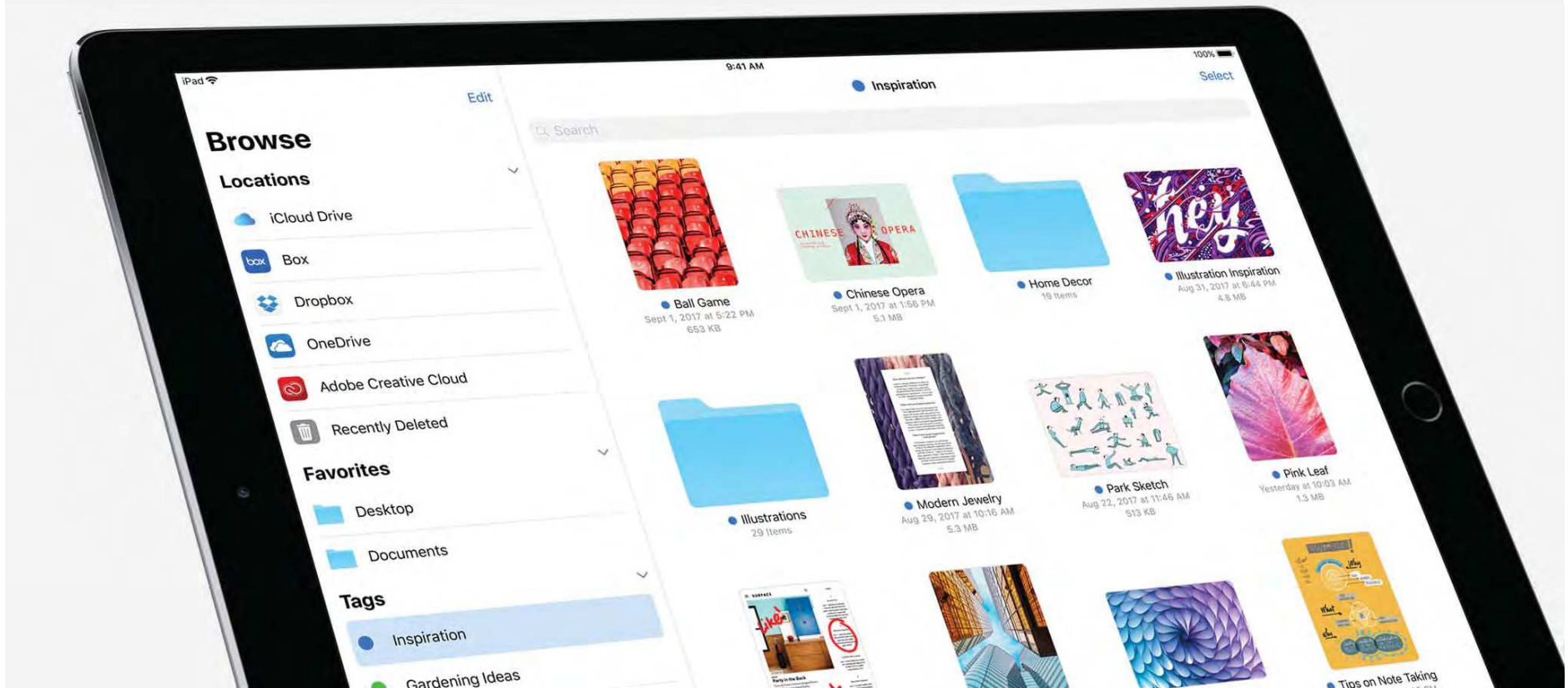
A giant step for iPhone. A monumental leap for iPad.

iOS 11 sets a new standard for what is already the world's most advanced mobile operating system. It makes iPhone better than before. It makes iPad more capable than ever. And now it opens up both to amazing possibilities for augmented reality in games and apps. With iOS 11, iPhone and iPad are the most powerful, personal, and intelligent devices they've ever been.



iPad. Turned up to 11.

iPad has always been a powerful way to work, play, and learn. And iOS 11 brings it to life like never before. New features and capabilities let you get more done more quickly and easily, making your iPad experience even more powerful and personal. Do with it what you will. Because now you can.



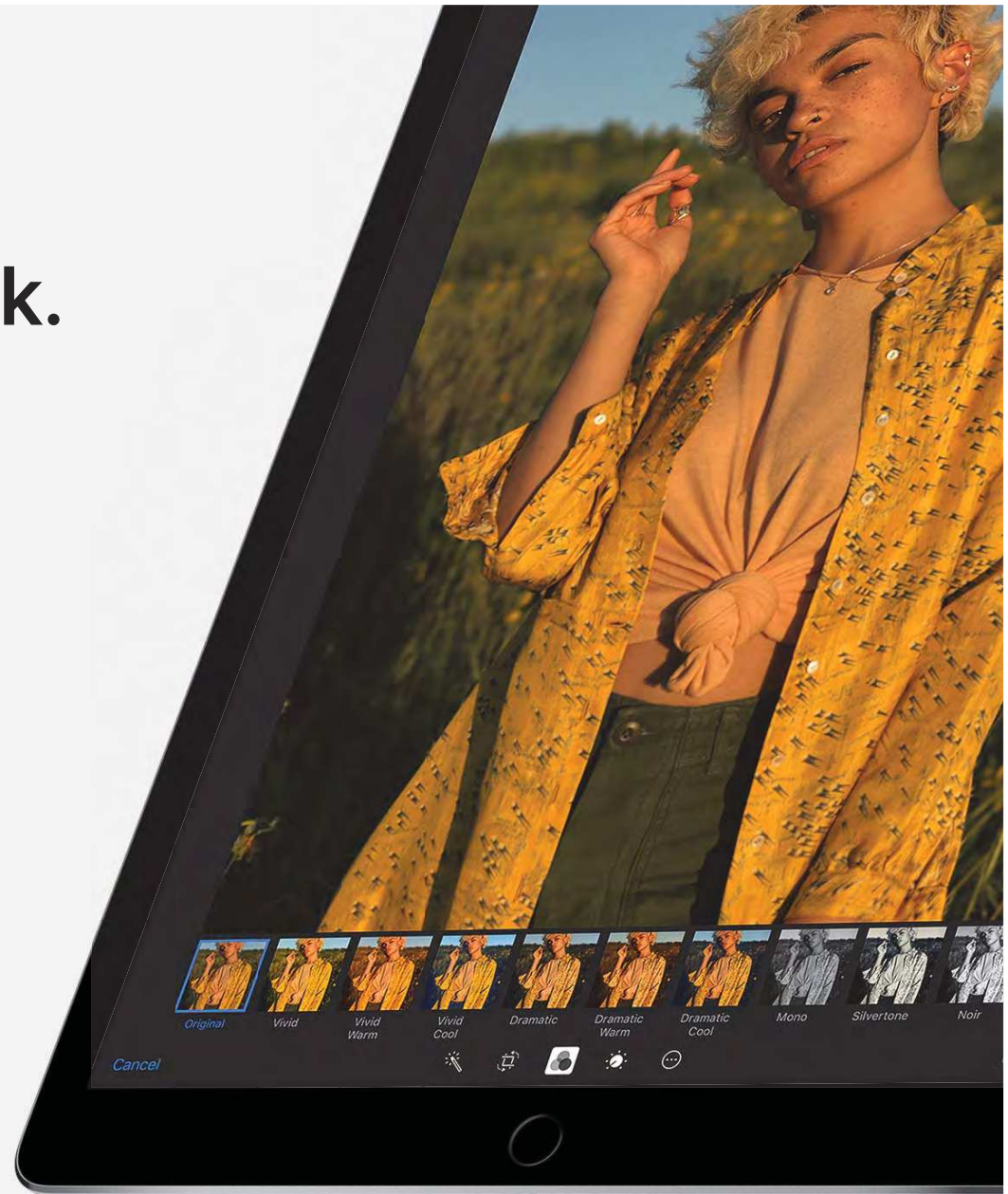


Files. Wherever they are, they're here.

The new Files app brings all your files together. You can easily browse, search, and organize all your files in one place. And there's a dedicated place for your recent files. Those on your iPad as well as in apps, on your other iOS devices, in iCloud Drive, and across other services like Box, Dropbox, and OneDrive.

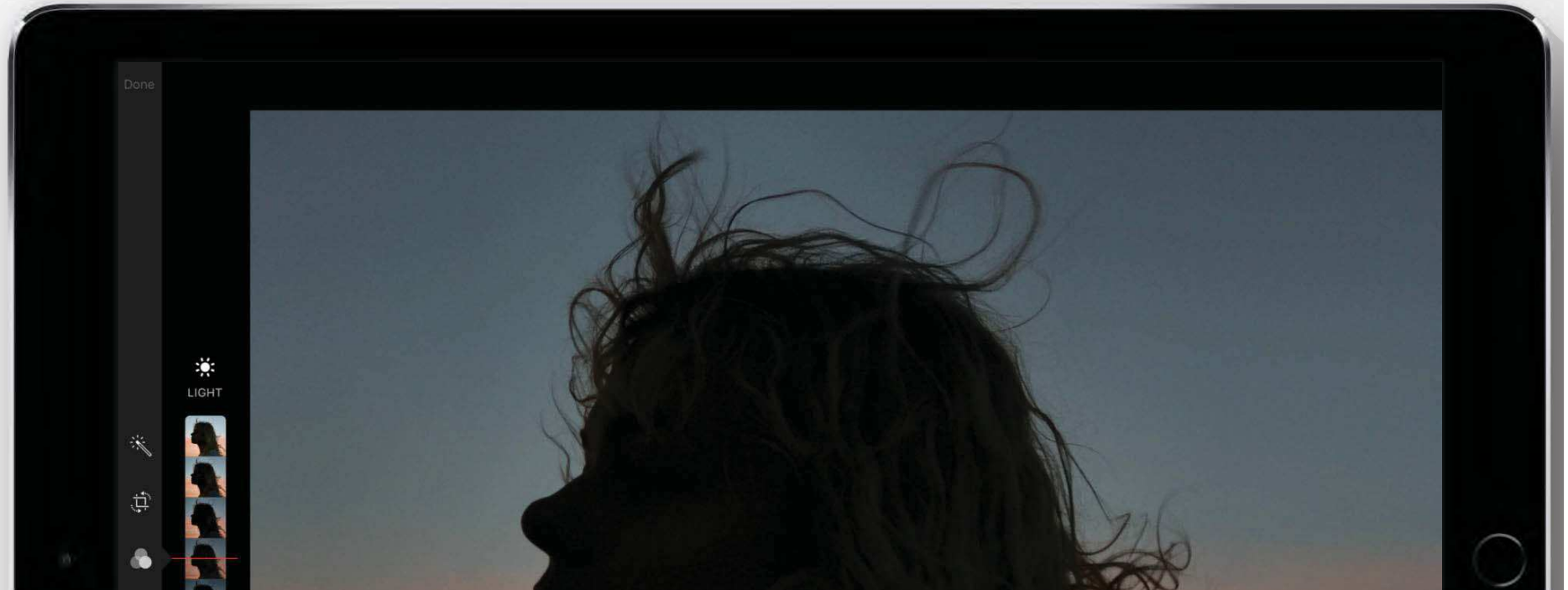
The new Dock. Bottom line, a more powerful way to work.

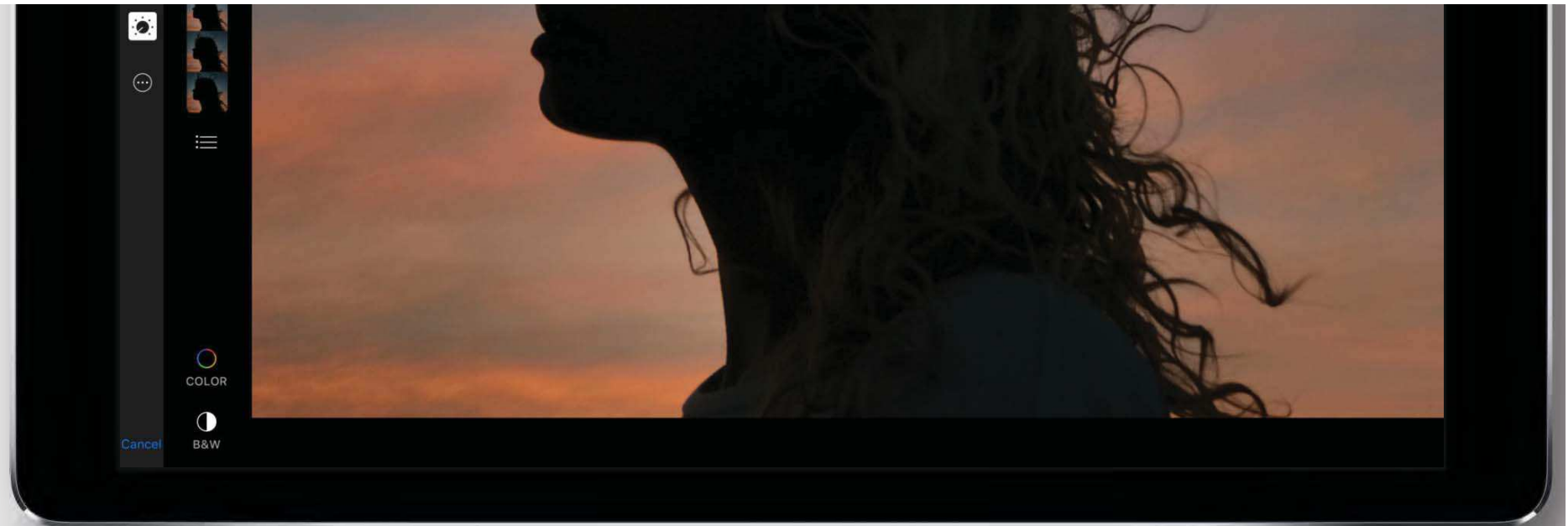
The new Dock is a foundational change for iPad. It's now available from any screen. So with just a swipe, you can open and switch apps instantly. And you can customize it with more of your favorites. Apps you've opened recently and apps that are currently open on your iPhone or Mac appear in the right side of the Dock.



Multitasking. Better in multiple ways.

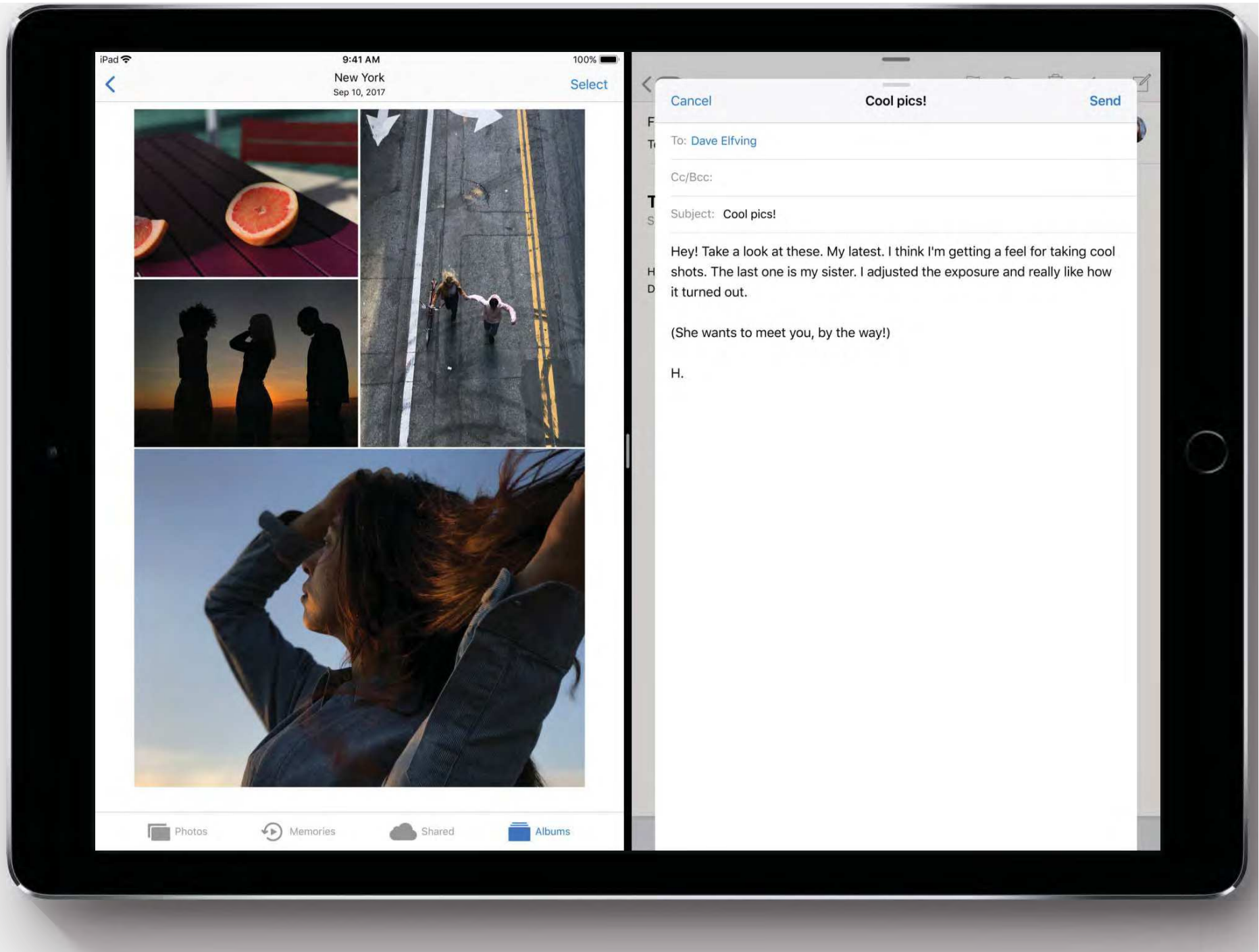
iOS 11 makes it easier and more intuitive than ever to multitask. You can open a second app right from the Dock, and both apps remain active in Slide Over as well as Split View. You can drag the second app in Slide Over to the left. And you can get back to your favorite App Spaces in the redesigned App Switcher.





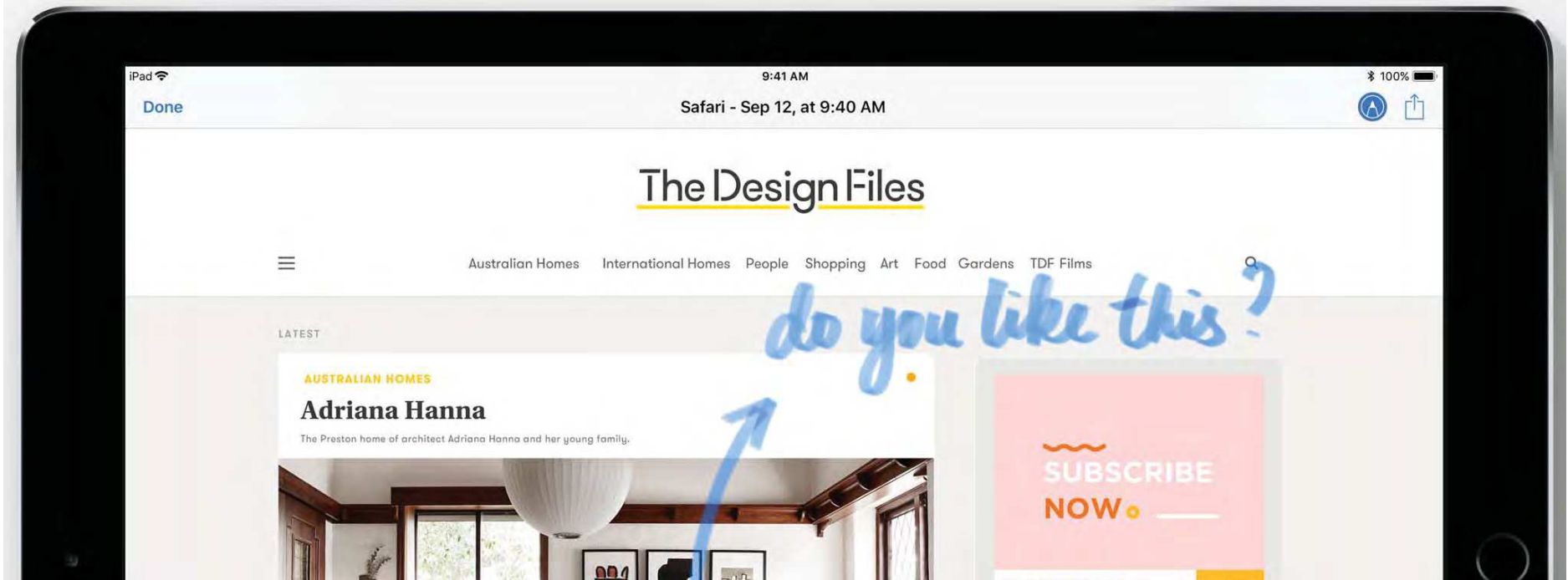
Drag and Drop. Give it a touch.

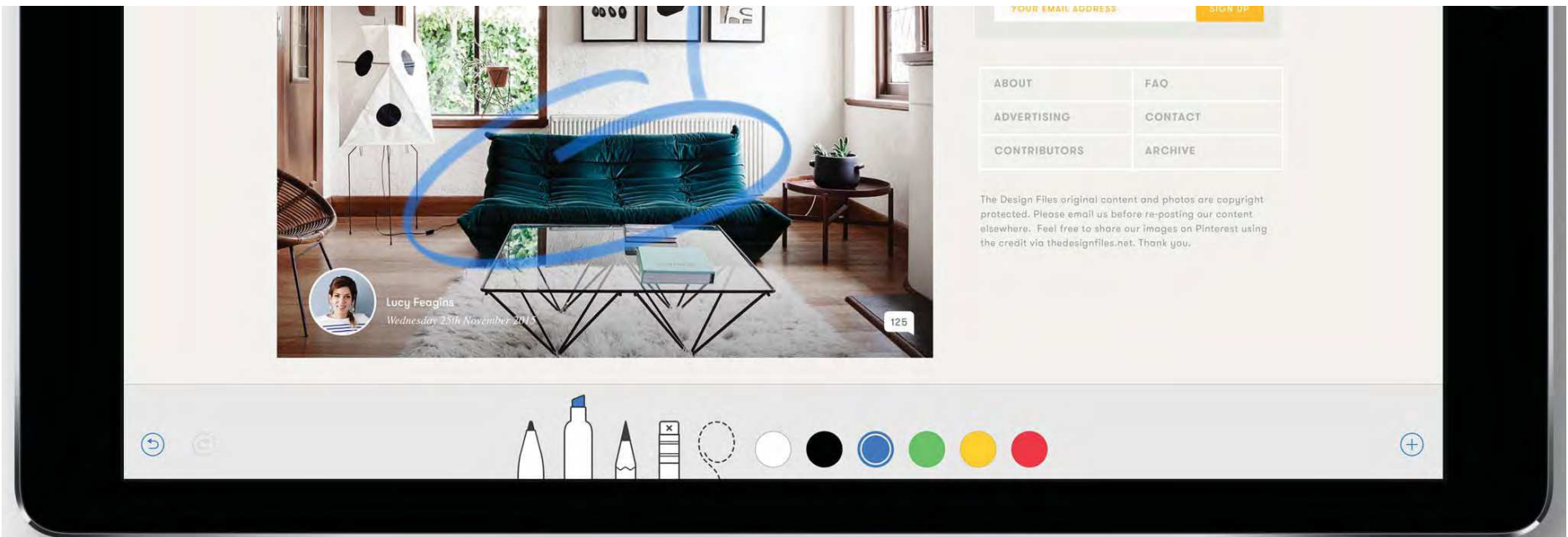
Drag and Drop comes to iPad, allowing you to move text, photos, and files from one app to another. And because it's been designed for the large Multi-Touch display of iPad, moving them around is pure magic. You can touch and move just about anything — or things — anywhere on the screen.



Apple Pencil. More ways to make your mark.

iOS 11 makes Apple Pencil for iPad more versatile, powerful, and natural than ever. It's more useful for all kinds of tasks, such as taking notes, getting work done, or simply being creative.

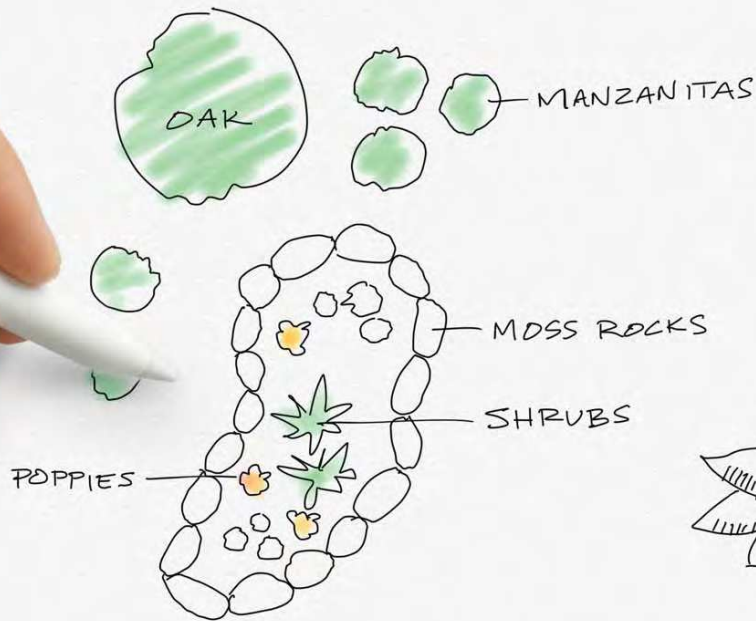




Instant Markup

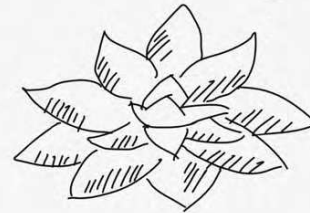
Now you can mark up a PDF or screenshot faster and more easily. Step one, pick up your Apple Pencil. Step two, touch it to the screen. Step three, start writing. It's called Instant Markup for a reason.

Diana's Native Garden Ideas



PLANTS

- Manzanita
- Purple Owl's Clover
- California Poppy
- Pacific Jewel Flower
- Canyon Dudleya
- Blue-eyed Grass
- Goldback Fern

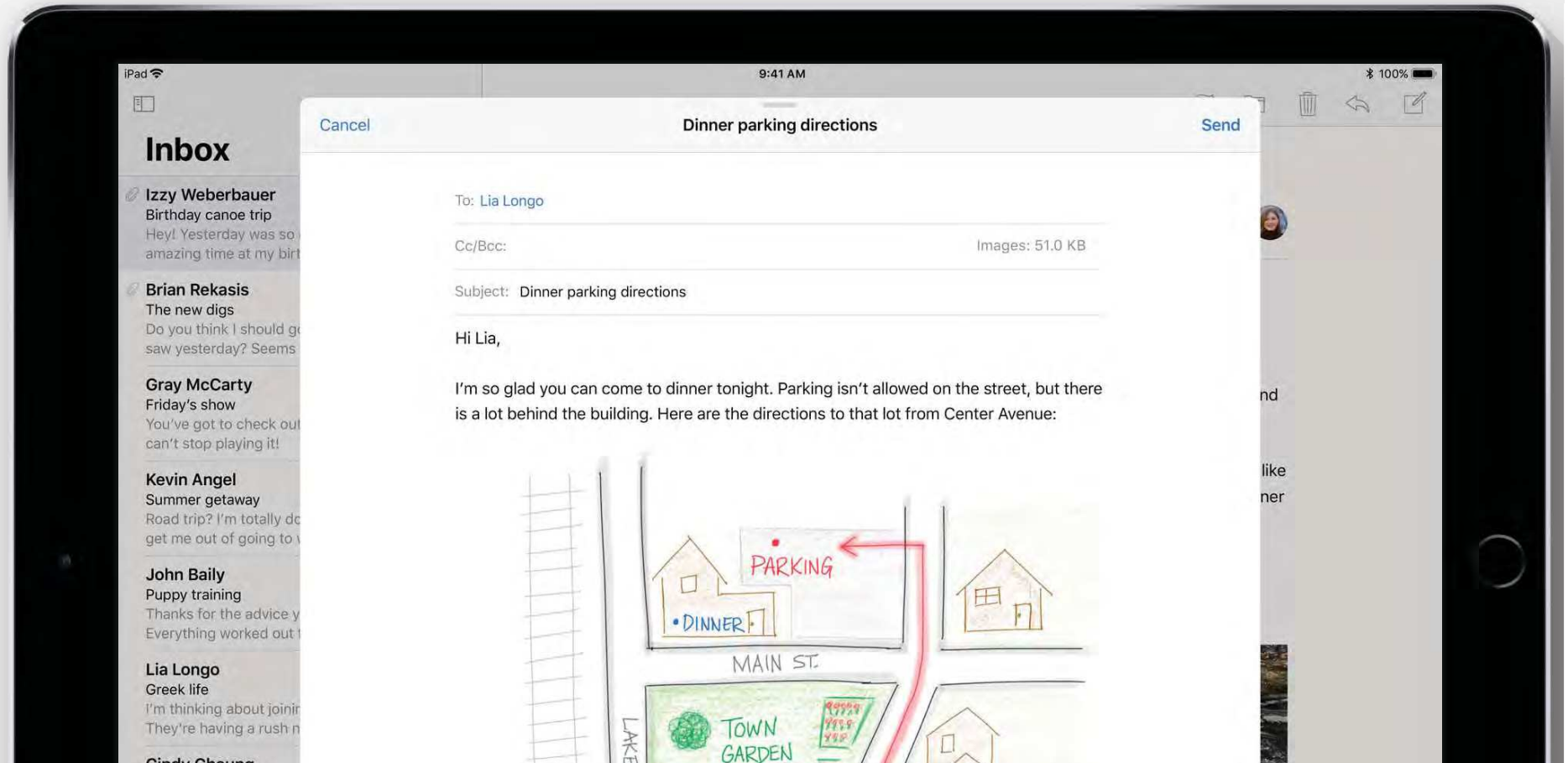


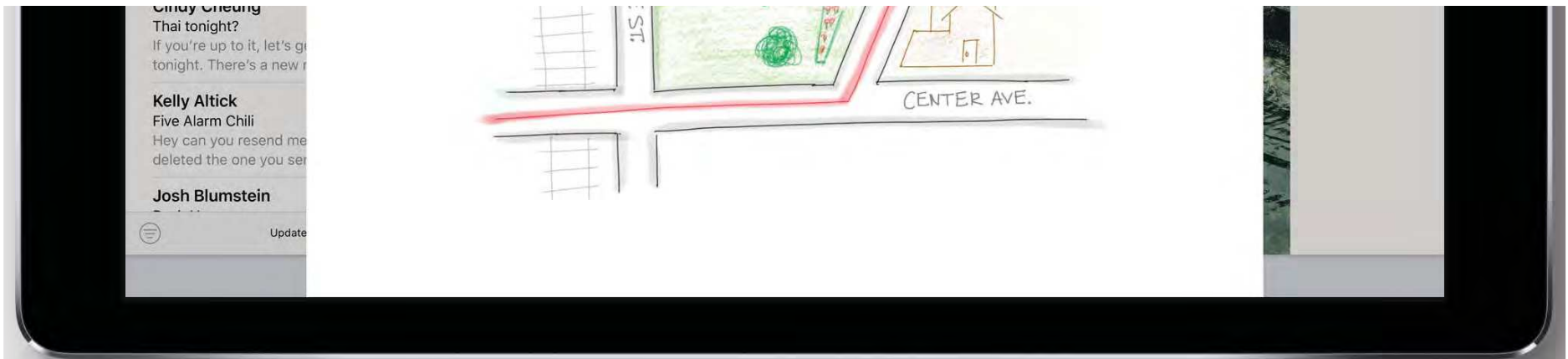
Canyon
Dudleya
Saves H₂O!



Instant Notes

Simply tap your Apple Pencil on the Lock screen and start taking notes immediately. Whatever you create is saved in the Notes app.

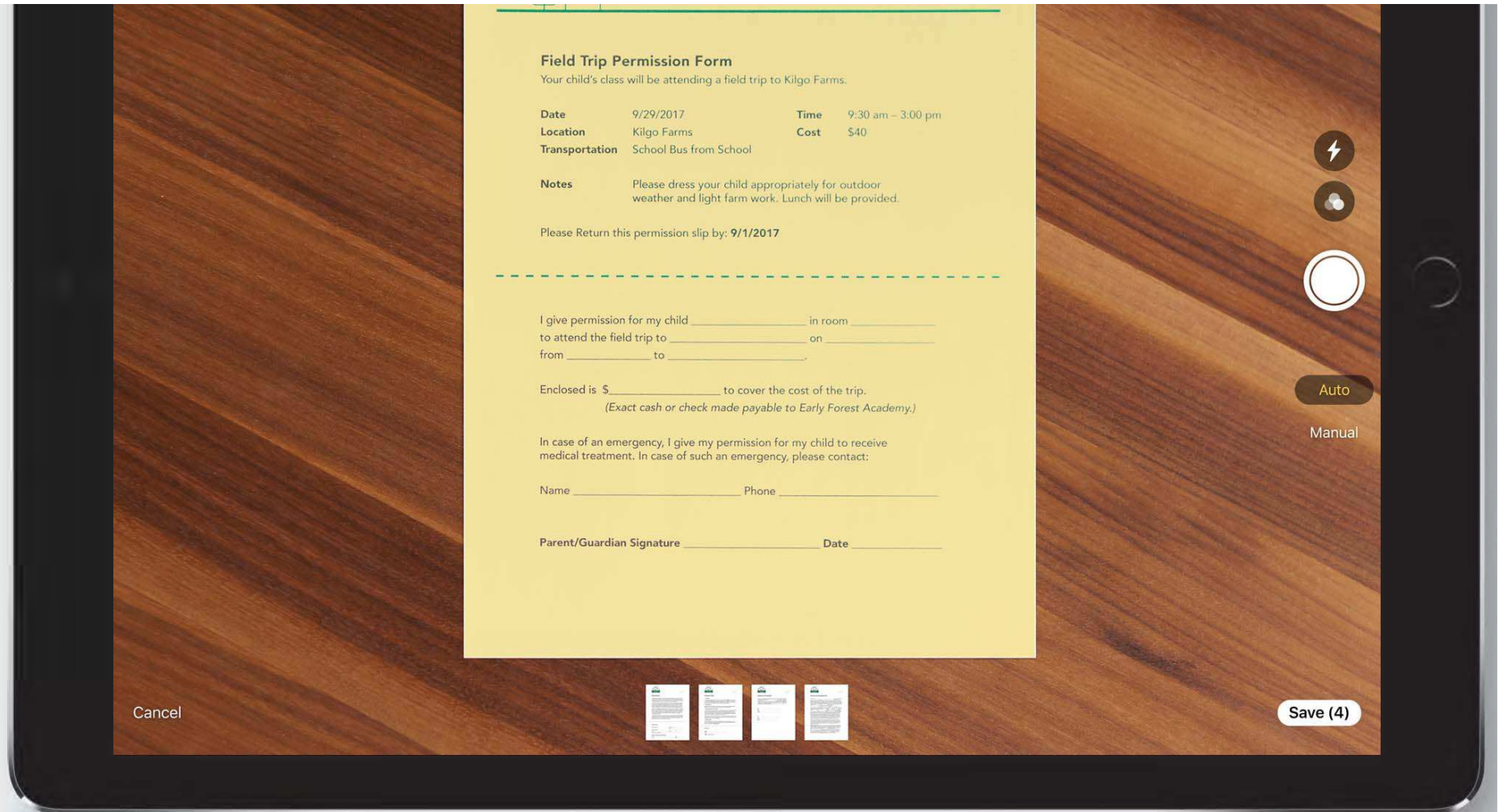




Inline Drawing

When you begin to draw or jot down something in Notes, the text around it can automatically move aside. And now handwritten words in Notes are searchable.¹ It all happens on your device, so your private information stays that way. You can also add inline drawings in Mail.





Scan and Sign

The new Document Scanner in Notes automatically senses and scans a document, crops the edges, and removes any tilt or glare. Fill in the blanks or sign it with Apple Pencil, then save or share it easily.



QuickType keyboard. Typing as quick as a flick.

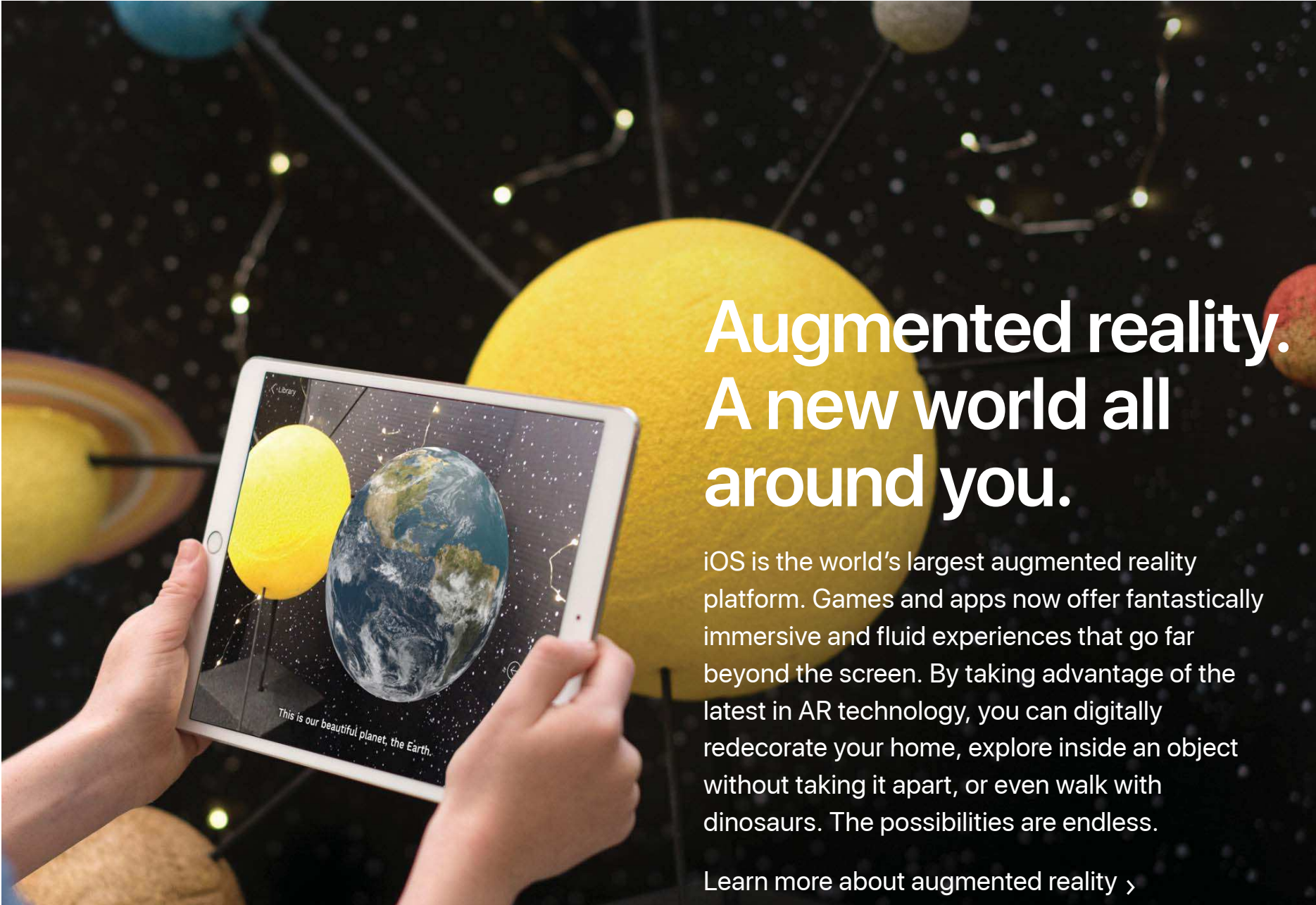
Letters, numbers, symbols, and punctuation marks are now all on the same keyboard — no more switching back and forth. Just flick down on a key to quickly select what you need.

Do even more on iPad with iOS 11.

Watch short films that show how the new features in iOS 11 make iPad — and you — even more capable. Get hands-on tips for using the all-new Dock, enhanced multitasking, the powerfully simple Files app, and more.

Watch the films >

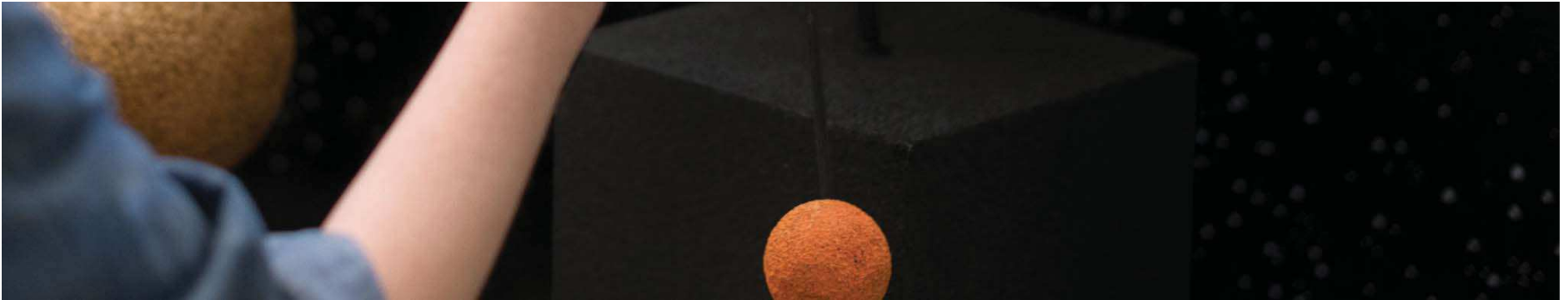


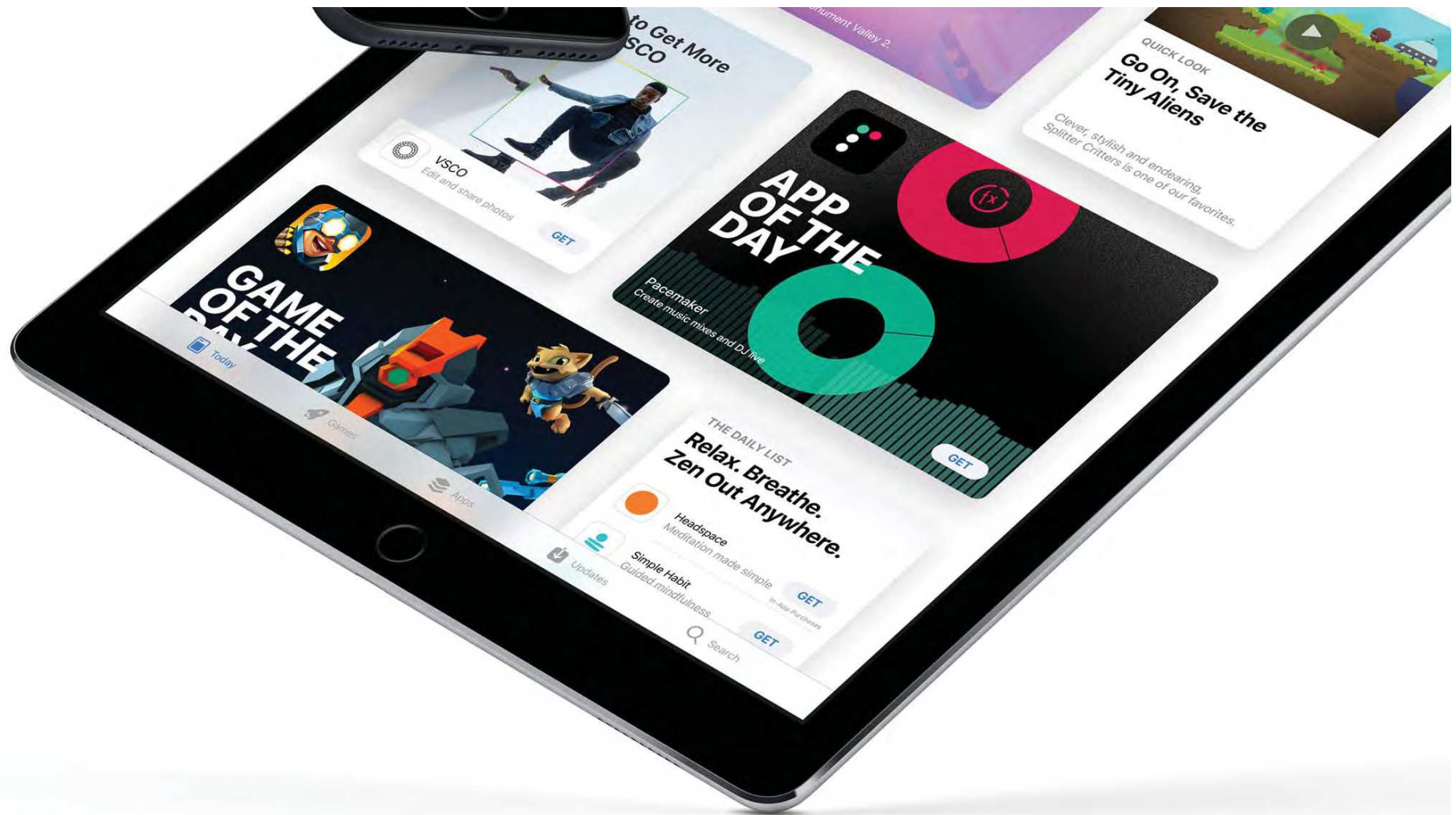


Augmented reality. A new world all around you.

iOS is the world's largest augmented reality platform. Games and apps now offer fantastically immersive and fluid experiences that go far beyond the screen. By taking advantage of the latest in AR technology, you can digitally redecorate your home, explore inside an object without taking it apart, or even walk with dinosaurs. The possibilities are endless.

Learn more about augmented reality [›](#)





iPhone and iPad. More essential everyday

essentials.

iOS 11 makes iPhone and iPad so smart, they learn from you. So capable, they help you in more powerful and personal ways. And so in tune with you, they do things for you before you even ask.

Apple Pay. Pay friends with a message.

iOS 11 brings the convenience of Apple Pay to Messages. Now sending money to friends — and receiving it — is as simple as a conversation.

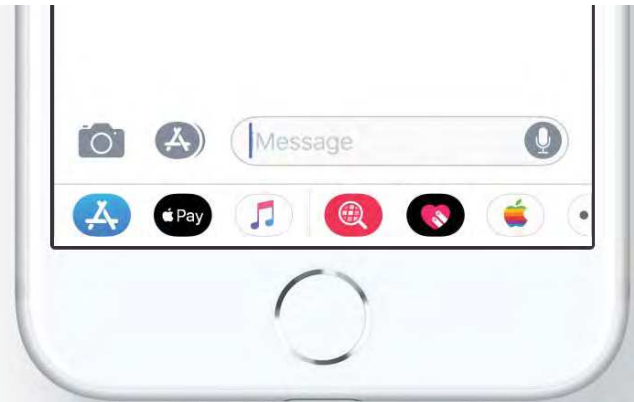
Learn more about Apple Pay ›

[Person to Person](#)

[Apple Pay Cash](#)



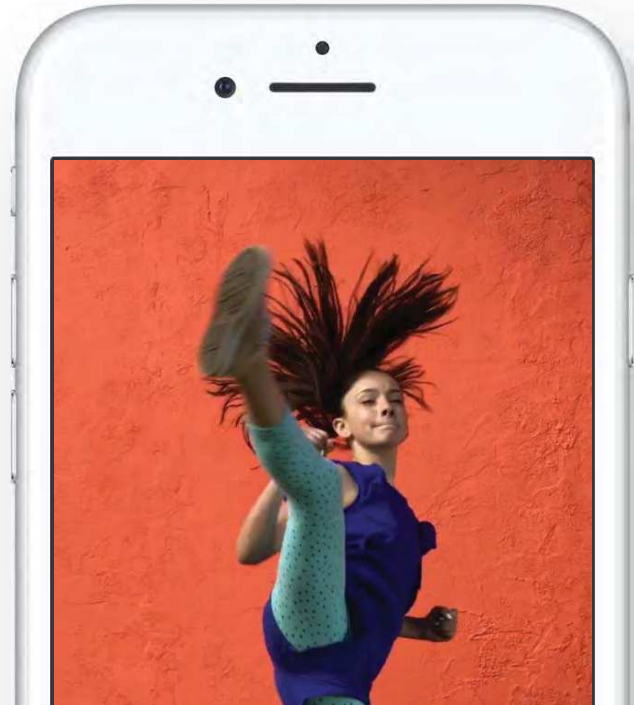
Use Apple Pay with your credit or debit card to send money instantly and securely, right in Messages. You can request and receive money just as easily.²



Live Photos. Livelier than ever.

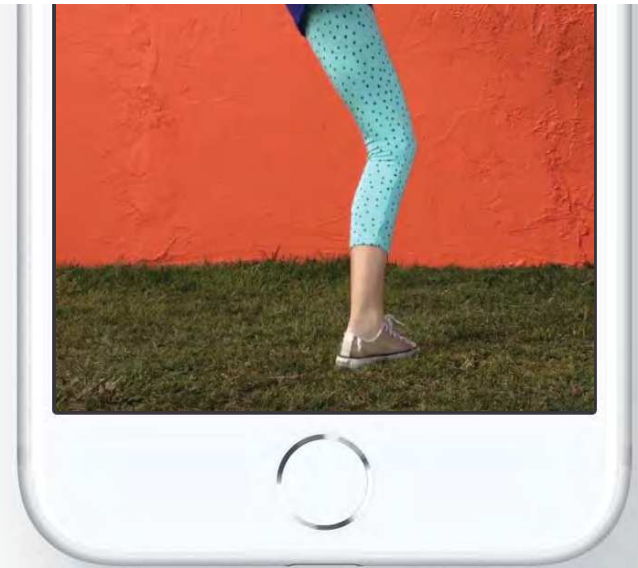
Now your Live Photos can be even more expressive, creative, and just plain fun.

Learn more about Photos >



Loop Bounce Long Exposure

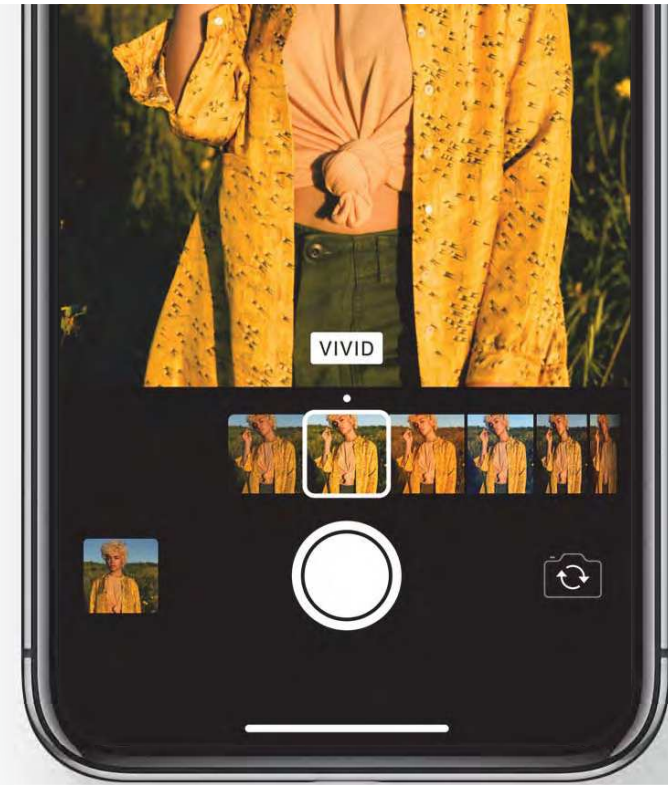
Turn a Live Photo you love into a fun video loop.
Choose an image yourself, or let Photos suggest which ones would make great loops.



Camera. Classic inspiration for

timeless filters.

Inspired by classic photography styles, new filters take the camera on iPhone to another level. Portrait photos are more expressive. Skin tones more natural. And next-generation compression technology lets you take new photos with the same quality as before at half the file size.³

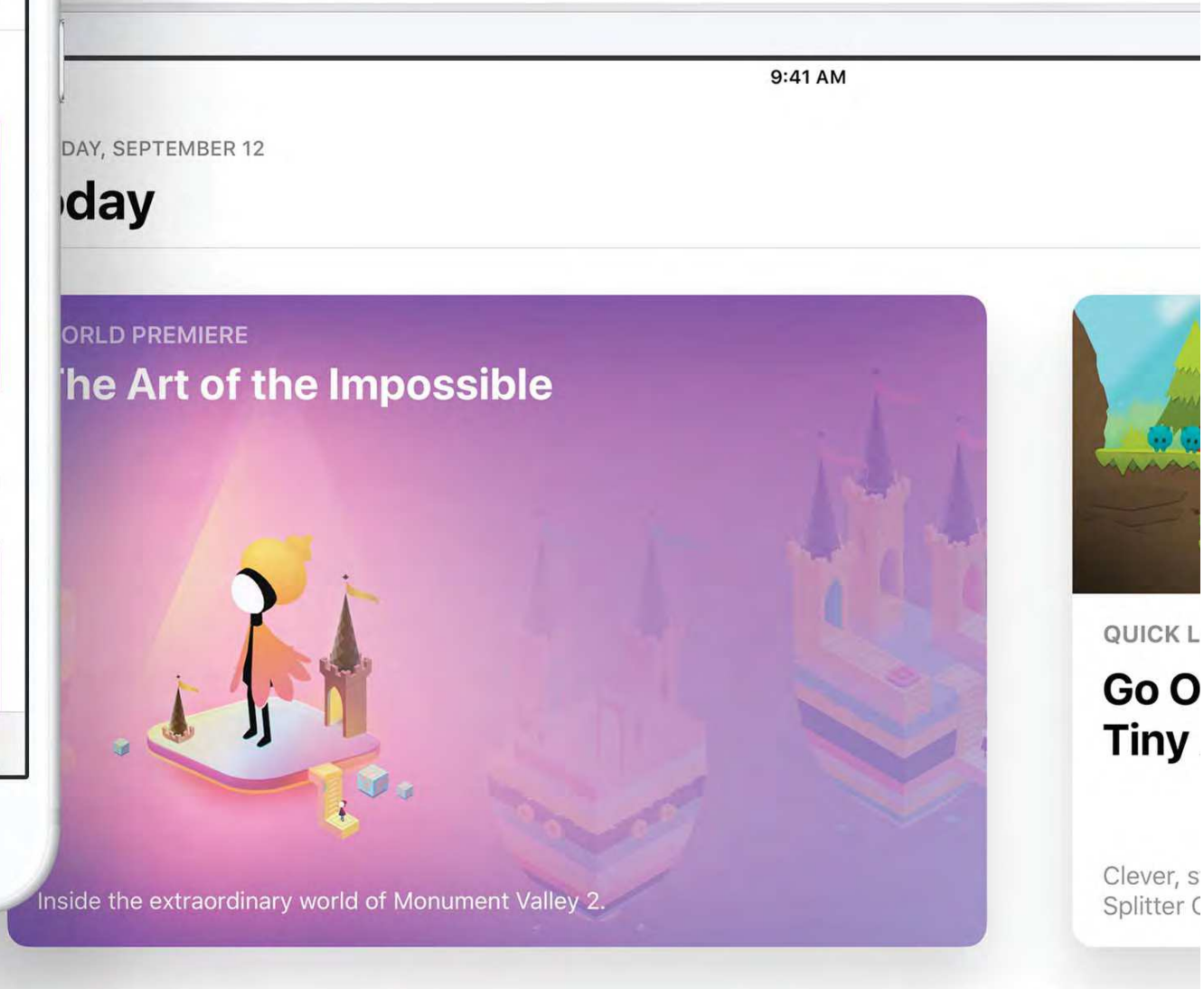
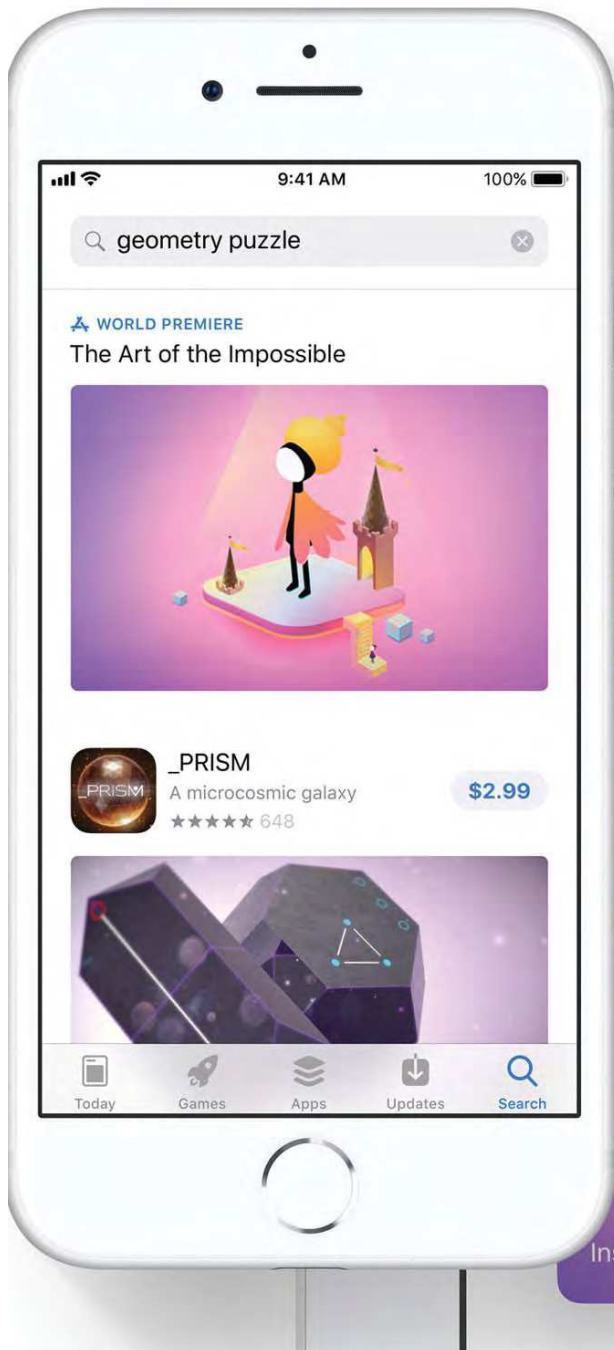


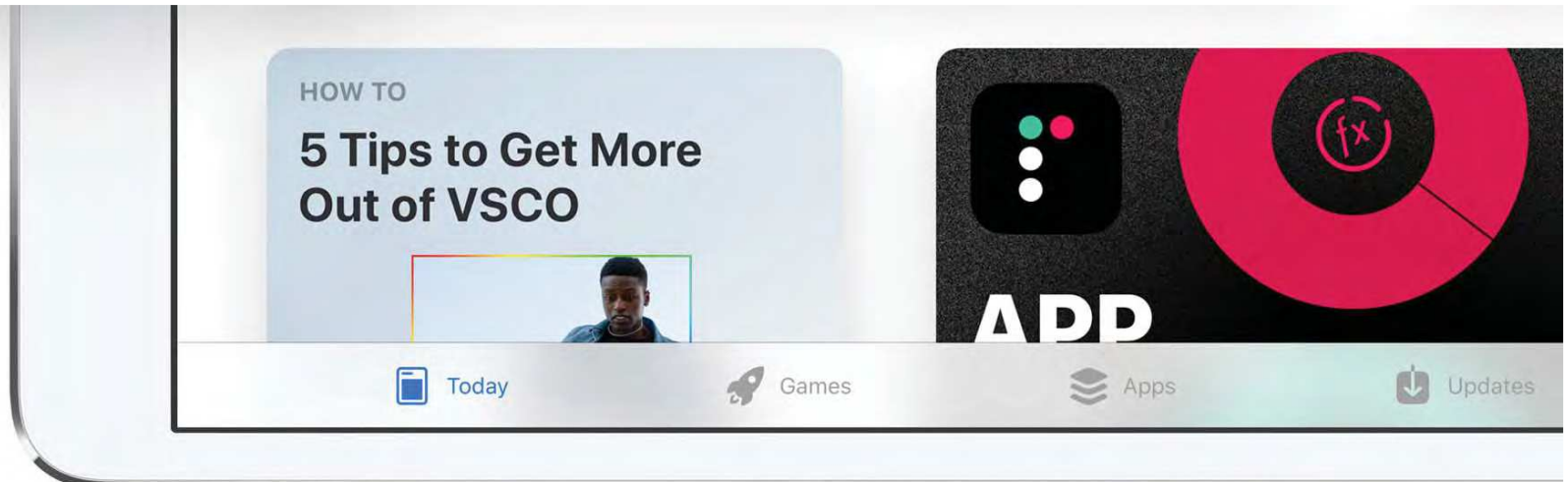
The all-new App Store.

The App Store has been redesigned from the ground up to help you discover new apps and games you can't live without. You'll see daily stories by experts, a dedicated Games tab, lists for all

kinds of apps, and much more. It's the biggest thing to come to the App Store since apps.

Learn more about the App Store >

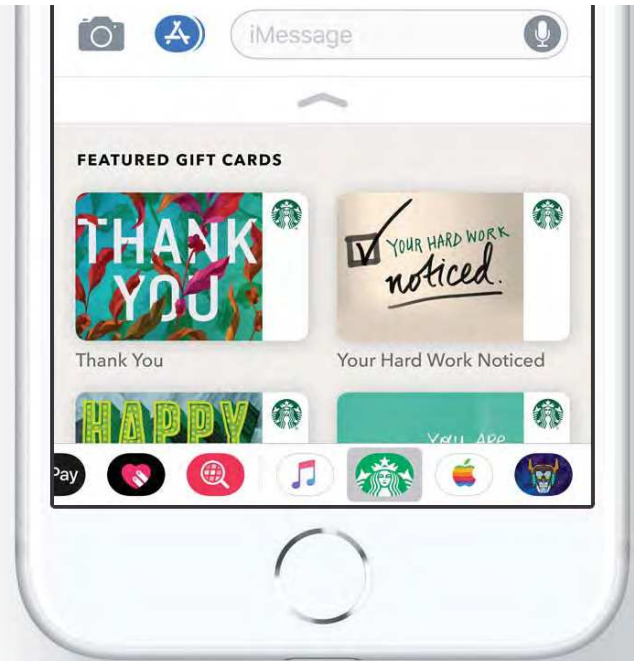




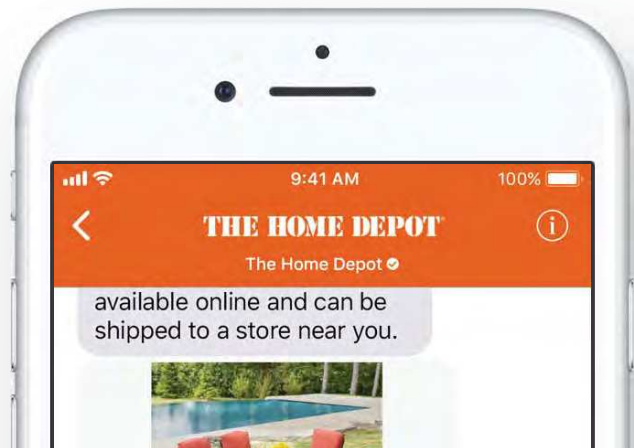
Messages. Get to the fun with

fewer taps.

Share stickers, emoji, and games with your friends just by swiping across the app drawer. All the goodies, less effort.



Business Chat.



A whole new way to talk to companies.

Business Chat lets you connect with companies as easily as you do with friends and family. Ask for information, schedule appointments, or even make a purchase. Right in the Messages app.

Learn more about Business Chat >

Beta



Messages in iCloud. Every conversation. On every device.

With Messages in iCloud, you can set up a brand-new iPhone or iPad and easily access your entire Messages history. Delete a message, photo, or conversation on one device, and it's automatically removed from all of them. And because everything — including attachments — is stored in iCloud, you can save space on your devices.



Siri. Naturally, more helpful.

iOS 11 makes the world's most popular intelligent assistant even more helpful. Through advanced machine learning and artificial intelligence, Siri is more expressive, with a new, more natural voice.

Learn more about Siri >

Translation

Personal DJ

Ask Siri in English how to say something in Mandarin, Spanish, French, German, or Italian, and Siri will translate the phrase.⁴ Like your hotel room in Rome? Tell your host. "È fantastico!"

Beta



Smarter about you. Smarter for you.

Siri has always been more than a voice. With iOS 11, Siri is even more helpful. It learns from you and is able to anticipate what you want and make suggestions before you even ask. And these features are encrypted end-to-end, so your personal information remains private.

News QuickType Safari

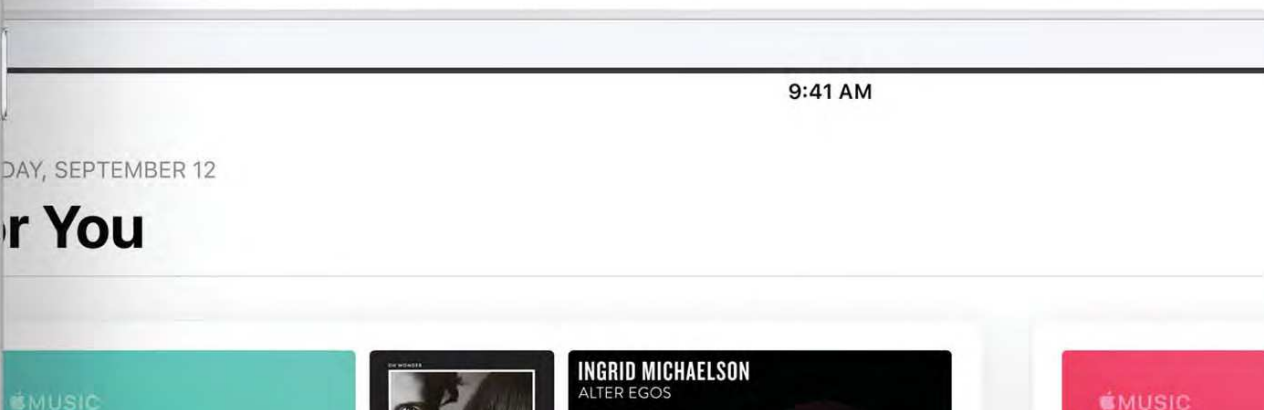
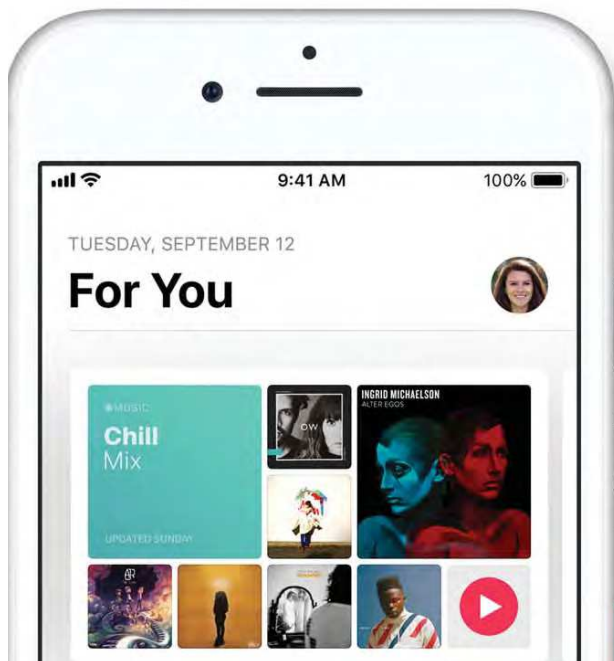
As Siri learns which topics you're interested in, they'll be suggested in News — making News even better at finding stories that matter to you.

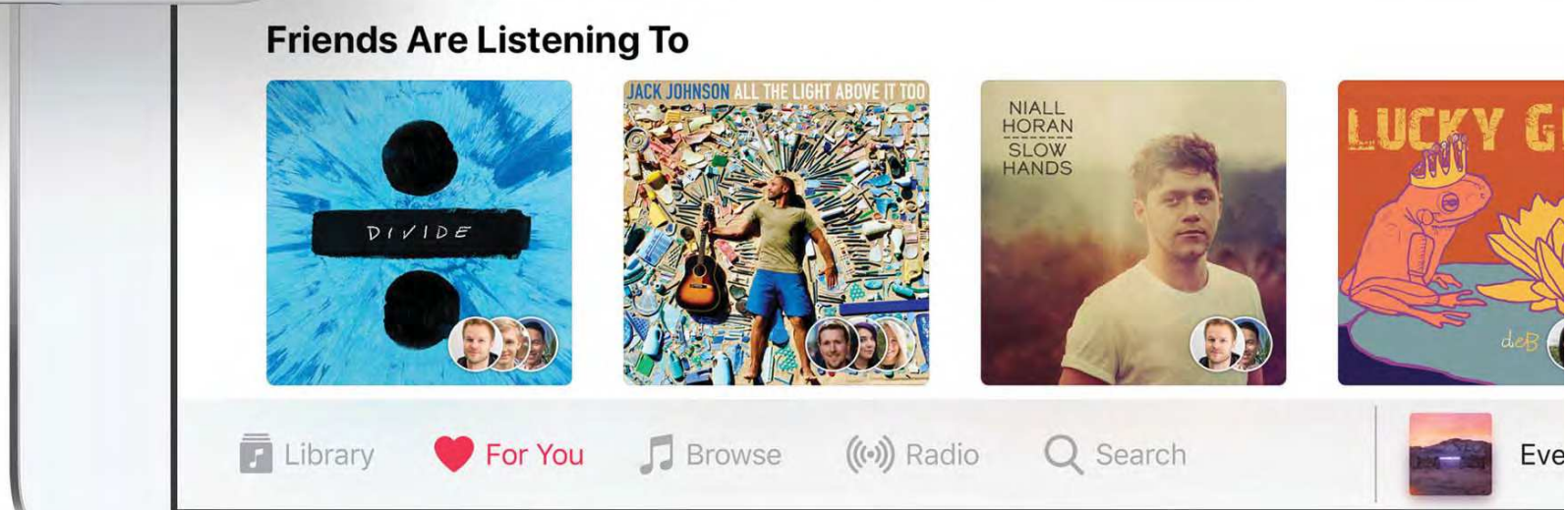
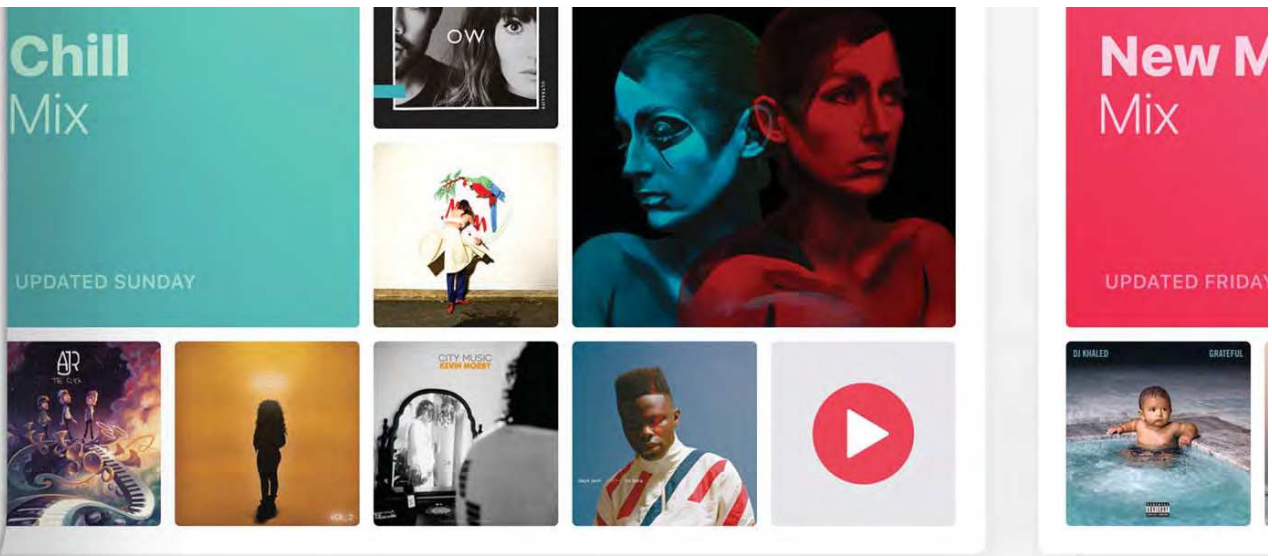
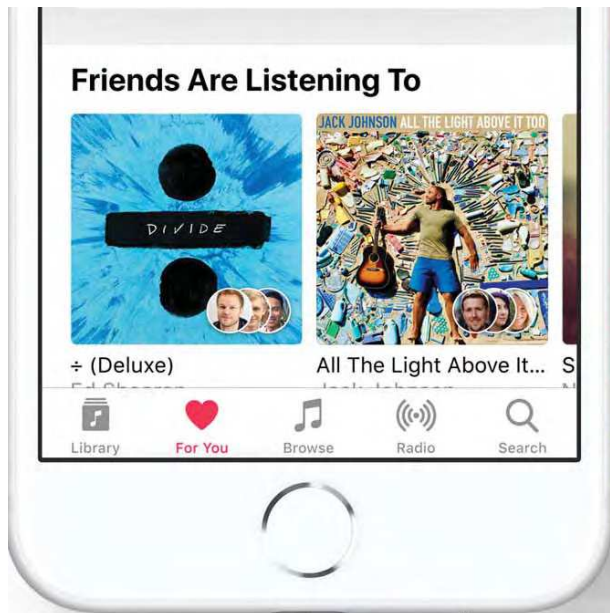


Apple Music. 45 million songs. Zero ads.

Stream anything in the Apple Music collection on all your devices ad-free. Download albums, tracks, and now music videos to your personal library and play them offline.⁶ Start your free three-month trial and cancel anytime.

[Learn more about Apple Music](#) > [Try it free](#) ↗





AirPlay 2. Home, sweet-sounding home.

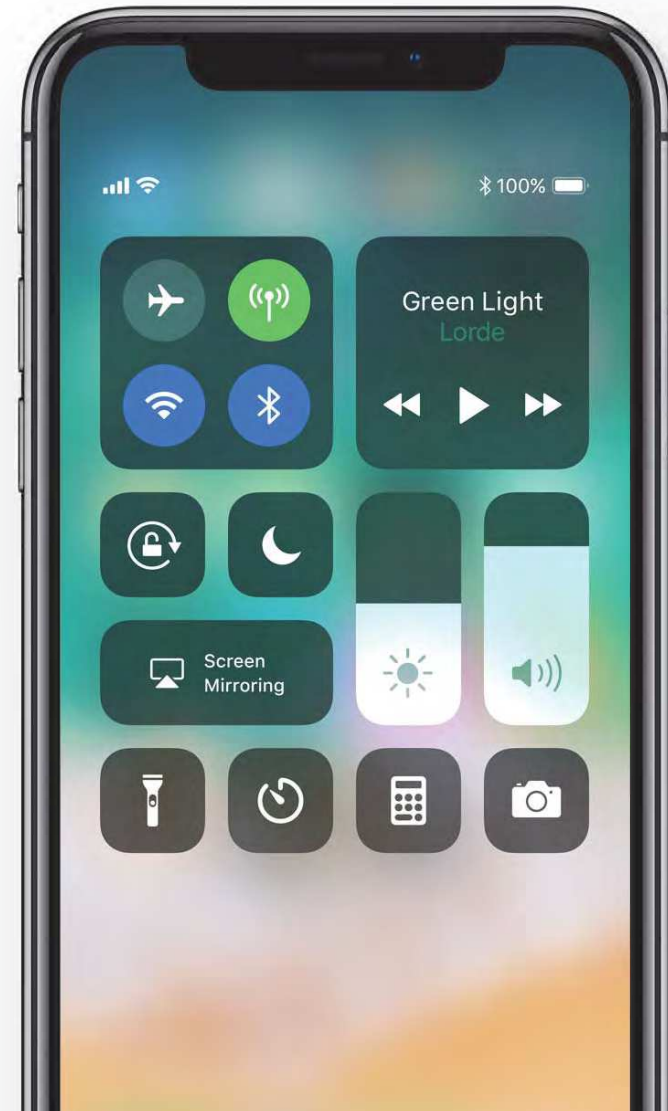
With the new AirPlay 2, you can control your home audio system and the speakers throughout your house.⁷ You can play a song in the living room and your kitchen at the same time. Adjust the volume in any room. Or have your music start instantly on all your speakers — in sync with one another.

Learn more about AirPlay >



Control Center. Make it your own.

iOS 11 lets you customize the redesigned Control Center so you can change the settings for the things you do most. Want to be ready when inspiration hits? Add a Voice Memos control. Want to dim the lights in the dining room with a tap? Add Home controls. Or use 3D Touch in Control Center to unlock even more commands.

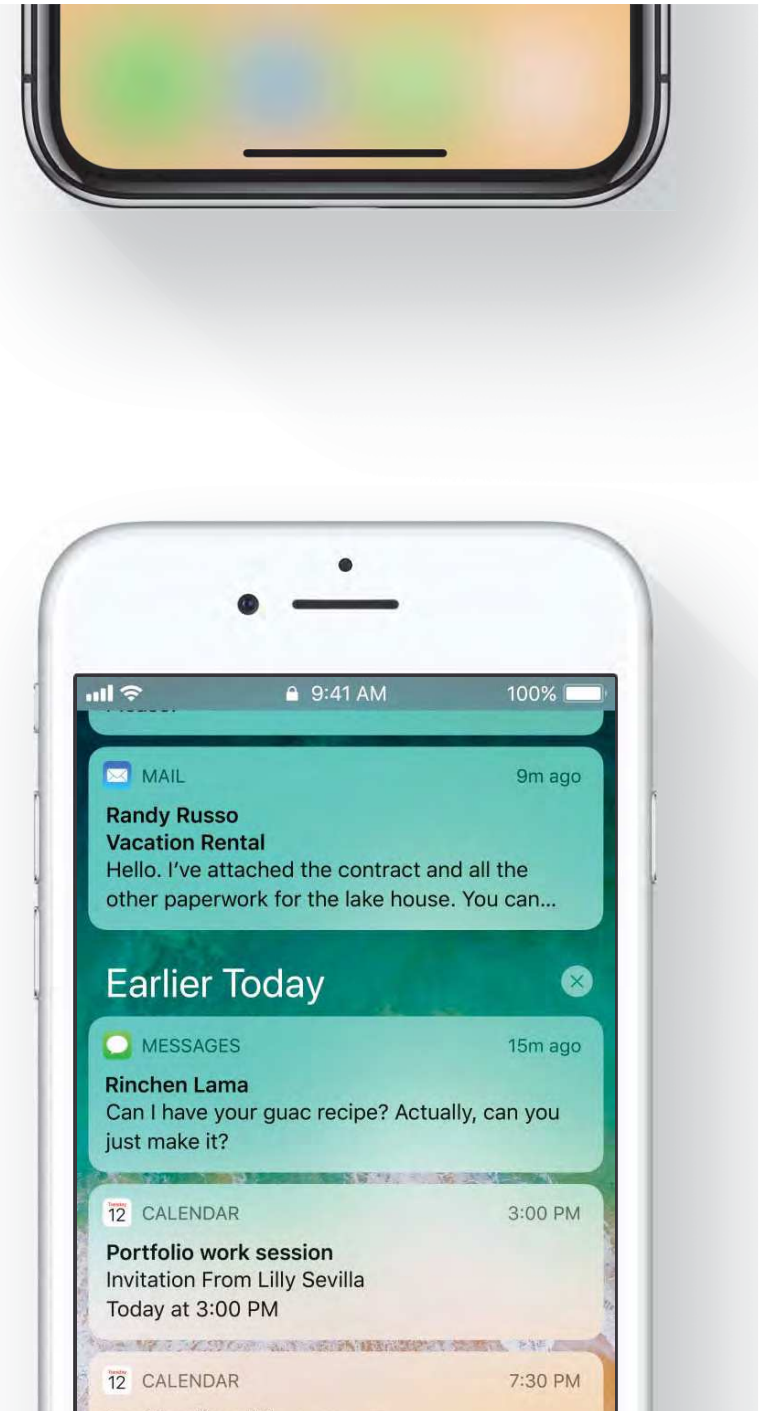


Lock screen. All your notifications in one handy place.

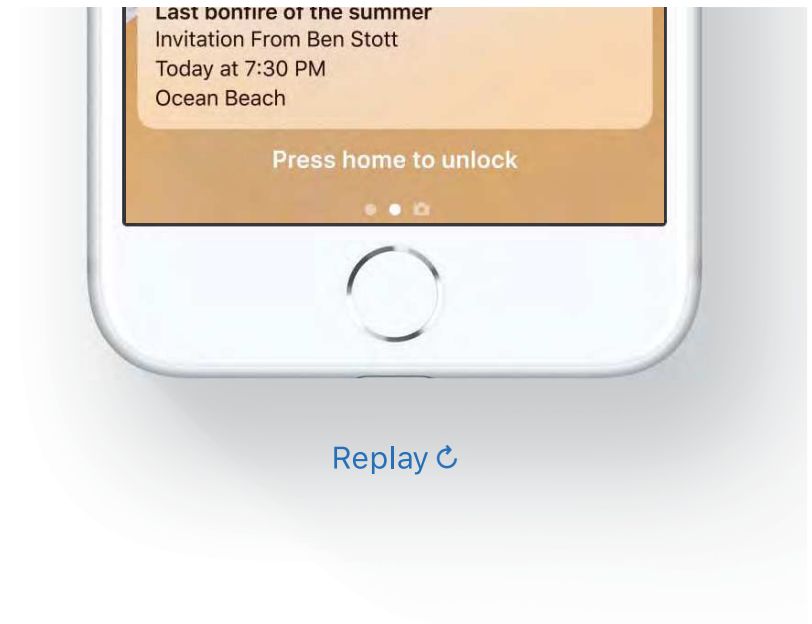
The Lock screen is even more powerful. To get to all your notifications, just swipe up from anywhere on the

screen. At a glance, you can see both your recent and

<https://www.apple.com/ios/ios-11/>



missed notifications in one place.



**Do Not Disturb.
When you're driving,
just drive.**



iPhone can now sense when you might be driving and help keep you from being distracted by calls, text messages, and notifications. People trying to message you can automatically be notified that you're driving.



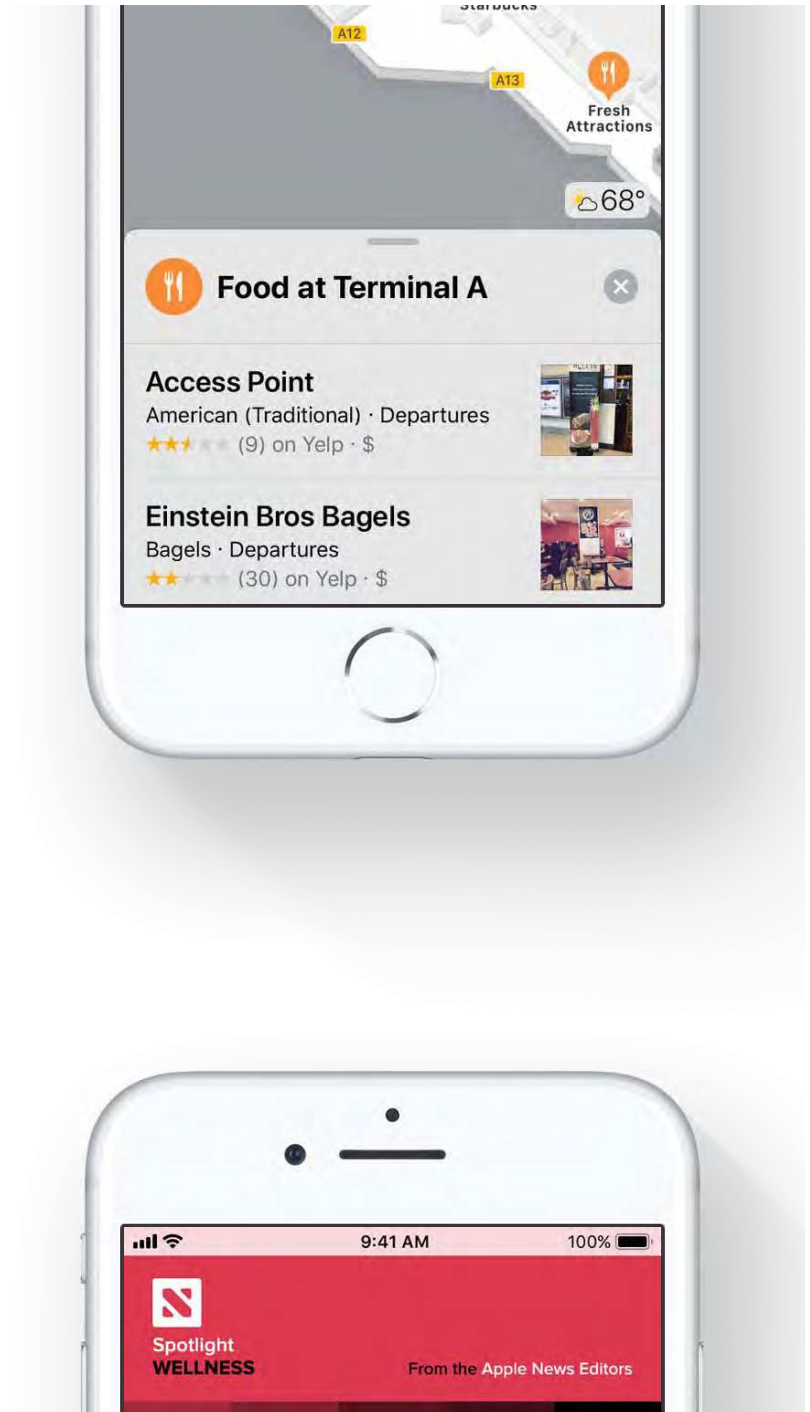
**Maps.
Stay on course.
Indoors and out.**



Whether you're going on a new adventure or just searching for the nearest coffee shop, Maps makes all your journeys smoother. From indoor maps to lane guidance arrows, it's easier than ever to get around.

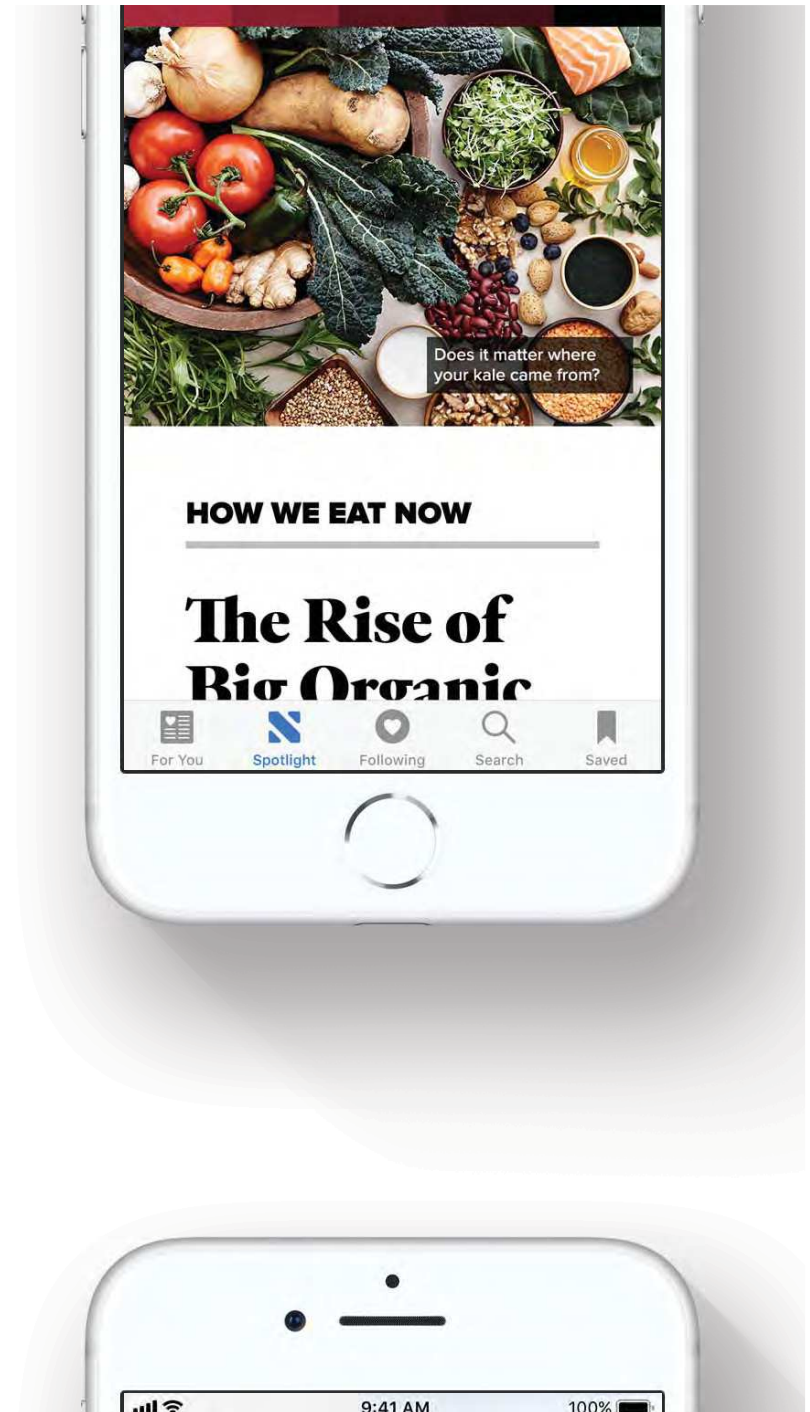
Indoor Maps Lane Guidance

See detailed maps of major airports and shopping centers around the world. Find out which restaurants are past security at the airport or which stores are on level three of the mall.



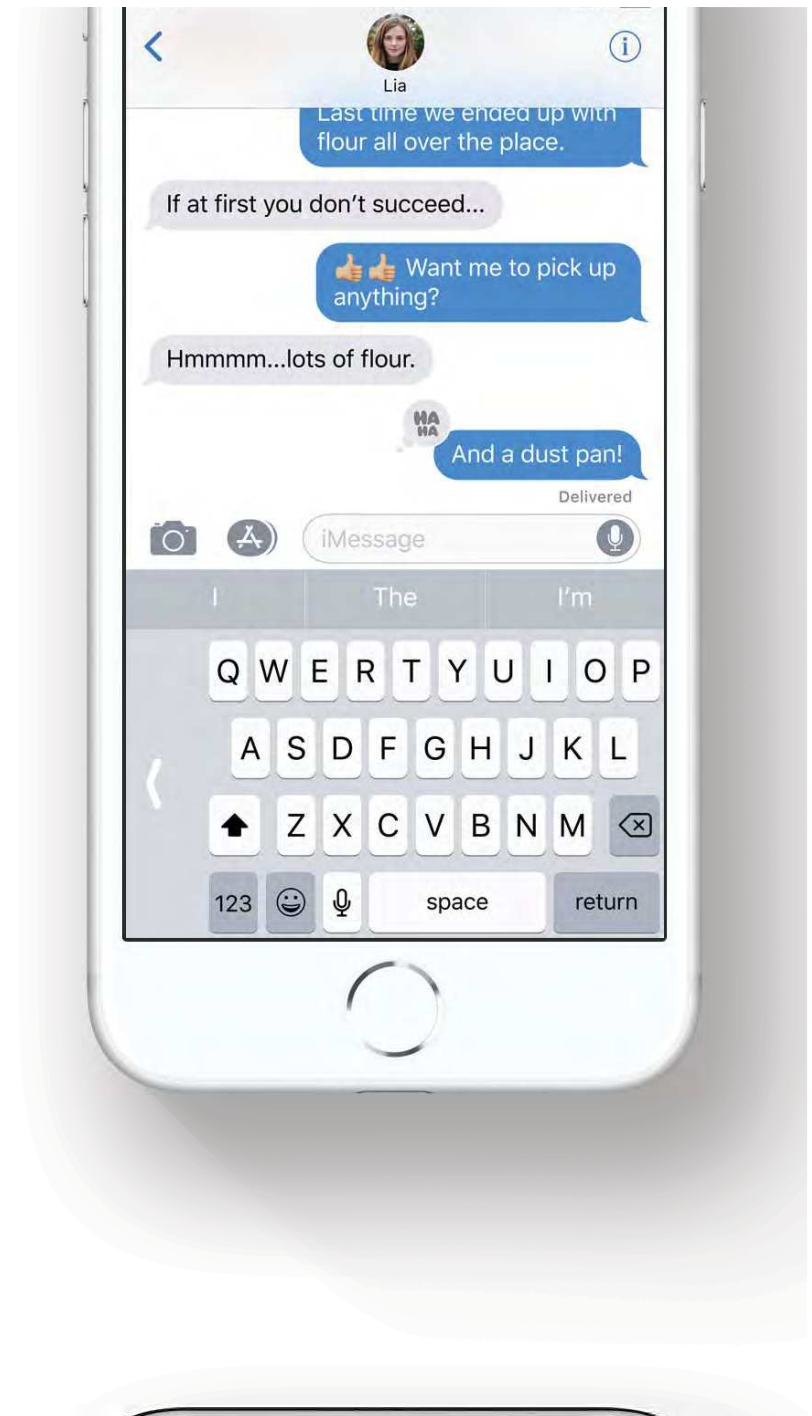
News. Read and watch all about it.

News becomes even more personal, showing top stories that are more relevant to you. Siri learns what's important to you and suggests stories you might like. And our editors choose a different topic every day for you to explore in a new tab called Spotlight. They also craft a daily selection of the best videos for you to see in Today View.



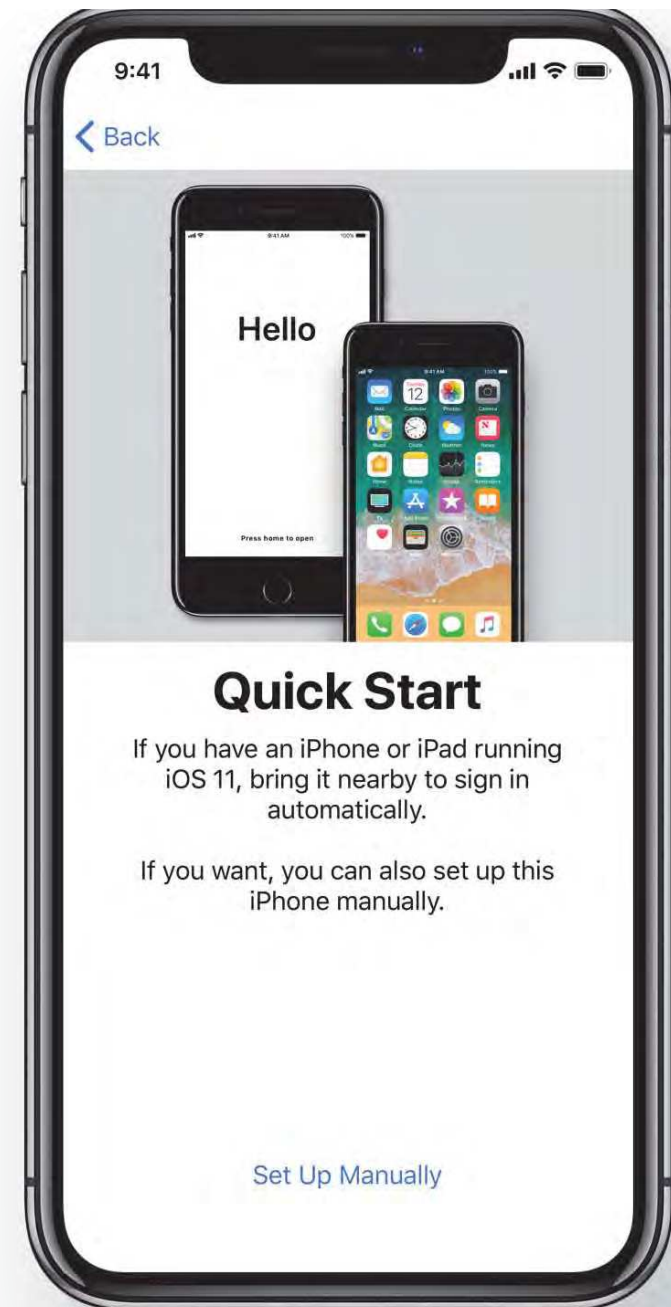
QuickType keyboard. Type with one hand tied behind your back.

Holding a coffee in one hand and your iPhone in the other? Simply touch and hold the emoji or globe key, select one-handed typing, and the keys will instantly move closer to your thumb.



Automatic Setup. Get off to a quick start.

Just hold your new iPhone or iPad near an iOS device to sign in with your Apple ID automatically. Many of your personal settings, preferences, and content will be quickly and securely imported. Or in technical terms, easy peasy.





Developing for iOS 11 with ARKit and Core ML.

Developers have enormous possibilities with iOS 11. ARKit makes it easy to build fantastic augmented reality experiences into apps. And Core ML lets developers use machine learning to create apps that become more intelligent.

Learn more about developing for iOS 11 [↗](#)

iOS 11 is compatible with these devices.

iPhone



- iPhone X
- iPhone 8
- iPhone 8 Plus
- iPhone 7
- iPhone 7 Plus
- iPhone 6s
- iPhone 6s Plus
- iPhone 6
- iPhone 6 Plus
- iPhone SE
- iPhone 5s

iPad



- 12.9-inch iPad Pro
- 2nd generation
- 12.9-inch iPad Pro
- 1st generation
- 10.5-inch iPad Pro
- 9.7-inch iPad Pro
- iPad Air 2
- iPad Air
- iPad
- 6th generation
- iPad
- 5th generation
- iPad mini 4
- iPad mini 3
- iPad mini 2

iPod

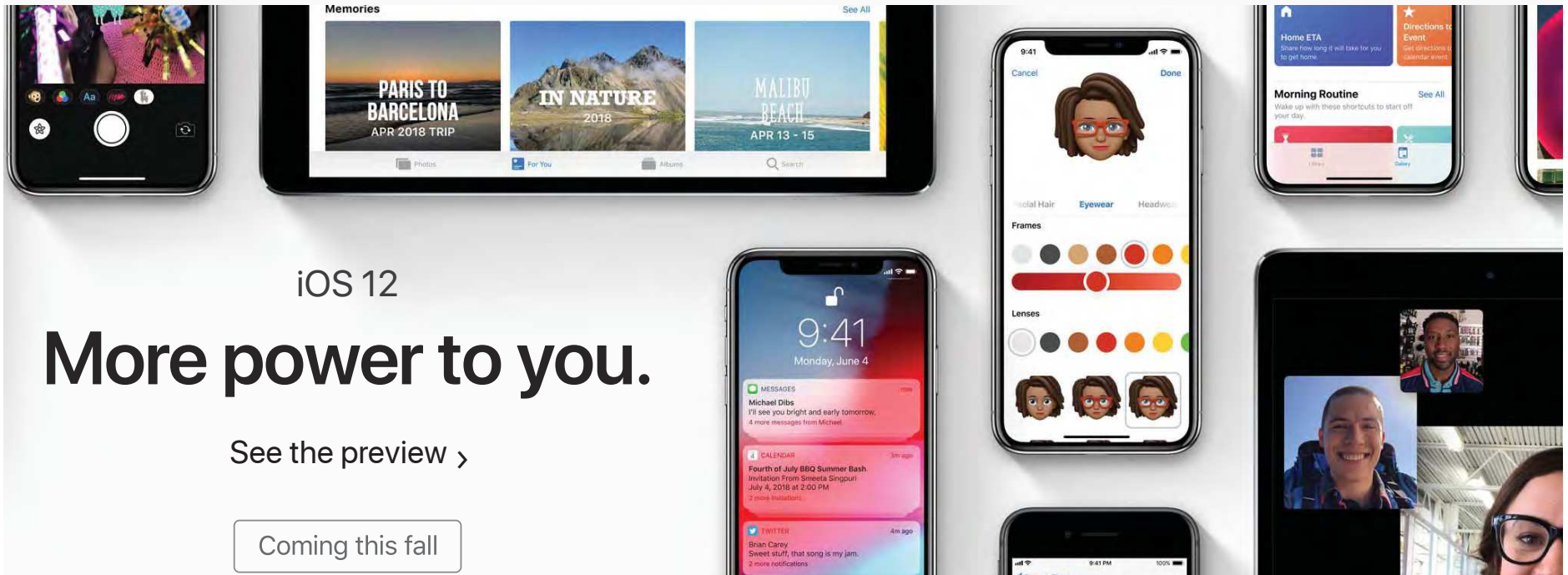


- iPod touch
- 6th generation



Updating is free and easy.

See how to upgrade to iOS 11 >



iOS 12

More power to you.

See the preview >

Coming this fall



1. Searchable handwriting is available for English and Chinese only.
2. Person to person payments and Apple Pay Cash are available only in the U.S. on iPhone SE, iPhone 6 or later, iPad Pro, iPad (5th generation or later), iPad Air 2, iPad mini 3 or later, and Apple Watch. Account security checks may require additional time to make funds available.
3. Amount of storage saved depends on specific photo content used; actual results may vary.
4. Translation requires Siri language to be set to U.S. English.
5. Requires iPhone 6s or later, iPad Pro, iPad (5th generation or later), iPad Air 2, or iPad mini 4.
6. Requires an Apple Music membership.
7. AirPlay 2 may require a software update to existing speakers or new hardware depending on speaker manufacturer.

Some features, applications, and services may not be available in all regions or all languages.

Apple Pay Cash is a service provided by Green Dot Bank, member FDIC.

Apple > iOS > iOS 11

Shop and Learn

- Mac
- iPad
- iPhone
- Watch
- TV
- Music
- iTunes
- HomePod
- iPod touch
- Accessories
- Gift Cards

Apple Store

- Find a Store
- Genius Bar
- Today at Apple
- Apple Camp
- Field Trip
- Apple Store App
- Refurbished and Clearance
- Financing
- Apple GiveBack
- Order Status
- Shopping Help

For Education

- Apple and Education
- Shop for College

For Business

- Apple and Business
- Shop for Business

Account

- Manage Your Apple ID
- Apple Store Account
- iCloud.com

Apple Values

- Accessibility
- Education
- Environment
- Inclusion and Diversity
- Privacy
- Supplier Responsibility

About Apple

- Newsroom
- Apple Leadership
- Job Opportunities
- Investors
- Events
- Contact Apple

More ways to shop: Visit an [Apple Store](#), call 1-800-MY-APPLE, or [find a reseller](#).



UPDATE
SEPTEMBER 18, 2017

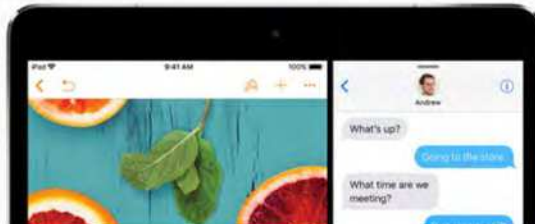
iOS 11 is available tomorrow



Download iOS 11 to open up new augmented reality experiences, boost productivity, take better photos and more.

Starting Tuesday, iPhone and iPad customers around the world will be able to update their devices to iOS 11, a major update to the world's most advanced mobile operating system and the biggest software release ever for iPad. iOS 11 brings augmented reality to hundreds of millions of iOS devices and new professional capabilities improve images in Photos and Camera. Siri is more natural and useful and a redesigned App Store makes it easier to discover apps and games.

iPad Becomes Even More Powerful

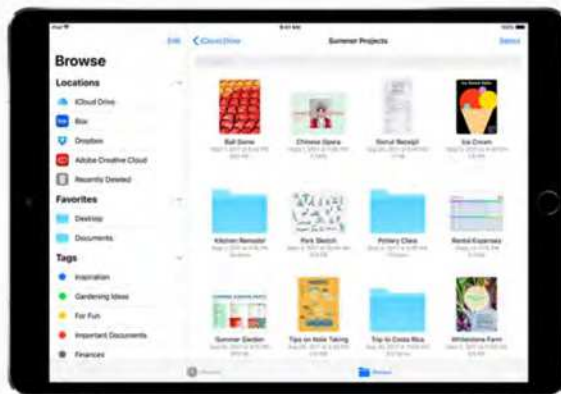


Cao v. Apple
Apple Trial Exhibit
54



Work with multiple apps at the same time using Slide Over on iPad.

The all-new Dock provides quick access to favorite and frequently used apps and documents from any screen and makes it easier to work with multiple apps with Split View and now Slide Over. Drag and Drop makes moving images, text and files between apps easier than ever using Multi-Touch. And Apple Pencil is more deeply integrated into iPad Pro with support for inline drawing and a new Instant Notes feature that opens Notes from the Lock Screen by simply tapping Apple Pencil on the display.



Files makes it easy to access and organize files from one central place.

The all-new Files app provides a central place to access and organize files no matter where they are located — on iPad or in the cloud with built-in support for iCloud Drive as well as providers, such as Box, Dropbox and others.

Immersive Augmented Reality





With new AR apps, users can place virtual objects in real-world scenes.

Hundreds of millions of people can now experience AR apps on iPhone and iPad and view virtual content on top of real-world scenes for interactive gaming, immersive shopping experiences, industrial design and more. These apps deliver high-quality AR experiences using the built-in camera, powerful processors and motion sensors in iOS devices.

Photos Look Even More Professional



New Loop and Bounce effects create continuous video loops for Live Photos.

The incredibly popular and innovative Portrait mode now uses optical image stabilization, True Tone flash and HDR, so every shot looks even more professional. Loop and Bounce effects create continuous video loops for Live Photos, while Long Exposure creatively captures time and movement. In Photos, Memory Movies are optimized to play in both portrait and landscape orientation, and more memories, such as photos of pets or birthdays, are automatically created.

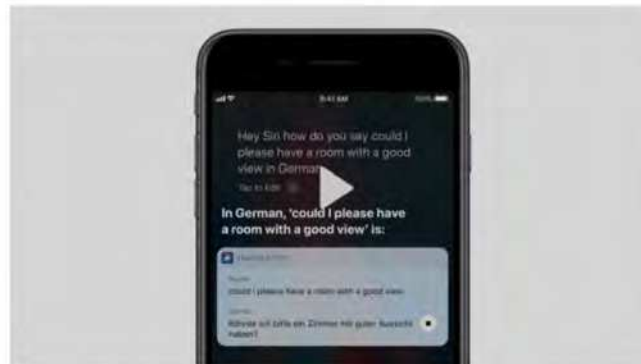
The All-New App Store



Redesigned App Store makes discovering apps and games easier than ever.

The App Store is redesigned in iOS 11, making discovering apps and games easier than ever before. New in-depth features and interviews will uncover the stories behind iOS developers, and the incredible apps and games they create. [App Store for iMessage](#) is also easier to access with a redesigned app drawer.

Siri is More Natural and Useful



Siri now offers translation, an expressive new voice and more proactive intelligence to help you through your day.

New voices are more natural and expressive, adjusting intonation, pitch, emphasis and tempo while speaking, and can translate US English into Mandarin, French, German, Italian or Spanish. Siri uses on-device learning to deliver more personal experiences and offers suggestions based on personal usage of Safari, News, Mail, Messages and more.

Send Money to Friends with Apple Pay this Fall





Coming this fall, easily and securely send and receive money from friends and family with Apple Pay right in Messages, no extra steps or apps needed.

Coming this fall with an update to iOS 11 and watchOS 4, Apple Pay users will be able to send and receive money from friends and family quickly, easily and securely. Pay and get paid right in Messages, or tell Siri to pay someone, using the credit and debit cards they have in Wallet. When users get paid, they receive the money in their new Apple Pay Cash card in Apple Wallet and can use the money instantly.

Stay Focused on the Road

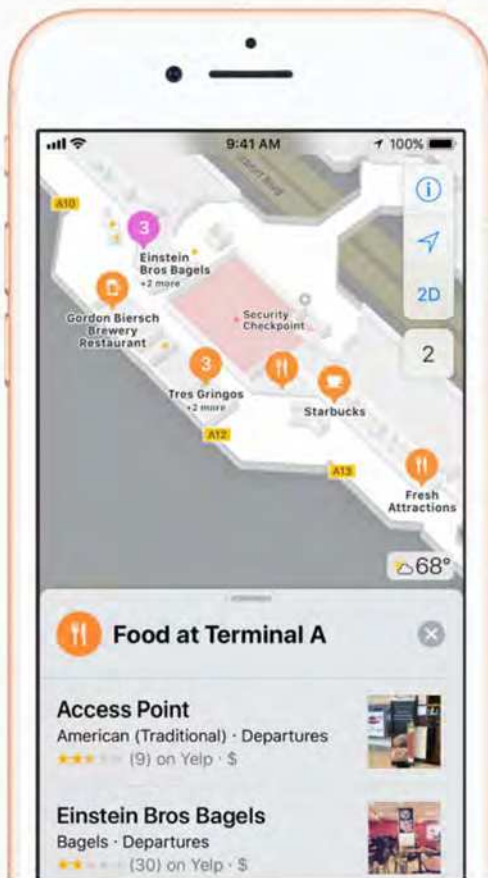


Do Not Disturb while driving is a new way to help drivers stay more focused on the road.

iOS 11 introduces a new way to help drivers stay more focused on the road with Do Not Disturb while driving. iPhone can detect when a user may be driving through vehicle movement or Bluetooth connections, and automatically silences notifications to keep the screen dark. Users have the option of sending an auto reply to their Favorites, contacts or recents

to let them know they are driving and cannot respond until they arrive at their destination.

More Ways to Navigate with Apple Maps

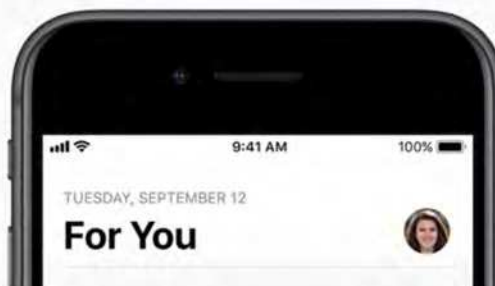


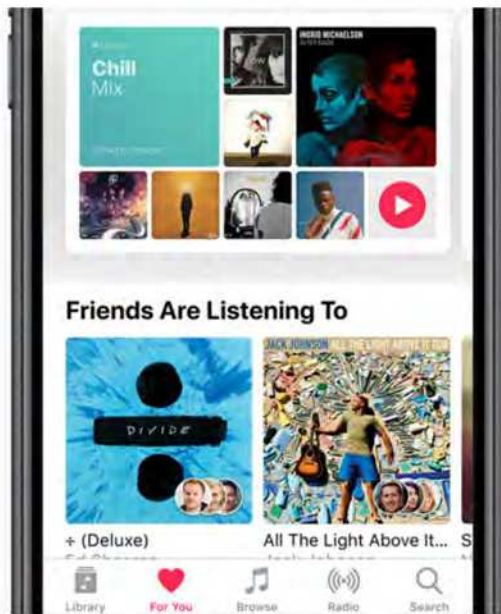
Look inside malls and airports with new indoor maps.

Coming this fall, Apple Maps adds indoor maps for shopping centers and airports around the world, including: Amsterdam (AMS), London Heathrow (LHR), Las Vegas (LAS), Los Angeles (LAX), Miami (MIA), Philadelphia (PHL) and San Jose (SJC).

iOS 11 also introduces lane guidance to help users better prepare for the next turn, as well as speed limits to help users stay informed.

Discover New Music with Friends





Share Music with friends with new features in Apple Music.

Subscribers can create a profile and follow friends to listen to shared playlists and see the music they listen to most. Apple Music subscribers can also begin receiving notifications when friends follow them, new music is released and more — so they never miss a beat.

To learn more ways to get the most out of iOS 11, users can visit the Tips app on iPhone or iPad. For details on how to update iOS devices, visit [Apple Support](#).

Media

Images of iOS 11

[Download All](#)


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media.help@apple.com
(408) 974-2042

Newsroom
The latest news for journalists.
[Read more >](#)

 [Newsroom](#) [iOS 11 is available tomorrow](#)

Shop and Learn Mac iPad iPhone Watch TV Music iTunes HomePod iPod touch Accessories Gift Cards	Apple Store Find a Store Genius Bar Today at Apple Apple Camp Field Trip Apple Store App Refurbished and Clearance Financing Apple GiveBack Order Status Shopping Help	For Education Apple and Education Shop for College For Business Apple and Business Shop for Business	Account Manage Your Apple ID Apple Store Account iCloud.com Apple Values Accessibility Education Environment Inclusion and Diversity Privacy Supplier Responsibility	About Apple Newsroom Apple Leadership Job Opportunities Investors Events Contact Apple
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More ways to shop: Visit an [Apple Store](#), call 1-800-MY-APPLE, or find a [reseller](#).

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Apple Announces Record iPhone 6s & iPhone 6s Plus Sales

Targeted News Service

September 28, 2015 Monday 3:47 AM EST

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Length: 1081 words

Byline: Targeted News Service

Dateline: CUPERTINO, Calif.

Body

Apple issued the following news release:

Apple today announced it has sold more than 13 million new iPhone 6s and iPhone 6s Plus models, a new record, just three days after launch. iPhone 6s and iPhone 6s Plus will be available in more than 40 additional countries beginning October 9 including Italy, Mexico, Russia, Spain and Taiwan. The new iPhones will be available in over 130 countries by the end of the year.

"Sales for iPhone 6s and iPhone 6s Plus have been phenomenal, blowing past any previous first weekend sales results in Apple's history," said Tim Cook, Apple's CEO. "Customers' feedback is incredible and they are loving 3D Touch and Live Photos, and we can't wait to bring iPhone 6s and iPhone 6s Plus to customers in even more countries on October 9."

iPhone 6s and iPhone 6s Plus bring a powerful new dimension to iPhone's revolutionary Multi-Touch interface with 3D Touch, which senses how deeply you press the display, letting you do essential things more quickly and simply. The new iPhones introduce Live Photos, which bring still images to life, transforming instants frozen in time into unforgettable living memories. Live Photos, 3D Touch, 12-megapixel iSight camera, 5-megapixel FaceTime HD camera with Retina Flash and more are powered by the Apple-designed A9 chip, the most advanced chip ever in a smartphone, delivering faster performance and great battery life. iPhone 6s and iPhone 6s Plus are designed with the strongest glass on any smartphone and 7000 series aluminum, the same alloy used in the aerospace industry, in gorgeous metallic finishes that now include rose gold.

iOS 9, the world's most advanced mobile operating system, brings more intelligence to iPhone with proactive assistance, powerful search and improved Siri features, all while protecting users' privacy. Built-in apps become more powerful with a redesigned Notes app, detailed transit information in Maps*, and an all-new News app for the best news reading experience on any mobile device. The foundation of iOS is even stronger with software updates that require less space to install and advanced security features to further protect your devices.

Customers are encouraged to check the Apple Store app or Apple.com to receive updates on availability and estimated delivery dates. Every customer who buys an iPhone 6s or iPhone 6s Plus at an Apple Retail Store will be offered free Personal Setup service, helping them customize their iPhone by setting up email, showing them new apps from the App Store and more, so they'll be up and running with their new iPhone before they leave the store. Customers can also learn more about iOS 9 and their new device through free workshops at all Apple retail stores worldwide. In the US, the new iPhones are also available through AT&T, Sprint, T-Mobile, Verizon Wireless and additional carriers, and select Apple Authorized Resellers including Best Buy, Target and Walmart.

Apple Announces Record iPhone 6s & iPhone 6s Plus Sales

iPhone 6s and iPhone 6s Plus will roll out worldwide to more than 40 additional countries and territories beginning October 9 including Andorra, Austria, Belgium, Bosnia, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, Greece, Greenland, Hungary, Iceland, Ireland, Isle of Man, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Maldives, Mexico, Monaco, Netherlands, Norway, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland and Taiwan. On October 10, countries include Bahrain, Jordan, Kuwait, Qatar, Saudi Arabia and United Arab Emirates. iPhone 6s and iPhone 6s Plus will be available in India, Malaysia and Turkey on Friday, October 16 and in over 130 countries by the end of the year.

Sales completed by Saturday, September 26 will be included in Apple's 2015 fourth fiscal quarter results, and sales completed on Sunday, September 27 will be included in Apple's 2016 first fiscal quarter results.

Pricing & Availability

iPhone 6s and iPhone 6s Plus are available in gold, silver, space gray and the new rose gold metallic finishes for \$0 down with 24 monthly payments starting at \$27 (US) and \$31 (US), respectively, from Apple's retail stores in the US, Apple.com, select carriers and Apple Authorized Resellers.**

Apple-designed accessories including leather and silicone cases in a range of colors and Lightning Docks in color-matched metallic finishes are also available.

Exclusively at Apple's retail stores in the US, customers can choose their carrier and get an unlocked iPhone 6s or iPhone 6s Plus with the opportunity to get a new iPhone annually and AppleCare+ on the new iPhone Upgrade Program. Monthly payments start at \$32 (US) and \$37 (US), respectively. For more information on the iPhone Upgrade Program visit www.apple.com/shop/iphone/iphone-upgrade-program or a US Apple Retail Store.***

Customers can visit Apple.com to reserve their iPhone for pick-up at their local Apple Store, based on availability. Most Apple stores also have iPhone available for walk-in customers each day.

*Transit information in Maps will be available in select major cities including Baltimore, Berlin, Chicago, London, Mexico City, New York City, Philadelphia, the San Francisco Bay Area, Toronto and Washington D.C., as well as over 300 cities in China, including Beijing, Chengdu and Shanghai. News app availability varies by country.

**Prices are rounded to nearest dollar and are based on 24 monthly installment payments. Taxes and activation fees may be due at sale. Carrier terms and eligibility may apply.

***The iPhone Upgrade Program is available to qualified customers only with a valid US personal credit card. Requires a 24-month installment loan with Citizens Bank, N.A. and iPhone activation with a national carrier -- AT&T, Sprint, T-Mobile or Verizon. Full terms apply.

Apple revolutionized personal technology with the introduction of the Macintosh in 1984. Today, Apple leads the world in innovation with iPhone, iPad, the Mac and Apple Watch. Apple's three software platforms -- iOS, OS X and watchOS -- provide seamless experiences across all Apple devices and empower people with breakthrough services including the App Store, Apple Music, Apple Pay and iCloud. Apple's 100,000 employees are dedicated to making the best products on earth, and to leaving the world better than we found it.

Document provided to Targeted News Service as a news release through an RSS feed.

Contact: Trudy Muller, 408/862-7426, tmuller@apple.com

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Load-Date: September 29, 2015

Apple Announces Record iPhone 6s & iPhone 6s Plus Sales

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Apple breaks iPhone sales record with 78.3 million units sold in the holiday quarter

Posted Jan 31, 2017 by [Ryan Lawler \(@ryanlawler\)](#)



With another big holiday quarter behind it, Apple saw revenues from its flagship iPhone product rise to \$54.4 billion, up from \$51.6 billion a year earlier. That revenue growth came as Apple reported units sold rose 5 percent to 78.3 million in its fiscal first quarter of 2017.

That was a record for sales, and also beat analysts expectations by a couple of million. Wall Street forecast iPhone unit sales of 76.3 million in the holiday quarter.

The iPhone is still Apple’s biggest seller, but for the quarter it also saw a slight uptick in sales from its personal computing division, thanks to a [long-awaited refresh of its MacBook Pro line](#).

In the company’s earnings release, Apple CEO Tim Cook noted that the company “sold more iPhones than ever before and set all-time revenue records for iPhone, Services, Mac and Apple Watch.”

Cao v. Apple
Apple Trial Exhibit
56

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Cao v. Apple
Apple Trial Exhibit
57

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 30, 2017

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: **001-36743**

Apple Inc.

(Exact name of Registrant as specified in its charter)

California

(State or other jurisdiction of incorporation or organization)

**1 Infinite Loop
Cupertino, California**

(Address of principal executive offices)

94-2404110

(I.R.S. Employer Identification No.)

95014

(Zip Code)

(408) 996-1010

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, \$0.00001 par value per share

1.000% Notes due 2022
1.375% Notes due 2024
0.875% Notes due 2025
1.625% Notes due 2026
2.000% Notes due 2027
1.375% Notes due 2029
3.050% Notes due 2029
3.600% Notes due 2042

(Title of each class)

The Nasdaq Stock Market LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC

(Name of each exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the Registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

Yes No Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

 (Do not check if a smaller reporting company)

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

The aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant, as of March 31, 2017, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately \$747,509,000,000. Solely for purposes of this disclosure, shares of common stock held by executive officers and directors of the Registrant as of such date have been excluded because such persons may be deemed to be affiliates. This determination of executive officers and directors as affiliates is not necessarily a conclusive determination for any other purposes.

5,134,312,000 shares of common stock were issued and outstanding as of October 20, 2017.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement relating to its 2018 annual meeting of shareholders (the 2018 Proxy Statement) are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. The 2018 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

Apple Inc.
Form 10-K
For the Fiscal Year Ended September 30, 2017
TABLE OF CONTENTS

		<u>Page</u>
Part I		
Item 1.	Business	1
Item 1A.	Risk Factors	8
Item 1B.	Unresolved Staff Comments	16
Item 2.	Properties	17
Item 3.	Legal Proceedings	17
Item 4.	Mine Safety Disclosures	17
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	18
Item 6.	Selected Financial Data	21
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	22
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	36
Item 8.	Financial Statements and Supplementary Data	38
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	72
Item 9A.	Controls and Procedures	72
Item 9B.	Other Information	72
Part III		
Item 10.	Directors, Executive Officers and Corporate Governance	73
Item 11.	Executive Compensation	73
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	73
Item 13.	Certain Relationships and Related Transactions, and Director Independence	73
Item 14.	Principal Accounting Fees and Services	73
Part IV		
Item 15.	Exhibits, Financial Statement Schedules	74
Item 16.	Form 10-K Summary	76

This Annual Report on Form 10-K ("Form 10-K") contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Many of the forward-looking statements are located in Part II, Item 7 of this Form 10-K under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. All information presented herein is based on the Company's fiscal calendar. Unless otherwise stated, references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly-owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

PART I

Item 1. Business

Company Background

The Company designs, manufactures and markets mobile communication and media devices and personal computers, and sells a variety of related software, services, accessories, networking solutions and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, Apple TV, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, iBooks Store and Apple Music (collectively "Digital Content and Services"). The Company sells its products worldwide through its retail stores, online stores and direct sales force, as well as through third-party cellular network carriers, wholesalers, retailers and value-added resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers. The Company's fiscal year is the 52 or 53-week period that ends on the last Saturday of September. The Company is a California corporation established in 1977.

Business Strategy

The Company is committed to bringing the best user experience to its customers through its innovative hardware, software and services. The Company's business strategy leverages its unique ability to design and develop its own operating systems, hardware, application software and services to provide its customers products and solutions with innovative design, superior ease-of-use and seamless integration. As part of its strategy, the Company continues to expand its platform for the discovery and delivery of digital content and applications through its Digital Content and Services, which allows customers to discover and download digital content, iOS, Mac, Apple Watch and Apple TV applications, and books through either a Mac or Windows personal computer or through iPhone, iPad and iPod touch devices ("iOS devices"), Apple TV and Apple Watch. The Company also supports a community for the development of third-party software and hardware products and digital content that complement the Company's offerings. The Company believes a high-quality buying experience with knowledgeable salespersons who can convey the value of the Company's products and services greatly enhances its ability to attract and retain customers. Therefore, the Company's strategy also includes building and expanding its own retail and online stores and its third-party distribution network to effectively reach more customers and provide them with a high-quality sales and post-sales support experience. The Company believes ongoing investment in research and development ("R&D"), marketing and advertising is critical to the development and sale of innovative products, services and technologies.

Business Organization

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. Further information regarding the Company's reportable segments may be found in Part II, Item 7 of this Form 10-K under the subheading "Segment Operating Performance," and in Part II, Item 8 of this Form 10-K in the Note to Consolidated Financial Statements in Note 11, "Segment Information and Geographic Data."

Products

iPhone

iPhone is the Company's line of smartphones based on its iOS operating system. iPhone includes Siri, a voice-activated intelligent assistant, and Apple Pay and Touch ID on qualifying devices. In September 2017, the Company introduced iPhone 8 and 8 Plus, featuring a new glass and aluminum design, enhanced cameras and speakers, wireless charging and augmented reality optimization. Additionally, in September 2017, the Company announced iPhone X, featuring an all-glass design with a Super Retina OLED display and facial recognition. iPhone 8 and 8 Plus were available starting in September 2017, and iPhone X is expected to be available in November 2017. The Company's line of smartphones also includes iPhone 7, 7 Plus, 6s, 6s Plus and SE models. iPhone works with the iTunes Store, App Store, iBooks Store and Apple Music for purchasing, organizing and playing digital content and apps.

iPad

iPad is the Company's line of multi-purpose tablets based on its iOS operating system, which includes iPad Pro, iPad and iPad mini. iPad includes Siri, Apple Pay and Touch ID. In June 2017, the Company released a new 10.5-inch iPad Pro and an updated 12.9-inch iPad Pro with more advanced displays and enhanced performance. iPad works with the iTunes Store, App Store, iBooks Store and Apple Music for purchasing, organizing and playing digital content and apps.

Mac

Mac is the Company's line of desktop and portable personal computers based on its macOS operating system. Mac includes Siri and Apple Pay and also includes Touch ID on qualifying devices. The Company's desktop computers include iMac, 21.5-inch iMac with Retina 4K display, 27-inch iMac with Retina 5K display, Mac Pro and Mac mini. In June 2017, the Company announced the new iMac Pro, which is expected to be available in December 2017. The Company's portable computers include MacBook, MacBook Air, MacBook Pro and MacBook Pro with Touch Bar.

Operating Systems

iOS

iOS is the Company's mobile operating system that serves as the foundation for iOS devices. Devices running iOS are compatible with both Mac and Windows personal computers and Apple's iCloud services. In September 2017, the Company released iOS 11, which includes new iPad features, new capabilities to improve images in Photos and Camera, enhanced Siri functionality and a redesigned App Store. iOS 11 also introduces ARKit, an augmented reality framework for developers.

macOS

macOS is the Company's desktop operating system and is built on an open-source UNIX-based foundation and provides an intuitive and integrated computer experience. Support for iCloud is built into macOS so users can access content and information from Mac, iOS devices and other supported devices and access downloaded content and apps from the iTunes Store. macOS High Sierra, released in September 2017, is the 14th major release of macOS and incorporates new storage, video and graphics technologies, and includes improvements to Photos, Safari and Mail.

watchOS

watchOS is the Company's operating system for Apple Watch. In September 2017, the Company released watchOS 4, which adds a proactive Siri watch face that displays the information users need most throughout the day, personalized activity coaching and a new music experience. watchOS 4 also includes an enhanced Workout app and introduces GymKit, a technology platform that offers users connected workouts with cardio equipment.

tvOS

tvOS is the Company's operating system for Apple TV. The tvOS operating system is based on the Company's iOS platform and enables developers to create new apps and games specifically for Apple TV and deliver them to customers through the Apple TV App Store. tvOS incorporates Siri capabilities that allow searching across apps and services.

Application Software

The Company's application software includes iWork and various other software, including Final Cut Pro, Logic Pro X and FileMaker Pro. iWork is the Company's integrated productivity suite included with all Mac computers and is designed to help users create, present and publish documents through Pages, presentations through Keynote and spreadsheets through Numbers. The Company also has Multi-Touch versions of iWork applications designed specifically for use on iOS devices, which are available as free downloads for all new iOS devices.

Services

Digital Content and Services

The iTunes Store, available for iOS devices, Mac and Windows personal computers and Apple TV, allows customers to purchase and download music and TV shows, rent or purchase movies and download free podcasts. The App Store, available for iOS devices, allows customers to discover and download apps and purchase in-app content. The Mac App Store, available for Mac computers, allows customers to discover, download and install Mac applications. The TV App Store allows customers access to apps and games specifically for Apple TV. The iBooks Store, available for iOS devices and Mac computers, features e-books from major and independent publishers. Apple Music offers users a curated listening experience with on-demand radio stations that evolve based on a user's play or download activity and a subscription-based internet streaming service that also provides unlimited access to the Apple Music library.

iCloud

iCloud is the Company's cloud service which stores music, photos, contacts, calendars, mail, documents and more, keeping them up-to-date and available across multiple iOS devices, Mac and Windows personal computers and Apple TV. iCloud services include iCloud Drive, iCloud Photo Library, Family Sharing, Find My iPhone, iPad or Mac, Find My Friends, Notes, iCloud Keychain and iCloud Backup for iOS devices.

AppleCare

The Company offers a range of support options for its customers. These include assistance that is built into software products, electronic product manuals, online support including comprehensive product information as well as technical assistance, the AppleCare Protection Plan (APP) and AppleCare+ (AC+). APP and AC+ are fee-based services that extend the coverage of phone support eligibility and hardware warranty repairs. APP and AC+ offer additional coverage under some circumstances for instances of accidental damage and are available in certain countries for certain products.

Apple Pay

Apple Pay is the Company's cashless payment service available in certain countries that offers an easy, secure and private way to pay. Apple Pay allows users to pay for purchases in participating stores accepting contactless payments and to pay for purchases within participating apps on qualifying devices. Apple Pay accepts credit and debit cards across major card networks and also supports reward programs and store-issued credit and debit cards. The Company expects to release an update to iOS 11 and watchOS 4 in fall 2017 that will allow peer-to-peer payments using Apple Pay.

Other Products

Accessories

The Company sells a variety of Apple-branded and third-party accessories, including Beats products, headphones, displays, storage devices, and various other connectivity and computing products and supplies. In December 2016, the Company released AirPods, new wireless headphones that interact with Siri. Additionally, in June 2017, the Company announced the HomePod wireless speaker and in September 2017, announced AirPower, a new wireless charging accessory, which are expected to be available in December 2017 and calendar year 2018, respectively.

Apple TV

Apple TV connects to consumers' TVs and enables them to access digital content directly for streaming video, playing music and games, and viewing photos. Content from Apple Music and other media services is also available on Apple TV. Apple TV allows streaming digital content from Mac and Windows personal computers through Home Share and from compatible Mac and iOS devices through AirPlay. Apple TV runs on the Company's tvOS operating system and is based on apps built for the television. Additionally, the Apple TV remote features Siri, allowing users to search and access content with their voice. In September 2017, the Company introduced Apple TV 4K, which supports 4K and High Dynamic Range content, providing customers with enhanced picture quality.

Apple Watch

Apple Watch is a personal electronic device that combines the watchOS user interface and technologies created specifically for a smaller device, including the Digital Crown, a unique navigation tool that allows users to seamlessly scroll, zoom and navigate, and Force Touch, a technology that senses the difference between a tap and a press and allows users to access controls within apps. Apple Watch enables users to communicate in new ways from their wrist, track their health and fitness through activity and workout apps, and includes Siri and Apple Pay. In September 2017, the Company introduced Apple Watch Series 3, featuring health and fitness enhancements and built-in cellular capability on qualifying devices.

iPod touch

iPod touch, based on the Company's iOS operating system, is a flash memory-based digital music and media player that works with the iTunes Store, App Store, iBooks Store and Apple Music for purchasing and playing digital content and apps.

Developer Programs

The Company's developer programs support app developers with building, testing and distributing apps for iOS, macOS, watchOS and tvOS. Developer program membership provides access to beta software and advanced app capabilities (e.g., CloudKit, HealthKit and Apple Pay), the ability to test apps using TestFlight, distribution on the App Store, access to App Analytics and code-level technical support. Developer programs also exist for businesses creating apps for internal use (the Apple Developer Enterprise Program) and developers creating accessories for Apple devices (the MFi Program). All developers, even those who are not developer program members, can sign in with their Apple ID to post on the Apple Developer Forums and use Xcode, the Company's integrated development environment for creating apps for Apple platforms. Xcode includes project management tools; analysis tools to collect, display and compare app performance data; simulation tools to locally run, test and debug apps; and tools to simplify the design and development of user interfaces. All developers also have access to extensive technical documentation and sample code.

Markets and Distribution

The Company's customers are primarily in the consumer, small and mid-sized business, education, enterprise and government markets. The Company sells its products and resells third-party products in most of its major markets directly to consumers and small and mid-sized businesses through its retail and online stores and its direct sales force. The Company also employs a variety of indirect distribution channels, such as third-party cellular network carriers, wholesalers, retailers and value-added resellers. During 2017, the Company's net sales through its direct and indirect distribution channels accounted for 28% and 72%, respectively, of total net sales.

The Company believes that sales of its innovative and differentiated products and services are enhanced by knowledgeable salespersons who can convey the value of the hardware and software integration and demonstrate the unique solutions that are available on its products. The Company further believes providing direct contact with its targeted customers is an effective way to demonstrate the advantages of its products over those of its competitors and providing a high-quality sales and after-sales support experience is critical to attracting new and retaining existing customers.

To ensure a high-quality buying experience for its products in which service and education are emphasized, the Company continues to build and improve its distribution capabilities by expanding the number of its own retail stores worldwide. The Company's retail stores are typically located at high-traffic locations in quality shopping malls and urban shopping districts. By operating its own stores and locating them in desirable high-traffic locations the Company is better positioned to ensure a high-quality customer buying experience and attract new customers. The stores are designed to simplify and enhance the presentation and marketing of the Company's products and related solutions. The retail stores employ experienced and knowledgeable personnel who provide product advice, service and training, and offer a wide selection of third-party hardware, software and other accessories that complement the Company's products.

The Company has also invested in programs to enhance reseller sales by placing high-quality Apple fixtures, merchandising materials and other resources within selected third-party reseller locations. Through the Apple Premium Reseller Program, certain third-party resellers focus on the Apple platform by providing a high level of product expertise, integration and support services.

The Company is committed to delivering solutions to help educators teach and students learn. The Company believes effective integration of technology into classroom instruction can result in higher levels of student achievement and has designed a range of products, services and programs to address the needs of education customers. The Company also supports mobile learning and real-time distribution of, and access to, education-related materials through iTunes U, a platform that allows students and teachers to share and distribute educational media online. The Company sells its products to the education market through its direct sales force, select third-party resellers and its retail and online stores.

The Company also sells its hardware and software products to enterprise and government customers in each of its reportable segments. The Company's products are deployed in these markets because of their performance, productivity, ease-of-use and seamless integration into information technology environments. The Company's products are compatible with thousands of third-party business applications and services, and its tools enable the development and secure deployment of custom applications as well as remote device administration.

No single customer accounted for more than 10% of net sales in 2017, 2016 and 2015.

Competition

The markets for the Company's products and services are highly competitive and the Company is confronted by aggressive competition in all areas of its business. These markets are characterized by frequent product introductions and rapid technological advances that have substantially increased the capabilities and use of mobile communication and media devices, personal computers and other digital electronic devices. Many of the Company's competitors that sell mobile devices and personal computers based on other operating systems seek to compete primarily through aggressive pricing and very low cost structures. The Company's financial condition and operating results can be adversely affected by these and other industry-wide downward pressures on gross margins. Principal competitive factors important to the Company include price, product features (including security features), relative price and performance, product quality and reliability, design innovation, a strong third-party software and accessories ecosystem, marketing and distribution capability, service and support and corporate reputation.

The Company is focused on expanding its market opportunities related to personal computers and mobile communication and media devices. These markets are highly competitive and include many large, well-funded and experienced participants. The Company expects competition in these markets to intensify significantly as competitors attempt to imitate some of the features of the Company's products and applications within their own products or, alternatively, collaborate with each other to offer solutions that are more competitive than those they currently offer. These markets are characterized by aggressive price competition, frequent product introductions, evolving design approaches and technologies, rapid adoption of technological and product advancements by competitors and price sensitivity on the part of consumers and businesses.

The Company's digital content services have faced significant competition from other companies promoting their own digital music and content products and services, including those offering free peer-to-peer music and video services.

The Company's future financial condition and operating results depend on the Company's ability to continue to develop and offer new innovative products and services in each of the markets in which it competes. The Company believes it offers superior innovation and integration of the entire solution including the hardware (iOS devices, Mac, Apple Watch and Apple TV), software (iOS, macOS, watchOS and tvOS), online services and distribution of digital content and applications (Digital Content and Services). Some of the Company's current and potential competitors have substantial resources and may be able to provide such products and services at little or no profit or even at a loss to compete with the Company's offerings.

Supply of Components

Although most components essential to the Company's business are generally available from multiple sources, a few components are currently obtained from single or limited sources. In addition, the Company competes for various components with other participants in the markets for mobile communication and media devices and personal computers. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortage and significant pricing fluctuations that could materially adversely affect the Company's financial condition and operating results.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source. Continued availability of these components at acceptable prices, or at all, may be affected if those suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

Substantially all of the Company's hardware products are currently manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. Certain of these outsourcing partners are the sole-sourced suppliers of components and manufacturers for many of the Company's products. Although the Company works closely with its outsourcing partners on manufacturing schedules, the Company's operating results could be adversely affected if its outsourcing partners were unable to meet their production commitments. The Company's manufacturing purchase obligations typically cover its requirements for periods up to 150 days.

Research and Development

Because the industries in which the Company competes are characterized by rapid technological advances, the Company's ability to compete successfully depends heavily upon its ability to ensure a continual and timely flow of competitive products, services and technologies to the marketplace. The Company continues to develop new technologies to enhance existing products and services, and to expand the range of its offerings through R&D, licensing of intellectual property and acquisition of third-party businesses and technology. Total R&D expense was \$11.6 billion, \$10.0 billion and \$8.1 billion in 2017, 2016 and 2015, respectively.

Intellectual Property

The Company currently holds a broad collection of intellectual property rights relating to certain aspects of its hardware devices, accessories, software and services. This includes patents, copyrights, trademarks, service marks, trade dress and other forms of intellectual property rights in the U.S. and a number of foreign countries. Although the Company believes the ownership of such intellectual property rights is an important factor in its business and that its success does depend in part on such ownership, the Company relies primarily on the innovative skills, technical competence and marketing abilities of its personnel.

The Company regularly files patent applications to protect innovations arising from its research, development and design, and is currently pursuing thousands of patent applications around the world. Over time, the Company has accumulated a large portfolio of issued patents, including utility patents, design patents and others. The Company also holds copyrights relating to certain aspects of its products and services. No single intellectual property right is solely responsible for protecting the Company's products. The Company believes the duration of its intellectual property rights is adequate relative to the expected lives of its products.

Many of the Company's products are designed to include intellectual property obtained from third parties. It may be necessary in the future to seek or renew licenses relating to various aspects of its products, processes and services. While the Company has generally been able to obtain such licenses on commercially reasonable terms in the past, there is no guarantee that such licenses could be obtained in the future on reasonable terms or at all. Because of technological changes in the industries in which the Company competes, current extensive patent coverage and the rapid rate of issuance of new patents, it is possible that certain components of the Company's products, processes and services may unknowingly infringe existing patents or intellectual property rights of others. From time to time, the Company has been notified that it may be infringing certain patents or other intellectual property rights of third parties.

Foreign and Domestic Operations and Geographic Data

During 2017, the Company's domestic and international net sales accounted for 37% and 63%, respectively, of total net sales. Information regarding financial data by geographic segment is set forth in Part II, Item 7 of this Form 10-K under the subheading "Segment Operating Performance," and in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 11, "Segment Information and Geographic Data."

Substantially all of the Company's hardware products are currently manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland. The supply and manufacture of a number of components is performed by sole-sourced outsourcing partners in the U.S., Asia and Europe. Margins on sales of the Company's products in foreign countries and on sales of products that include components obtained from foreign suppliers, can be adversely affected by foreign currency exchange rate fluctuations and by international trade regulations, including tariffs and antidumping penalties. Information regarding concentration in the available sources of supply of materials and products is set forth in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies."

Business Seasonality and Product Introductions

The Company has historically experienced higher net sales in its first quarter compared to other quarters in its fiscal year due in part to seasonal holiday demand. Additionally, new product introductions can significantly impact net sales, product costs and operating expenses. Product introductions can also impact the Company's net sales to its indirect distribution channels as these channels are filled with new product inventory following a product introduction, and often, channel inventory of a particular product declines as the next related major product launch approaches. Net sales can also be affected when consumers and distributors anticipate a product introduction. However, neither historical seasonal patterns nor historical patterns of product introductions should be considered reliable indicators of the Company's future pattern of product introductions, future net sales or financial performance.

Warranty

The Company offers a limited parts and labor warranty on its hardware products. The basic warranty period is typically one year from the date of purchase by the original end-user. The Company also offers a 90-day limited warranty on the service parts used to repair the Company's hardware products. In certain jurisdictions, local law requires that manufacturers guarantee their products for a period prescribed by statute, typically at least two years. In addition, where available, consumers may purchase APP or AC+, which extends service coverage on many of the Company's hardware products.

Backlog

In the Company's experience, the actual amount of product backlog at any particular time is not a meaningful indication of its future business prospects. In particular, backlog often increases immediately following new product introductions as customers anticipate shortages. Backlog is often reduced once customers believe they can obtain sufficient supply. Because of the foregoing, backlog should not be considered a reliable indicator of the Company's ability to achieve any particular level of revenue or financial performance.

Employees

As of September 30, 2017, the Company had approximately 123,000 full-time equivalent employees.

Available Information

The Company's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are filed with the Securities and Exchange Commission (the "SEC"). The Company is subject to the informational requirements of the Exchange Act and files or furnishes reports, proxy statements and other information with the SEC. Such reports and other information filed by the Company with the SEC are available free of charge on the Company's website at investor.apple.com/sec.cfm when such reports are available on the SEC's website. The public may read and copy any materials filed by the Company with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Room 1580 Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an internet site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC at www.sec.gov. The information contained on the websites referenced in this Form 10-K is not incorporated by reference into this filing. Further, the Company's references to website URLs are intended to be inactive textual references only.

Item 1A. Risk Factors

The following discussion of risk factors contains forward-looking statements. These risk factors may be important to understanding other statements in this Form 10-K. The following information should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes in Part II, Item 8, "Financial Statements and Supplementary Data" of this Form 10-K.

The business, financial condition and operating results of the Company can be affected by a number of factors, whether currently known or unknown, including but not limited to those described below, any one or more of which could, directly or indirectly, cause the Company's actual financial condition and operating results to vary materially from past, or from anticipated future, financial condition and operating results. Any of these factors, in whole or in part, could materially and adversely affect the Company's business, financial condition, operating results and stock price.

Because of the following factors, as well as other factors affecting the Company's financial condition and operating results, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

Global and regional economic conditions could materially adversely affect the Company.

The Company's operations and performance depend significantly on global and regional economic conditions. Uncertainty about global and regional economic conditions poses a risk as consumers and businesses may postpone spending in response to tighter credit, higher unemployment, financial market volatility, government austerity programs, negative financial news, declines in income or asset values and/or other factors. These worldwide and regional economic conditions could have a material adverse effect on demand for the Company's products and services. Demand also could differ materially from the Company's expectations as a result of currency fluctuations because the Company generally raises prices on goods and services sold outside the U.S. to correspond with the effect of a strengthening of the U.S. dollar. Other factors that could influence worldwide or regional demand include changes in fuel and other energy costs, conditions in the real estate and mortgage markets, unemployment, labor and healthcare costs, access to credit, consumer confidence and other macroeconomic factors affecting consumer spending behavior. These and other economic factors could materially adversely affect demand for the Company's products and services.

In the event of financial turmoil affecting the banking system and financial markets, additional consolidation of the financial services industry, or significant financial service institution failures, there could be tightening in the credit markets, low liquidity and extreme volatility in fixed income, credit, currency and equity markets. This could have a number of effects on the Company's business, including the insolvency or financial instability of outsourcing partners or suppliers or their inability to obtain credit to finance development and/or manufacture products, resulting in product delays; inability of customers, including channel partners, to obtain credit to finance purchases of the Company's products; failure of derivative counterparties and other financial institutions; and restrictions on the Company's ability to issue new debt. Other income and expense also could vary materially from expectations depending on gains or losses realized on the sale or exchange of financial instruments; impairment charges resulting from revaluations of debt and equity securities and other investments; changes in interest rates; increases or decreases in cash balances; volatility in foreign exchange rates; and changes in fair value of derivative instruments. Increased volatility in the financial markets and overall economic uncertainty would increase the risk of the actual amounts realized in the future on the Company's financial instruments differing significantly from the fair values currently assigned to them.

Global markets for the Company's products and services are highly competitive and subject to rapid technological change, and the Company may be unable to compete effectively in these markets.

The Company's products and services compete in highly competitive global markets characterized by aggressive price competition and resulting downward pressure on gross margins, frequent introduction of new products, short product life cycles, evolving industry standards, continual improvement in product price/performance characteristics, rapid adoption of technological and product advancements by competitors and price sensitivity on the part of consumers.

The Company's ability to compete successfully depends heavily on its ability to ensure a continuing and timely introduction of innovative new products, services and technologies to the marketplace. The Company believes it is unique in that it designs and develops nearly the entire solution for its products, including the hardware, operating system, numerous software applications and related services. As a result, the Company must make significant investments in R&D. The Company currently holds a significant number of patents and copyrights and has registered and/or has applied to register numerous patents, trademarks and service marks. In contrast, many of the Company's competitors seek to compete primarily through aggressive pricing and very low cost structures, and emulating the Company's products and infringing on its intellectual property. If the Company is unable to continue to develop and sell innovative new products with attractive margins or if competitors infringe on the Company's intellectual property, the Company's ability to maintain a competitive advantage could be adversely affected.

The Company markets certain mobile communication and media devices based on the iOS mobile operating system and also markets related services, including third-party digital content and applications. The Company faces substantial competition in these markets from companies that have significant technical, marketing, distribution and other resources, as well as established hardware, software and digital content supplier relationships; and the Company has a minority market share in the global smartphone market. Additionally, the Company faces significant competition as competitors reduce their selling prices and attempt to imitate the Company's product features and applications within their own products or, alternatively, collaborate with each other to offer solutions that are more competitive than those they currently offer. The Company competes with business models that provide content to users for free. The Company also competes with illegitimate means to obtain third-party digital content and applications. Some of the Company's competitors have greater experience, product breadth and distribution channels than the Company. Because some current and potential competitors have substantial resources and/or experience and a lower cost structure, they may be able to provide products and services at little or no profit or even at a loss. The Company also expects competition to intensify as competitors attempt to imitate the Company's approach to providing components seamlessly within their individual offerings or work collaboratively to offer integrated solutions. The Company's financial condition and operating results depend substantially on the Company's ability to continually improve iOS and iOS devices in order to maintain their functional and design advantages.

The Company is the only authorized maker of hardware using macOS, which has a minority market share in the personal computer market. This market has been contracting and is dominated by computer makers using competing operating systems, most notably Windows. In the market for personal computers and accessories, the Company faces a significant number of competitors, many of which have broader product lines, lower-priced products and a larger installed customer base. Historically, consolidation in this market has resulted in larger competitors. Competition has been particularly intense as competitors have aggressively cut prices and lowered product margins. An increasing number of internet-enabled devices that include software applications and are smaller and simpler than traditional personal computers compete for market share with the Company's existing products. The Company's financial condition and operating results also depend on its ability to continually improve the Mac platform to maintain its functional and design advantages.

There can be no assurance the Company will be able to continue to provide products and services that compete effectively.

To remain competitive and stimulate customer demand, the Company must successfully manage frequent product introductions and transitions.

Due to the highly volatile and competitive nature of the industries in which the Company competes, the Company must continually introduce new products, services and technologies, enhance existing products and services, effectively stimulate customer demand for new and upgraded products and successfully manage the transition to these new and upgraded products. The success of new product introductions depends on a number of factors including, but not limited to, timely and successful product development, market acceptance, the Company's ability to manage the risks associated with new product production ramp-up issues, the availability of application software for new products, the effective management of purchase commitments and inventory levels in line with anticipated product demand, the availability of products in appropriate quantities and at expected costs to meet anticipated demand and the risk that new products may have quality or other defects or deficiencies in the early stages of introduction. Accordingly, the Company cannot determine in advance the ultimate effect of new product introductions and transitions.

The Company depends on the performance of distributors, carriers and other resellers.

The Company distributes its products through cellular network carriers, wholesalers, national and regional retailers and value-added resellers, many of whom distribute products from competing manufacturers. The Company also sells its products and third-party products in most of its major markets directly to education, enterprise and government customers and consumers and small and mid-sized businesses through its retail and online stores.

Some carriers providing cellular network service for iPhone subsidize users' purchases of the device. There is no assurance that such subsidies will be continued at all or in the same amounts upon renewal of the Company's agreements with these carriers or in agreements the Company enters into with new carriers.

The Company has invested and will continue to invest in programs to enhance reseller sales, including staffing selected resellers' stores with Company employees and contractors, and improving product placement displays. These programs could require a substantial investment while providing no assurance of return or incremental revenue. The financial condition of these resellers could weaken, these resellers could stop distributing the Company's products, or uncertainty regarding demand for some or all of the Company's products could cause resellers to reduce their ordering and marketing of the Company's products.

The Company faces substantial inventory and other asset risk in addition to purchase commitment cancellation risk.

The Company records a write-down for product and component inventories that have become obsolete or exceed anticipated demand or net realizable value and accrues necessary cancellation fee reserves for orders of excess products and components. The Company also reviews its long-lived assets, including capital assets held at its suppliers' facilities and inventory prepayments, for impairment whenever events or circumstances indicate the carrying amount of an asset may not be recoverable. If the Company determines that impairment has occurred, it records a write-down equal to the amount by which the carrying value of the asset exceeds its fair value. Although the Company believes its provisions related to inventory, capital assets, inventory prepayments and other assets and purchase commitments are currently adequate, no assurance can be given that the Company will not incur additional related charges given the rapid and unpredictable pace of product obsolescence in the industries in which the Company competes.

The Company must order components for its products and build inventory in advance of product announcements and shipments. Manufacturing purchase obligations typically cover forecasted component and manufacturing requirements for periods up to 150 days. Because the Company's markets are volatile, competitive and subject to rapid technology and price changes, there is a risk the Company will forecast incorrectly and order or produce excess or insufficient amounts of components or products, or not fully utilize firm purchase commitments.

Future operating results depend upon the Company's ability to obtain components in sufficient quantities on commercially reasonable terms.

Because the Company currently obtains components from single or limited sources, the Company is subject to significant supply and pricing risks. Many components, including those that are available from multiple sources, are at times subject to industry-wide shortages and significant commodity pricing fluctuations. While the Company has entered into agreements for the supply of many components, there can be no assurance that the Company will be able to extend or renew these agreements on similar terms, or at all. A number of suppliers of components may suffer from poor financial conditions, which can lead to business failure for the supplier or consolidation within a particular industry, further limiting the Company's ability to obtain sufficient quantities of components on commercially reasonable terms. The effects of global or regional economic conditions on the Company's suppliers, described in *Global and regional economic conditions could materially adversely affect the Company*" above, also could affect the Company's ability to obtain components. Therefore, the Company remains subject to significant risks of supply shortages and price increases.

The Company's new products often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. Continued availability of these components at acceptable prices, or at all, may be affected for any number of reasons, including if those suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements. The supply of components for a new or existing product could be delayed or constrained, or a key manufacturing vendor could delay shipments of completed products to the Company.

The Company depends on component and product manufacturing and logistical services provided by outsourcing partners, many of which are located outside of the U.S.

Substantially all of the Company's manufacturing is performed in whole or in part by a few outsourcing partners located primarily in Asia. The Company has also outsourced much of its transportation and logistics management. While these arrangements may lower operating costs, they also reduce the Company's direct control over production and distribution. It is uncertain what effect such diminished control will have on the quality or quantity of products or services, or the Company's flexibility to respond to changing conditions. Although arrangements with these partners may contain provisions for warranty expense reimbursement, the Company may remain responsible to the consumer for warranty service in the event of product defects and could experience an unanticipated product defect or warranty liability. While the Company relies on its partners to adhere to its supplier code of conduct, material violations of the supplier code of conduct could occur.

The Company relies on sole-sourced outsourcing partners in the U.S., Asia and Europe to supply and manufacture many critical components, and on outsourcing partners primarily located in Asia, for final assembly of substantially all of the Company's hardware products. Any failure of these partners to perform may have a negative impact on the Company's cost or supply of components or finished goods. In addition, manufacturing or logistics in these locations or transit to final destinations may be disrupted for a variety of reasons including, but not limited to, natural and man-made disasters, information technology system failures, commercial disputes, military actions or economic, business, labor, environmental, public health, or political issues.

The Company has invested in manufacturing process equipment, much of which is held at certain of its outsourcing partners, and has made prepayments to certain of its suppliers associated with long-term supply agreements. While these arrangements help ensure the supply of components and finished goods, if these outsourcing partners or suppliers experience severe financial problems or other disruptions in their business, such continued supply could be reduced or terminated and the net realizable value of these assets could be negatively impacted.

The Company's products and services may experience quality problems from time to time that can result in decreased sales and operating margin and harm to the Company's reputation.

The Company sells complex hardware and software products and services that can contain design and manufacturing defects. Sophisticated operating system software and applications, such as those sold by the Company, often contain "bugs" that can unexpectedly interfere with the software's intended operation. The Company's only services may from time to time experience outages, service slowdowns or errors. Defects may also occur in components and products the Company purchases from third parties. There can be no assurance the Company will be able to detect and fix all defects in the hardware, software and services it sells. Failure to do so could result in lost revenue, significant warranty and other expenses and harm to the Company's reputation.

The Company relies on access to third-party digital content, which may not be available to the Company on commercially reasonable terms or at all.

The Company contracts with numerous third parties to offer their digital content to customers. This includes the right to sell currently available music, movies, TV shows and books. The licensing or other distribution arrangements with these third parties are for relatively short terms and do not guarantee the continuation or renewal of these arrangements on reasonable terms, if at all. Some third-party content providers and distributors currently or in the future may offer competing products and services, and could take action to make it more difficult or impossible for the Company to license or otherwise distribute their content in the future. Other content owners, providers or distributors may seek to limit the Company's access to, or increase the cost of, such content. The Company may be unable to continue to offer a wide variety of content at reasonable prices with acceptable usage rules, or continue to expand its geographic reach. Failure to obtain the right to make third-party digital content available, or to make such content available on commercially reasonable terms, could have a material adverse impact on the Company's financial condition and operating results.

Some third-party digital content providers require the Company to provide digital rights management and other security solutions. If requirements change, the Company may have to develop or license new technology to provide these solutions. There is no assurance the Company will be able to develop or license such solutions at a reasonable cost and in a timely manner. In addition, certain countries have passed or may propose and adopt legislation that would force the Company to license its digital rights management, which could lessen the protection of content and subject it to piracy and also could negatively affect arrangements with the Company's content providers.

The Company's future performance depends in part on support from third-party software developers.

The Company believes decisions by customers to purchase its hardware products depend in part on the availability of third-party software applications and services. There is no assurance that third-party developers will continue to develop and maintain software applications and services for the Company's products. If third-party software applications and services cease to be developed and maintained for the Company's products, customers may choose not to buy the Company's products.

With respect to its Mac products, the Company believes the availability of third-party software applications and services depends in part on the developers' perception and analysis of the relative benefits of developing, maintaining and upgrading such software for the Company's products compared to Windows-based products. This analysis may be based on factors such as the market position of the Company and its products, the anticipated revenue that may be generated, expected future growth of Mac sales and the costs of developing such applications and services. If the Company's minority share of the global personal computer market causes developers to question the Mac's prospects, developers could be less inclined to develop or upgrade software for the Company's Mac products and more inclined to devote their resources to developing and upgrading software for the larger Windows market.

With respect to iOS devices, the Company relies on the continued availability and development of compelling and innovative software applications, including applications distributed through the App Store. iOS devices are subject to rapid technological change, and, if third-party developers are unable to or choose not to keep up with this pace of change, third-party applications might not successfully operate and may result in dissatisfied customers. As with applications for the Company's Mac products, the availability and development of these applications also depend on developers' perceptions and analysis of the relative benefits of developing, maintaining or upgrading software for the Company's iOS devices rather than its competitors' platforms, such as Android. If developers focus their efforts on these competing platforms, the availability and quality of applications for the Company's iOS devices may suffer.

The Company relies on access to third-party intellectual property, which may not be available to the Company on commercially reasonable terms or at all.

Many of the Company's products include third-party intellectual property, which requires licenses from those third parties. Based on past experience and industry practice, the Company believes such licenses generally can be obtained on reasonable terms. There is, however, no assurance that the necessary licenses can be obtained on acceptable terms or at all. Failure to obtain the right to use third-party intellectual property, or to use such intellectual property on commercially reasonable terms, could preclude the Company from selling certain products or otherwise have a material adverse impact on the Company's financial condition and operating results.

The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights.

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and have not yet been fully resolved, and new claims may arise in the future. In addition, agreements entered into by the Company sometimes include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party.

Claims against the Company based on allegations of patent infringement or other violations of intellectual property rights have generally increased over time and may continue to increase. In particular, the Company has historically faced a significant number of patent claims relating to its cellular-enabled products, and new claims may arise in the future. For example, technology and other patent-holding companies frequently assert their patents and seek royalties and often enter into litigation based on allegations of patent infringement or other violations of intellectual property rights. The Company is vigorously defending infringement actions in courts in a number of U.S. jurisdictions and before the U.S. International Trade Commission, as well as internationally in various countries. The plaintiffs in these actions frequently seek injunctions and substantial damages.

Regardless of the merit of particular claims, litigation may be expensive, time-consuming, disruptive to the Company's operations and distracting to management. In recognition of these considerations, the Company may enter into licensing agreements or other arrangements to settle litigation and resolve such disputes. No assurance can be given that such agreements can be obtained on acceptable terms or that litigation will not occur. These agreements may also significantly increase the Company's operating expenses.

In management's opinion, there is not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies, including matters related to infringement of intellectual property rights. However, the outcome of litigation is inherently uncertain.

Although management considers the likelihood of such an outcome to be remote, if one or more legal matters were resolved against the Company or an indemnified third party in a reporting period for amounts in excess of management's expectations, the Company's consolidated financial statements for that reporting period could be materially adversely affected. Further, such an outcome could result in significant compensatory, punitive or trebled monetary damages, disgorgement of revenue or profits, remedial corporate measures or injunctive relief against the Company that could materially adversely affect its financial condition and operating results.

While the Company maintains insurance coverage for certain types of claims, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company is subject to laws and regulations worldwide, changes to which could increase the Company's costs and individually or in the aggregate adversely affect the Company's business.

The Company is subject to laws and regulations affecting its domestic and international operations in a number of areas. These U.S. and foreign laws and regulations affect the Company's activities including, but not limited to, in areas of labor, advertising, digital content, consumer protection, real estate, billing, e-commerce, promotions, quality of services, telecommunications, mobile communications and media, television, intellectual property ownership and infringement, tax, import and export requirements, anti-corruption, foreign exchange controls and cash repatriation restrictions, data privacy requirements, anti-competition, environmental, health and safety.

By way of example, laws and regulations related to mobile communications and media devices in the many jurisdictions in which the Company operates are extensive and subject to change. Such changes could include, among others, restrictions on the production, manufacture, distribution and use of devices, locking devices to a carrier's network, or mandating the use of devices on more than one carrier's network. These devices are also subject to certification and regulation by governmental and standardization bodies, as well as by cellular network carriers for use on their networks. These certification processes are extensive and time consuming, and could result in additional testing requirements, product modifications, or delays in product shipment dates, or could preclude the Company from selling certain products.

Compliance with these laws, regulations and similar requirements may be onerous and expensive, and they may be inconsistent from jurisdiction to jurisdiction, further increasing the cost of compliance and doing business. Any such costs, which may rise in the future as a result of changes in these laws and regulations or in their interpretation, could individually or in the aggregate make the Company's products and services less attractive to the Company's customers, delay the introduction of new products in one or more regions, or cause the Company to change or limit its business practices. The Company has implemented policies and procedures designed to ensure compliance with applicable laws and regulations, but there can be no assurance that the Company's employees, contractors, or agents will not violate such laws and regulations or the Company's policies and procedures.

The Company's business is subject to the risks of international operations.

The Company derives a significant portion of its revenue and earnings from its international operations. Compliance with applicable U.S. and foreign laws and regulations, such as import and export requirements, anti-corruption laws, tax laws, foreign exchange controls and cash repatriation restrictions, data privacy requirements, environmental laws, labor laws and anti-competition regulations, increases the costs of doing business in foreign jurisdictions. Although the Company has implemented policies and procedures to comply with these laws and regulations, a violation by the Company's employees, contractors or agents could nevertheless occur. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Violations of these laws and regulations could materially adversely affect the Company's brand, international growth efforts and business.

The Company also could be significantly affected by other risks associated with international activities including, but not limited to, economic and labor conditions, increased duties, taxes and other costs and political instability. Margins on sales of the Company's products in foreign countries, and on sales of products that include components obtained from foreign suppliers, could be materially adversely affected by international trade regulations, including duties, tariffs and antidumping penalties. The Company is also exposed to credit and collectability risk on its trade receivables with customers in certain international markets. There can be no assurance the Company can effectively limit its credit risk and avoid losses.

The Company's retail stores have required and will continue to require a substantial investment and commitment of resources and are subject to numerous risks and uncertainties.

The Company's retail stores have required substantial investment in equipment and leasehold improvements, information systems, inventory and personnel. The Company also has entered into substantial operating lease commitments for retail space. Certain stores have been designed and built to serve as high-profile venues to promote brand awareness and serve as vehicles for corporate sales and marketing activities. Because of their unique design elements, locations and size, these stores require substantially more investment than the Company's more typical retail stores. Due to the high cost structure associated with the Company's retail stores, a decline in sales or the closure or poor performance of individual or multiple stores could result in significant lease termination costs, write-offs of equipment and leasehold improvements and severance costs.

Many factors unique to retail operations, some of which are beyond the Company's control, pose risks and uncertainties. These risks and uncertainties include, but are not limited to, macro-economic factors that could have an adverse effect on general retail activity, as well as the Company's inability to manage costs associated with store construction and operation, the Company's failure to manage relationships with its existing retail partners, more challenging environments in managing retail operations outside the U.S., costs associated with unanticipated fluctuations in the value of retail inventory, and the Company's inability to obtain and renew leases in quality retail locations at a reasonable cost.

Investment in new business strategies and acquisitions could disrupt the Company's ongoing business and present risks not originally contemplated.

The Company has invested, and in the future may invest, in new business strategies or acquisitions. Such endeavors may involve significant risks and uncertainties, including distraction of management from current operations, greater than expected liabilities and expenses, inadequate return of capital and unidentified issues not discovered in the Company's due diligence. These new ventures are inherently risky and may not be successful.

The Company's business and reputation may be impacted by information technology system failures or network disruptions.

The Company may be subject to information technology system failures or network disruptions caused by natural disasters, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, physical or electronic break-ins, or other events or disruptions. System redundancy and other continuity measures may be ineffective or inadequate, and the Company's business continuity and disaster recovery planning may not be sufficient for all eventualities. Such failures or disruptions could adversely impact the Company's business by, among other things, preventing access to the Company's online services, interfering with customer transactions or impeding the manufacturing and shipping of the Company's products. These events could materially adversely affect the Company's reputation financial condition and operating results.

There may be losses or unauthorized access to or releases of confidential information, including personally identifiable information, that could subject the Company to significant reputational, financial, legal and operational consequences.

The Company's business requires it to use and store confidential information, including, among other things, personally identifiable information ("PII") with respect to the Company's customers and employees. The Company devotes significant resources to network and data security, including through the use of encryption and other security measures intended to protect its systems and data. But these measures cannot provide absolute security, and losses or unauthorized access to or releases of confidential information may still occur, which could materially adversely affect the Company's reputation, financial condition and operating results.

The Company's business also requires it to share confidential information with suppliers and other third parties. Although the Company takes steps to secure confidential information that is provided to third parties, such measures may not be effective and losses or unauthorized access to or releases of confidential information may still occur, which could materially adversely affect the Company's reputation, financial condition and operating results.

For example, the Company may experience a security breach impacting the Company's information technology systems that compromises the confidentiality, integrity or availability of confidential information. Such an incident could, among other things, impair the Company's ability to attract and retain customers for its products and services, impact the Company's stock price, materially damage supplier relationships, and expose the Company to litigation or government investigations, which could result in penalties, fines or judgments against the Company.

Although malicious attacks perpetrated to gain access to confidential information, including PII, affect many companies across various industries, the Company is at a relatively greater risk of being targeted because of its high profile and the value of the confidential information it creates, owns, manages, stores and processes.

The Company has implemented systems and processes intended to secure its information technology systems and prevent unauthorized access to or loss of sensitive data, including through the use of encryption and authentication technologies. As with all companies, these security measures may not be sufficient for all eventualities and may be vulnerable to hacking, employee error, malfeasance, system error, faulty password management or other irregularities. For example, third parties may attempt to fraudulently induce employees or customers into disclosing user names, passwords or other sensitive information, which may in turn be used to access the Company's information technology systems. To help protect customers and the Company, the Company monitors its services and systems for unusual activity and may freeze accounts under suspicious circumstances, which, among other things, may result in the delay or loss of customer orders or impede customer access to the Company's products and services.

In addition to the risks relating to general confidential information described above, the Company may also be subject to specific obligations relating to health data and payment card data. Health data may be subject to additional privacy, security and breach notification requirements, and the Company may be subject to audit by governmental authorities regarding the Company's compliance with these obligations. If the Company fails to adequately comply with these rules and requirements, or if health data is handled in a manner not permitted by law or under the Company's agreements with healthcare institutions, the Company could be subject to litigation or government investigations, may be liable for associated investigatory expenses, and could also incur significant fees or fines.

Under payment card rules and obligations, if cardholder information is potentially compromised, the Company could be liable for associated investigatory expenses and could also incur significant fees or fines if the Company fails to follow payment card industry data security standards. The Company could also experience a significant increase in payment card transaction costs or lose the ability to process payment cards if it fails to follow payment card industry data security standards, which would materially adversely affect the Company's reputation, financial condition and operating results.

While the Company maintains insurance coverage that is intended to address certain aspects of data security risks, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company's business is subject to a variety of U.S. and international laws, rules, policies and other obligations regarding data protection.

The Company is subject to federal, state and international laws relating to the collection, use, retention, security and transfer of PII. In many cases, these laws apply not only to third-party transactions, but also may restrict transfers of PII among the Company and its international subsidiaries. Several jurisdictions have passed laws in this area, and other jurisdictions are considering imposing additional restrictions. These laws continue to develop and may be inconsistent from jurisdiction to jurisdiction. Complying with emerging and changing international requirements may cause the Company to incur substantial costs or require the Company to change its business practices. Noncompliance could result in significant penalties or legal liability.

The Company makes statements about its use and disclosure of PII through its privacy policy, information provided on its website and press statements. Any failure by the Company to comply with these public statements or with other federal, state or international privacy-related or data protection laws and regulations could result in proceedings against the Company by governmental entities or others. In addition to reputational impacts, penalties could include ongoing audit requirements and significant legal liability.

The Company's success depends largely on the continued service and availability of key personnel.

Much of the Company's future success depends on the continued availability and service of key personnel, including its Chief Executive Officer, executive team and other highly skilled employees. Experienced personnel in the technology industry are in high demand and competition for their talents is intense, especially in Silicon Valley, where most of the Company's key personnel are located.

The Company's business may be impacted by political events, war, terrorism, public health issues, natural disasters and other business interruptions.

War, terrorism, geopolitical uncertainties, public health issues and other business interruptions have caused and could cause damage or disruption to international commerce and the global economy, and thus could have a material adverse effect on the Company, its suppliers, logistics providers, manufacturing vendors and customers, including channel partners. The Company's business operations are subject to interruption by, among others, natural disasters, whether as a result of climate change or otherwise, fire, power shortages, nuclear power plant accidents and other industrial accidents, terrorist attacks and other hostile acts, labor disputes, public health issues and other events beyond its control. Such events could decrease demand for the Company's products, make it difficult or impossible for the Company to make and deliver products to its customers, including channel partners, or to receive components from its suppliers, and create delays and inefficiencies in the Company's supply chain. While the Company's suppliers are required to maintain safe working environments and operations, an industrial accident could occur and could result in disruption to the Company's business and harm to the Company's reputation. Should major public health issues, including pandemics, arise, the Company could be adversely affected by more stringent employee travel restrictions, additional limitations in freight services, governmental actions limiting the movement of products between regions, delays in production ramps of new products and disruptions in the operations of the Company's manufacturing vendors and component suppliers. The majority of the Company's R&D activities, its corporate headquarters, information technology systems and other critical business operations, including certain component suppliers and manufacturing vendors, are in locations that could be affected by natural disasters. In the event of a natural disaster, the Company could incur significant losses, require substantial recovery time and experience significant expenditures in order to resume operations.

The Company expects its quarterly revenue and operating results to fluctuate.

The Company's profit margins vary across its products and distribution channels. The Company's software, accessories, and service and support contracts generally have higher gross margins than certain of the Company's other products. Gross margins on the Company's hardware products vary across product lines and can change over time as a result of product transitions, pricing and configuration changes, and component, warranty, and other cost fluctuations. The Company's direct sales generally have higher associated gross margins than its indirect sales through its channel partners. In addition, the Company's gross margin and operating margin percentages, as well as overall profitability, may be materially adversely impacted as a result of a shift in product, geographic or channel mix, component cost increases, the strengthening U.S. dollar, price competition, or the introduction of new products, including those that have higher cost structures with flat or reduced pricing.

The Company has typically experienced higher net sales in its first quarter compared to other quarters due in part to seasonal holiday demand. Additionally, new product introductions can significantly impact net sales, product costs and operating expenses. Further, the Company generates a majority of its net sales from a single product and a decline in demand for that product could significantly impact quarterly net sales. The Company could also be subject to unexpected developments late in a quarter, such as lower-than-anticipated demand for the Company's products, issues with new product introductions, an internal systems failure, or failure of one of the Company's logistics, components supply, or manufacturing partners.

The Company's stock price is subject to volatility.

The Company's stock price has experienced substantial price volatility in the past and may continue to do so in the future. Additionally, the Company, the technology industry and the stock market as a whole have experienced extreme stock price and volume fluctuations that have affected stock prices in ways that may have been unrelated to these companies' operating performance. Price volatility over a given period may cause the average price at which the Company repurchases its own stock to exceed the stock's price at a given point in time. The Company believes its stock price should reflect expectations of future growth and profitability. The Company also believes its stock price should reflect expectations that its cash dividend will continue at current levels or grow and that its current share repurchase program will be fully consummated. Future dividends are subject to declaration by the Company's Board of Directors, and the Company's share repurchase program does not obligate it to acquire any specific number of shares. If the Company fails to meet expectations related to future growth, profitability, dividends, share repurchases or other market expectations, its stock price may decline significantly, which could have a material adverse impact on investor confidence and employee retention.

The Company's financial performance is subject to risks associated with changes in the value of the U.S. dollar versus local currencies.

The Company's primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar-denominated sales and operating expenses worldwide. Weakening of foreign currencies relative to the U.S. dollar adversely affects the U.S. dollar value of the Company's foreign currency-denominated sales and earnings, and generally leads the Company to raise international pricing, potentially reducing demand for the Company's products. Margins on sales of the Company's products in foreign countries and on sales of products that include components obtained from foreign suppliers, could be materially adversely affected by foreign currency exchange rate fluctuations. In some circumstances, for competitive or other reasons, the Company may decide not to raise local prices to fully offset the dollar's strengthening, or at all, which would adversely affect the U.S. dollar value of the Company's foreign currency-denominated sales and earnings. Conversely, a strengthening of foreign currencies relative to the U.S. dollar, while generally beneficial to the Company's foreign currency-denominated sales and earnings, could cause the Company to reduce international pricing and incur losses on its foreign currency derivative instruments, thereby limiting the benefit. Additionally, strengthening of foreign currencies may increase the Company's cost of product components denominated in those currencies, thus adversely affecting gross margins.

The Company uses derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not offset any, or more than a portion, of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place.

The Company is exposed to credit risk and fluctuations in the market values of its investment portfolio.

Given the global nature of its business, the Company has both domestic and international investments. Credit ratings and pricing of the Company's investments can be negatively affected by liquidity, credit deterioration, financial results, economic risk, political risk, sovereign risk or other factors. As a result, the value and liquidity of the Company's cash, cash equivalents and marketable securities may fluctuate substantially. Therefore, although the Company has not realized any significant losses on its cash, cash equivalents and marketable securities, future fluctuations in their value could result in significant realized losses.

The Company is exposed to credit risk on its trade accounts receivable, vendor non-trade receivables and prepayments related to long-term supply agreements, and this risk is heightened during periods when economic conditions worsen.

The Company distributes its products through third-party cellular network carriers, wholesalers, retailers and value-added resellers. The Company also sells its products directly to small and mid-sized businesses and education, enterprise and government customers. A substantial majority of the Company's outstanding trade receivables are not covered by collateral, third-party financing arrangements or credit insurance. The Company's exposure to credit and collectability risk on its trade receivables is higher in certain international markets and its ability to mitigate such risks may be limited. The Company also has unsecured vendor non-trade receivables resulting from purchases of components by outsourcing partners and other vendors that manufacture sub-assemblies or assemble final products for the Company. In addition, the Company has made prepayments associated with long-term supply agreements to secure supply of inventory components. As of September 30, 2017, a significant portion of the Company's trade receivables was concentrated within cellular network carriers, and its vendor non-trade receivables and prepayments related to long-term supply agreements were concentrated among a few individual vendors located primarily in Asia. While the Company has procedures to monitor and limit exposure to credit risk on its trade and vendor non-trade receivables, as well as long-term prepayments, there can be no assurance such procedures will effectively limit its credit risk and avoid losses.

The Company could be subject to changes in its tax rates, the adoption of new U.S. or international tax legislation or exposure to additional tax liabilities.

The Company is subject to taxes in the U.S. and numerous foreign jurisdictions, including Ireland, where a number of the Company's subsidiaries are organized. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. The Company's effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation, including in the U.S. and Ireland.

The Company is also subject to the examination of its tax returns and other tax matters by the U.S. Internal Revenue Service (the "IRS") and other tax authorities and governmental bodies. The Company regularly assesses the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of its provision for taxes. There can be no assurance as to the outcome of these examinations. If the Company's effective tax rates were to increase, particularly in the U.S. or Ireland, or if the ultimate determination of the Company's taxes owed is for an amount in excess of amounts previously accrued, the Company's financial condition, operating results and cash flows could be adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company's headquarters are located in Cupertino, California. As of September 30, 2017, the Company owned 13.4 million square feet and leased 23.0 million square feet of building space, primarily in the U.S. Additionally, the Company owned a total of 4,928 acres of land, primarily in the U.S.

As of September 30, 2017, the Company owned facilities and land for corporate functions, R&D and data centers at various locations throughout the U.S. Outside the U.S., the Company owned additional facilities and land for various purposes.

The Company believes its existing facilities and equipment, which are used by all operating segments, are in good operating condition and are suitable for the conduct of its business. The Company has invested in internal capacity and strategic relationships with outside manufacturing vendors and continues to make investments in capital equipment as needed to meet anticipated demand for its products.

Item 3. Legal Proceedings

The Company is subject to legal proceedings and claims that have not been fully resolved and that have arisen in the ordinary course of business. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims. However, the outcome of legal proceedings and claims brought against the Company is subject to significant uncertainty. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's consolidated financial statements for that reporting period could be materially adversely affected. See the risk factor *"The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights"* in Part I, Item 1A of this Form 10-K under the heading "Risk Factors." The Company settled certain matters during the fourth quarter of 2017 that did not individually or in the aggregate have a material impact on the Company's financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

The Company's common stock is traded on the Nasdaq Stock Market LLC (Nasdaq) under the symbol AAPL.

Price Range of Common Stock

The price range per share of common stock presented below represents the highest and lowest intraday sales prices for the Company's common stock on the Nasdaq during each quarter of the two most recent years.

	<u>Fourth Quarter</u>	<u>Third Quarter</u>	<u>Second Quarter</u>	<u>First Quarter</u>
2017 price range per share	\$164.94 □ \$142.41	\$156.65 □ \$140.06	\$144.50 □ \$114.76	\$118.69 □ \$104.08
2016 price range per share	\$116.18 □ \$91.50	\$112.39 □ \$89.47	\$109.43 □ \$92.39	\$123.82 □ \$105.57

Holders

As of October 20, 2017, there were 25,333 shareholders of record.

Dividends

The Company paid a total of \$12.6 billion and \$12.0 billion in dividends during 2017 and 2016, respectively, and expects to pay quarterly dividends of \$0.63 per common share each quarter, subject to declaration by the Board of Directors. The Company also plans to increase its dividend on an annual basis, subject to declaration by the Board of Directors.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

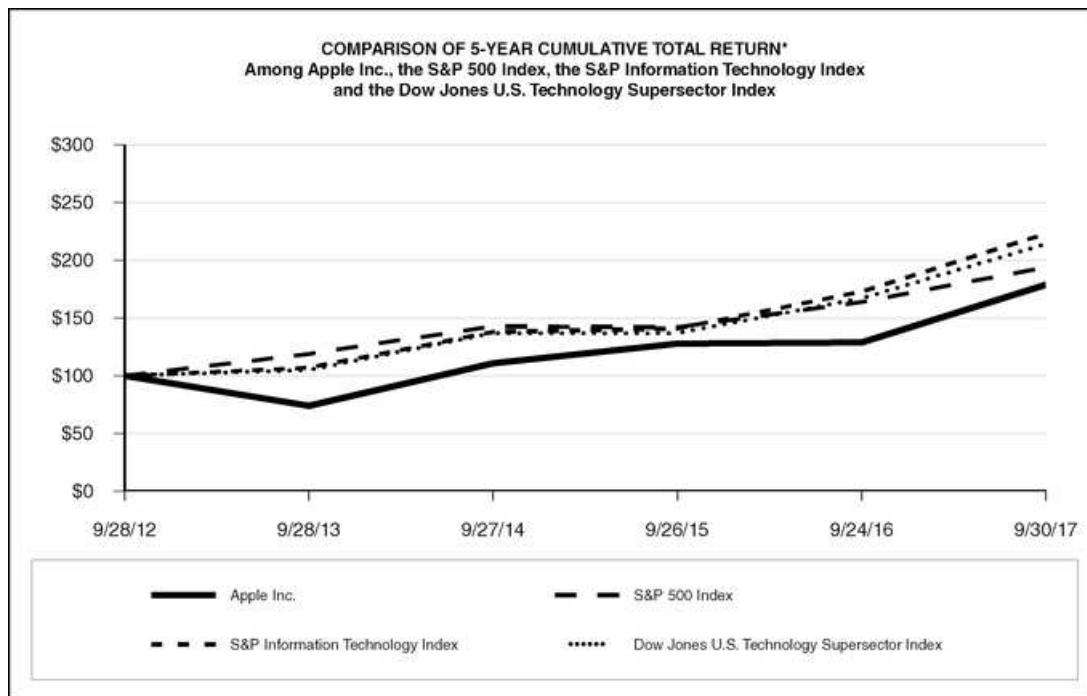
Share repurchase activity during the three months ended September 30, 2017 was as follows (in millions, except number of shares, which are reflected in thousands, and per share amounts):

Periods	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
July 2, 2017 to August 5, 2017:				
Open market and privately negotiated purchases	10,076	\$ 148.87	10,076	
August 6, 2017 to September 2, 2017:				
May 2017 ASR	4,510	(2)	4,510	
August 2017 ASR	15,069 ⁽³⁾	(3)	15,069 ⁽³⁾	
Open market and privately negotiated purchases	9,684	\$ 160.06	9,684	
September 3, 2017 to September 30, 2017:				
Open market and privately negotiated purchases	9,313	\$ 155.69	9,313	
Total	48,652			\$ 44,023

- (1) In May 2017, the Company's Board of Directors increased the Company's share repurchase authorization from \$175 billion to \$210 billion of the Company's common stock, of which \$166 billion had been utilized as of September 30, 2017. The remaining \$44 billion in the table represents the amount available to repurchase shares under the authorized repurchase program as of September 30, 2017. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.
- (2) In May 2017, the Company entered into an accelerated share repurchase arrangement ("ASR") to purchase up to \$3.0 billion of the Company's common stock. In August 2017, the purchase period for this ASR ended and an additional 4.5 million shares were delivered and retired. In total, 20.1 million shares were delivered under this ASR at an average repurchase price of \$149.20.
- (3) In August 2017, the Company entered into a new ASR to purchase up to \$3.0 billion of the Company's common stock. In exchange for an up-front payment of \$3.0 billion, the financial institution party to the arrangement committed to deliver shares to the Company during the ASR's purchase period, which will end in November 2017. The total number of shares ultimately delivered, and therefore the average price paid per share, will be determined at the end of the applicable purchase period based on the volume-weighted average price of the Company's common stock during that period.

Company Stock Performance

The following graph shows a comparison of cumulative total shareholder return, calculated on a dividend reinvested basis, for the Company, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index for the five years ended September 30, 2017. The graph assumes \$100 was invested in each of the Company's common stock, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index as of the market close on September 28, 2012. Note that historic stock price performance is not necessarily indicative of future stock price performance.



* \$100 invested on 9/28/12 in stock or index, including reinvestment of dividends. Data points are the last day of each fiscal year for the Company's common stock and September 30th for indexes.

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	September 2012	September 2013	September 2014	September 2015	September 2016	September 2017
Apple Inc.	\$ 100	\$ 74	\$ 111	\$ 128	\$ 129	\$ 179
S&P 500 Index	\$ 100	\$ 119	\$ 143	\$ 142	\$ 164	\$ 194
S&P Information Technology Index	\$ 100	\$ 107	\$ 138	\$ 141	\$ 173	\$ 223
Dow Jones U.S. Technology Supersector Index	\$ 100	\$ 105	\$ 137	\$ 137	\$ 167	\$ 214

Item 6. Selected Financial Data

The information set forth below for the five years ended September 30, 2017, is not necessarily indicative of results of future operations, and should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes thereto included in Part II, Item 8 of this Form 10-K to fully understand factors that may affect the comparability of the information presented below (in millions, except number of shares, which are reflected in thousands, and per share amounts).

	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>2013</u>
Net sales	\$ 229,234	\$ 215,639	\$ 233,715	\$ 182,795	\$ 170,910
Net income	\$ 48,351	\$ 45,687	\$ 53,394	\$ 39,510	\$ 37,037
Earnings per share:					
Basic	\$ 9.27	\$ 8.35	\$ 9.28	\$ 6.49	\$ 5.72
Diluted	\$ 9.21	\$ 8.31	\$ 9.22	\$ 6.45	\$ 5.68
Cash dividends declared per share	\$ 2.40	\$ 2.18	\$ 1.98	\$ 1.82	\$ 1.64
Shares used in computing earnings per share:					
Basic	5,217,242	5,470,820	5,753,421	6,085,572	6,477,320
Diluted	5,251,692	5,500,281	5,793,069	6,122,663	6,521,634
Total cash, cash equivalents and marketable securities	\$ 268,895	\$ 237,585	\$ 205,666	\$ 155,239	\$ 146,761
Total assets	\$ 375,319	\$ 321,686	\$ 290,345	\$ 231,839	\$ 207,000
Commercial paper	\$ 11,977	\$ 8,105	\$ 8,499	\$ 6,308	\$ □
Total term debt (1)	\$ 103,703	\$ 78,927	\$ 55,829	\$ 28,987	\$ 16,960
Other long-term obligations (2)	\$ 40,415	\$ 36,074	\$ 33,427	\$ 24,826	\$ 20,208
Total liabilities	\$ 241,272	\$ 193,437	\$ 170,990	\$ 120,292	\$ 83,451
Total shareholders' equity	\$ 134,047	\$ 128,249	\$ 119,355	\$ 111,547	\$ 123,549

(1) Includes current and long-term portion of term debt.

(2) Excludes non-current deferred revenue.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This section and other parts of this Annual Report on Form 10-K ("Form 10-K") contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included in Part II, Item 8 of this Form 10-K. All information presented herein is based on the Company's fiscal calendar. Unless otherwise stated, references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly-owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Overview and Highlights

The Company designs, manufactures and markets mobile communication and media devices and personal computers, and sells a variety of related software, services, accessories, networking solutions and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, Apple TV, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, iBooks Store and Apple Music (collectively "Digital Content and Services"). The Company sells its products worldwide through its retail stores, online stores and direct sales force as well as through third-party cellular network carriers, wholesalers, retailers and value-added resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers.

Fiscal Period

The Company's fiscal year is the 52 or 53-week period that ends on the last Saturday of September. The Company's fiscal year 2017 included 53 weeks and ended on September 30, 2017. A 14th week was included in the first quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters. The Company's fiscal years 2016 and 2015 ended on September 24, 2016 and September 26, 2015, respectively, and spanned 52 weeks each.

Fiscal 2017 Highlights

Net sales increased 6% or \$13.6 billion during 2017 compared to 2016, primarily driven by growth in Services, iPhone and Mac. The year-over-year increase in net sales reflected growth in each of the geographic operating segments, with the exception of Greater China. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on net sales during 2017 compared to 2016. In May 2017, the Company announced an increase to its capital return program by raising the expected total size of the program from \$250 billion to \$300 billion through March 2019. This included increasing its share repurchase authorization from \$175 billion to \$210 billion and raising its quarterly dividend from \$0.57 to \$0.63 per share beginning in May 2017. During 2017, the Company spent \$33.0 billion to repurchase shares of its common stock and paid dividends and dividend equivalents of \$12.8 billion. Additionally, the Company issued \$24.0 billion of U.S. dollar-denominated term debt, €2.5 billion of euro-denominated term debt and C\$2.5 billion of Canadian dollar-denominated term debt during 2017.

Fiscal 2016 Highlights

Net sales declined 8% or \$18.1 billion during 2016 compared to 2015, primarily driven by a year-over-year decrease in iPhone net sales and the effect of weakness in most foreign currencies relative to the U.S. dollar, partially offset by an increase in Services. In April 2016, the Company announced an increase to its capital return program by raising the expected total size of the program from \$200 billion to \$250 billion through March 2018. This included increasing its share repurchase authorization from \$140 billion to \$175 billion and raising its quarterly dividend from \$0.52 to \$0.57 per share beginning in May 2016. During 2016, the Company spent \$29.0 billion to repurchase shares of its common stock and paid dividends and dividend equivalents of \$12.2 billion. Additionally, the Company issued \$23.9 billion of U.S. dollar-denominated term debt and A\$1.4 billion of Australian dollar-denominated term debt during 2016.

Sales Data

The following table shows net sales by operating segment and net sales and unit sales by product for 2017, 2016 and 2015 (dollars in millions and units in thousands):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net Sales by Operating Segment:					
Americas	\$ 96,600	12 %	\$ 86,613	(8)%	\$ 93,864
Europe	54,938	10 %	49,952	(1)%	50,337
Greater China	44,764	(8)%	48,492	(17)%	58,715
Japan	17,733	5 %	16,928	8 %	15,706
Rest of Asia Pacific	15,199	11 %	13,654	(10)%	15,093
Total net sales	<u>\$ 229,234</u>	6 %	<u>\$ 215,639</u>	(8)%	<u>\$ 233,715</u>

Net Sales by Product:

iPhone (1)	\$ 141,319	3 %	\$ 136,700	(12)%	\$ 155,041
iPad (1)	19,222	(7)%	20,628	(11)%	23,227
Mac (1)	25,850	13 %	22,831	(10)%	25,471
Services (2)	29,980	23 %	24,348	22 %	19,909
Other Products (1)(3)	12,863	16 %	11,132	11 %	10,067
Total net sales	<u>\$ 229,234</u>	6 %	<u>\$ 215,639</u>	(8)%	<u>\$ 233,715</u>

Unit Sales by Product:

iPhone	216,756	2 %	211,884	(8)%	231,218
iPad	43,753	(4)%	45,590	(17)%	54,856
Mac	19,251	4 %	18,484	(10)%	20,587

(1) Includes deferrals and amortization of related software upgrade rights and non-software services.

(2) Includes revenue from Digital Content and Services, AppleCare, Apple Pay, licensing and other services. Services net sales in the fourth quarter of 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

(3) Includes sales of Apple TV, Apple Watch, Beats products, iPod touch and Apple-branded and third-party accessories.

Product Performance*iPhone*

The following table presents iPhone net sales and unit sales information for 2017, 2016 and 2015 (dollars in millions and units in thousands):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 141,319	3%	\$ 136,700	(12)%	\$ 155,041
Percentage of total net sales	62%		63%		66%
Unit sales	216,756	2%	211,884	(8)%	231,218

iPhone net sales increased during 2017 compared to 2016 due to higher iPhone unit sales and a different mix of iPhones with higher average selling prices. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on iPhone net sales during 2017 compared to 2016.

iPhone net sales decreased during 2016 compared to 2015. The Company believes the sales decline was due primarily to a lower rate of iPhone upgrades during 2016 compared to 2015 and challenging macroeconomic conditions in a number of major markets in 2016. Average selling prices for iPhone were lower year-over-year during 2016 due primarily to a different mix of iPhones, including the iPhone SE introduced in 2016, and the effect of weakness in most foreign currencies relative to the U.S. dollar.

iPad

The following table presents iPad net sales and unit sales information for 2017, 2016 and 2015 (dollars in millions and units in thousands):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 19,222	(7)%	\$ 20,628	(11)%	\$ 23,227
Percentage of total net sales	8%		10%		10%
Unit sales	43,753	(4)%	45,590	(17)%	54,856

iPad net sales decreased during 2017 compared to 2016 due to lower iPad unit sales and a different mix of iPads with lower average selling prices. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on iPad net sales during 2017 compared to 2016.

iPad net sales decreased during 2016 compared to 2015 primarily due to lower unit sales and the effect of weakness in most foreign currencies relative to the U.S. dollar, partially offset by higher average selling price due to a shift in mix to higher-priced iPads.

Mac

The following table presents Mac net sales and unit sales information for 2017, 2016 and 2015 (dollars in millions and units in thousands):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 25,850	13%	\$ 22,831	(10)%	\$ 25,471
Percentage of total net sales	11%		11%		11%
Unit sales	19,251	4%	18,484	(10)%	20,587

Mac net sales increased during 2017 compared to 2016 due primarily to a different mix of Macs with higher average selling prices and higher Mac unit sales. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Mac net sales during 2017 compared to 2016.

Mac net sales decreased during 2016 compared to 2015 primarily due to lower year-over-year Mac unit sales, which declined at rates similar to the overall market. The effect of weakness in most foreign currencies relative to the U.S. dollar also negatively impacted Mac net sales.

Services

The following table presents Services net sales information for 2017, 2016 and 2015 (dollars in millions):

	2017	Change	2016	Change	2015
Net sales	\$ 29,980	23%	\$ 24,348	22%	\$ 19,909
Percentage of total net sales	13%		11%		9%

The year-over-year growth in Services net sales in 2017 was due primarily to increases in App Store and licensing sales. Services net sales in the fourth quarter of 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

The year-over-year increase in Services net sales in 2016 was due primarily to growth from the App Store, licensing and AppleCare sales, partially offset by the effect of weakness in most foreign currencies relative to the U.S. dollar. During the first quarter of 2016, the Company received \$548 million from Samsung Electronics Co., Ltd. related to its patent infringement lawsuit, which was recorded as licensing net sales within Services.

Segment Operating Performance

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. Further information regarding the Company's reportable segments can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 11, "Segment Information and Geographic Data."

Americas

The following table presents Americas net sales information for 2017, 2016 and 2015 (dollars in millions):

	2017	Change	2016	Change	2015
Net sales	\$ 96,600	12%	\$ 86,613	(8)%	\$ 93,864
Percentage of total net sales	42%		40%		40%

Americas net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone, Services and Mac.

Americas net sales decreased during 2016 compared to 2015 due primarily to lower net sales of iPhone.

Europe

The following table presents Europe net sales information for 2017, 2016 and 2015 (dollars in millions):

	2017	Change	2016	Change	2015
Net sales	\$ 54,938	10%	\$ 49,952	(1)%	\$ 50,337
Percentage of total net sales	24%		23%		22%

Europe net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone and Services. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Europe net sales during 2017 compared to 2016.

Europe net sales decreased during 2016 compared to 2015 driven primarily by the effect of weakness in foreign currencies relative to the U.S. dollar and a decrease in net sales of Mac, largely offset by an increase in iPhone unit sales and Services.

Greater China

The following table presents Greater China net sales information for 2017, 2016 and 2015 (dollars in millions):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 44,764	(8)%	\$ 48,492	(17)%	\$ 58,715
Percentage of total net sales	20%		22%		25%

Greater China net sales decreased during 2017 compared to 2016 due primarily to lower net sales of iPhone, partially offset by higher net sales of Services. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Greater China net sales during 2017 compared to 2016.

Greater China net sales decreased during 2016 compared to 2015 due primarily to lower net sales of iPhone and the effect of weakness in foreign currencies relative to the U.S. dollar.

Japan

The following table presents Japan net sales information for 2017, 2016 and 2015 (dollars in millions):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 17,733	5%	\$ 16,928	8%	\$ 15,706
Percentage of total net sales	8%		8%		7%

The year-over-year increase in Japan net sales in 2017 and 2016 was due primarily to higher net sales of Services and the strength in the Japanese yen relative to the U.S. dollar.

Rest of Asia Pacific

The following table presents Rest of Asia Pacific net sales information for 2017, 2016 and 2015 (dollars in millions):

	<u>2017</u>	<u>Change</u>	<u>2016</u>	<u>Change</u>	<u>2015</u>
Net sales	\$ 15,199	11%	\$ 13,654	(10)%	\$ 15,093
Percentage of total net sales	7%		6%		6%

Rest of Asia Pacific net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone, Services and Mac. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Rest of Asia Pacific net sales during 2017 compared to 2016.

Rest of Asia Pacific net sales decreased during 2016 compared to 2015 due primarily to lower net sales of iPhone and the effect of weakness in foreign currencies relative to the U.S. dollar.

Gross Margin

Gross margin for 2017, 2016 and 2015 was as follows (dollars in millions):

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Net sales	\$ 229,234	\$ 215,639	\$ 233,715
Cost of sales	141,048	131,376	140,089
Gross margin	\$ 88,186	\$ 84,263	\$ 93,626
Gross margin percentage	38.5%	39.1%	40.1%

Gross margin percentage decreased in 2017 compared to 2016 due primarily to higher product costs, partially offset by a favorable shift in mix to services. Year-over-year gross margin increased due primarily to a shift in mix to services and an overall increase in product volumes. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on gross margin percentage and gross margin during 2017 compared to 2016.

Gross margin percentage decreased in 2016 compared to 2015 due primarily to the effect of weakness in most foreign currencies relative to the U.S. dollar and, to a lesser extent, unfavorable leverage on fixed costs from lower net sales, partially offset by a favorable shift in mix to services.

The Company anticipates gross margin percentage during the first quarter of 2018 to be between 38.0% and 38.5%. The foregoing statement regarding the Company's expected gross margin percentage in the first quarter of 2018 is forward-looking and could differ from actual results. The Company's future gross margins can be impacted by multiple factors including, but not limited to, those set forth in Part I, Item 1A of this Form 10-K under the heading "Risk Factors" and those described in this paragraph. In general, the Company believes gross margins will remain under downward pressure due to a variety of factors, including continued industry-wide global product pricing pressures, increased competition, compressed product life cycles, product transitions, potential increases in the cost of components, and potential strengthening of the U.S. dollar, as well as potential increases in the costs of outside manufacturing services and a potential shift in the Company's sales mix towards products with lower gross margins. In response to competitive pressures, the Company expects it will continue to take product pricing actions, which would adversely affect gross margins. Gross margins could also be affected by the Company's ability to manage product quality and warranty costs effectively and to stimulate demand for certain of its products. Due to the Company's significant international operations, its financial condition and operating results, including gross margins, could be significantly affected by fluctuations in exchange rates.

Operating Expenses

Operating expenses for 2017, 2016 and 2015 were as follows (dollars in millions):

	2017	Change	2016	Change	2015
Research and development	\$ 11,581	15%	\$ 10,045	25 %	\$ 8,067
Percentage of total net sales	5%		5%		3%
Selling, general and administrative	\$ 15,261	8%	\$ 14,194	(1)%	\$ 14,329
Percentage of total net sales	7%		7%		6%
Total operating expenses	\$ 26,842	11%	\$ 24,239	8 %	\$ 22,396
Percentage of total net sales	12%		11%		10%

Research and Development

The year-over-year growth in R&D expense in 2017 and 2016 was driven primarily by increases in headcount-related expenses and material costs to support expanded R&D activities. The Company continues to believe that focused investments in R&D are critical to its future growth and competitive position in the marketplace, and to the development of new and updated products and services that are central to the Company's core business strategy.

Selling, General and Administrative

The year-over-year growth in selling, general and administrative expense in 2017 compared to 2016 was driven primarily by an increase in headcount-related expenses, variable selling expenses and infrastructure-related costs. The decrease in selling, general and administrative expense in 2016 compared to 2015 was due primarily to lower discretionary expenditures and advertising costs, partially offset by an increase in headcount-related expenses.

Other Income/(Expense), Net

Other income/(expense), net for 2017, 2016 and 2015 was as follows (dollars in millions):

	2017	Change	2016	Change	2015
Interest and dividend income	\$ 5,201		\$ 3,999		\$ 2,921
Interest expense	(2,323)		(1,456)		(733)
Other expense, net	(133)		(1,195)		(903)
Total other income/(expense), net	\$ 2,745	104%	\$ 1,348	5%	\$ 1,285

The year-over-year increase in other income/(expense), net during 2017 was due primarily to higher interest income and the favorable impact of foreign exchange-related items, partially offset by higher interest expense on debt. The year-over-year increase in other income/(expense), net during 2016 was due primarily to higher interest income, partially offset by higher interest expense on debt and the unfavorable impact of foreign exchange-related items. The weighted-average interest rate earned by the Company on its cash, cash equivalents and marketable securities was 1.99%, 1.73% and 1.49% in 2017, 2016 and 2015, respectively.

Provision for Income Taxes

Provision for income taxes and effective tax rates for 2017, 2016 and 2015 were as follows (dollars in millions):

	2017	2016	2015
Provision for income taxes	\$ 15,738	\$ 15,685	\$ 19,121
Effective tax rate	24.6%	25.6%	26.4%

The Company's effective tax rates for 2017, 2016 and 2015 differ from the statutory federal income tax rate of 35% due primarily to certain undistributed foreign earnings, a substantial portion of which was generated by subsidiaries organized in Ireland, for which no U.S. taxes are provided when such earnings are intended to be indefinitely reinvested outside the U.S. The lower effective tax rate in 2017 compared to 2016 was due to a different geographic mix of earnings and higher U.S. R&D tax credits. The lower effective tax rate in 2016 compared to 2015 was due primarily to greater R&D tax credits.

As of September 30, 2017, the Company had deferred tax assets arising from deductible temporary differences, tax losses and tax credits of \$3.9 billion and deferred tax liabilities of \$31.5 billion. Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, together with future reversals of existing taxable temporary differences, will be sufficient to fully recover the deferred tax assets. The Company will continue to evaluate the realizability of deferred tax assets quarterly by assessing the need for and the amount of a valuation allowance.

The IRS concluded its review of the years 2010 through 2012 during the third quarter of 2017. All years prior to 2013 are closed, and the IRS is currently examining the years 2013 through 2015. The Company is also subject to audits by state, local and foreign tax authorities. In major states and major foreign jurisdictions, the years subsequent to 2003 generally remain open and could be subject to examination by the taxing authorities. Management believes that adequate provisions have been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner not consistent with management's expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs.

On August 30, 2016, the European Commission announced its decision that Ireland granted state aid to the Company by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of the Company (the "State Aid Decision"). The State Aid Decision orders Ireland to calculate and recover additional taxes from the Company for the period June 2003 through December 2014. Irish legislative changes, effective as of January 2015, eliminated the application of the tax opinions from that date forward. The Company believes the State Aid Decision to be without merit and appealed to the General Court of the Court of Justice of the European Union. Ireland has also appealed the State Aid Decision. Although Ireland is still computing the recovery amount, the Company expects the amount to be in line with the European Commission's announced recovery amount of €13 billion, plus interest of €1 billion. Once the recovery amount finalized by Ireland, the Company anticipates funding it, including interest, out of foreign cash. These amounts are expected to be placed into escrow in 2018, where they will remain pending conclusion of all appeals. The Company believes that any incremental Irish corporate income taxes potentially due related to the State Aid Decision would be creditable against U.S. taxes.

Recent Accounting Pronouncements

Hedging

In August 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2017-12, Derivatives and Hedging (Topic 8) Targeted Improvements to Accounting for Hedging Activities ("ASU 2017-12"). ASU 2017-12 expands component and fair value hedging, specifies the presentation of the effects of hedging instruments, and eliminates the separate measurement and presentation of hedge ineffectiveness. The Company will adopt ASU 2017-12 in its first quarter of 2020 utilizing the modified retrospective transition method and is currently evaluating the impact of adoption on its consolidated financial statements.

Restricted Cash

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash ("ASU 2016-18"), which enhances and clarifies the guidance on the classification and presentation of restricted cash in the statement of cash flows. The Company will adopt ASU 2016-18 in its first quarter of 2019 utilizing the retrospective transition method. Currently, the Company's restricted cash balance is not significant.

Income Taxes

In October 2016, the FASB issued ASU No. 2016-16, Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory (□ASU 2016-16□), which requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The Company will adopt ASU 2016-16 in its first quarter of 2019 utilizing the modified retrospective transition method. Currently, the Company anticipates recording up to \$9 billion of net deferred tax assets on its Consolidated Balance Sheets upon adoption. However, the ultimate impact of adopting ASU 2016-16 will depend on the balance of intellectual property transferred between its subsidiaries as of the adoption date. The Company will recognize incremental deferred income tax expense thereafter as these deferred tax assets are utilized.

Stock Compensation

In March 2016, the FASB issued ASU No. 2016-09, Compensation □ Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting (□ASU 2016-09□), which modifies certain aspects of the accounting for share-based payment transactions, including income taxes, classification of awards and classification in the statement of cash flows. The Company will adopt ASU 2016-09 in its first quarter of 2018. Currently, excess tax benefits or deficiencies from the Company's equity awards are recorded as additional paid-in capital in its Consolidated Balance Sheets. Upon adoption, the Company will record any excess tax benefits or deficiencies from its equity awards in its Consolidated Statements of Operations in the reporting periods in which vesting occurs. As a result, subsequent to adoption the Company's income tax expense and associated effective tax rate will be impacted by fluctuations in stock price between the grant dates and vesting dates of equity awards.

Leases

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842) (□ASU 2016-02□), which modifies lease accounting for lessees to increase transparency and comparability by recording lease assets and liabilities for operating leases and disclosing key information about leasing arrangements. The Company will adopt ASU 2016-02 in its first quarter of 2020 utilizing the modified retrospective transition method. While the Company is currently evaluating the timing and impact of adopting ASU 2016-02, currently the Company anticipates recording lease assets and liabilities in excess of \$9.5 billion on its Consolidated Balance Sheets, with no material impact to its Consolidated Statements of Operations. However, the ultimate impact of adopting ASU 2016-02 will depend on the Company's lease portfolio as of the adoption date.

Financial Instruments

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments □ Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities (□ASU 2016-01□), which updates certain aspects of recognition, measurement, presentation and disclosure of financial instruments. The Company will adopt ASU 2016-01 in its first quarter of 2019 utilizing the modified retrospective transition method. Based on the composition of the Company's investment portfolio, the adoption of ASU 2016-01 is not expected to have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, Financial Instruments □ Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments (□ASU 2016 13□), which modifies the measurement of expected credit losses of certain financial instruments. The Company will adopt ASU 2016-13 in its first quarter of 2021 utilizing the modified retrospective transition method. Based on the composition of the Company's investment portfolio, current market conditions, and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on its consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers (Topic 606) (□ASU 2014-09□), which amends the existing accounting standards for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount an entity expects to be entitled when products are transferred to customers.

Subsequently, the FASB has issued the following standards related to ASU 2014-09: ASU No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (□ASU 2016-08□); ASU No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing (□ASU 2016-10□); ASU No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients (□ASU 2016-12□); ASU No. 2016-20, Technical Corrections and Improvements to Topic 606, Revenue from Contracts with Customers (□ASU 2016-20□). The Company must adopt ASU 2016 08, ASU 2016-10, ASU 2016-12 and ASU 2016-20 with ASU 2014-09 (collectively, the □new revenue standards□).

The new revenue standards may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The Company will adopt the new revenue standards in its first quarter of 2019 utilizing the full retrospective transition method. The new revenue standards are not expected to have a material impact on the amount and timing of revenue recognized in the Company's consolidated financial statements.

Liquidity and Capital Resources

The following table presents selected financial information and statistics as of and for the years ended September 30, 2017, September 24, 2016 and September 26, 2015 (in millions):

	2017	2016	2015
Cash, cash equivalents and marketable securities	\$ 268,895	\$ 237,585	\$ 205,666
Property, plant and equipment, net	\$ 33,783	\$ 27,010	\$ 22,471
Commercial paper	\$ 11,977	\$ 8,105	\$ 8,499
Total term debt	\$ 103,703	\$ 78,927	\$ 55,829
Working capital	\$ 27,831	\$ 27,863	\$ 8,768
Cash generated by operating activities	\$ 63,598	\$ 65,824	\$ 81,266
Cash used in investing activities	\$ (46,446)	\$ (45,977)	\$ (56,274)
Cash used in financing activities	\$ (17,347)	\$ (20,483)	\$ (17,716)

The Company believes its existing balances of cash, cash equivalents and marketable securities will be sufficient to satisfy its working capital needs, capital asset purchases, outstanding commitments and other liquidity requirements associated with its existing operations over the next 12 months. The Company currently anticipates the cash used for future dividends, the share repurchase program and debt repayments will come from its current domestic cash, cash generated from ongoing U.S. operating activities and from borrowings.

As of September 30, 2017 and September 24, 2016, the Company's cash, cash equivalents and marketable securities held by foreign subsidiaries were \$252.3 billion and \$216.0 billion, respectively, and are generally based in U.S. dollar-denominated holdings. Amounts held by foreign subsidiaries are generally subject to U.S. income taxation on repatriation to the U.S. In connection with the State Aid Decision, Ireland is still computing the recovery amount. The Company expects the amount to be in line with the European Commission's announced recovery amount of €13 billion, plus interest of €1 billion. Once the recovery amount is finalized by Ireland, the Company anticipates funding it, including interest, out of foreign cash. These amounts are expected to be placed into escrow in 2018, where they will remain pending conclusion of all appeals.

The Company's marketable securities investment portfolio is primarily invested in highly-rated securities, and its investment policy generally limits the amount of credit exposure to any one issuer. The policy generally requires investments to be investment grade, with the primary objective of minimizing the potential risk of principal loss.

During 2017, cash generated by operating activities of \$63.6 billion was a result of \$48.4 billion of net income, non-cash adjustments to net income of \$20.8 billion and a decrease in the net change in operating assets and liabilities of \$5.6 billion, which included a one-time payment of \$1.9 billion related to a multi-year license agreement. Cash used in investing activities of \$46.4 billion during 2017 consisted primarily of cash used for purchases of marketable securities, net of sales and maturities, of \$33.1 billion and cash used to acquire property, plant and equipment of \$12.5 billion. Cash used in financing activities of \$17.3 billion during 2017 consisted primarily of cash used to repurchase common stock of \$32.9 billion, cash used to pay dividends and dividend equivalents of \$12.8 billion and cash used to repay term debt of \$3.5 billion, partially offset by proceeds from the issuance of term debt, net of \$28.7 billion and proceeds from commercial paper, net of \$3.9 billion.

During 2016, cash generated by operating activities of \$65.8 billion was a result of \$45.7 billion of net income and non-cash adjustments to net income of \$20.1 billion. Cash used in investing activities of \$46.0 billion during 2016 consisted primarily of cash used for purchases of marketable securities, net of sales and maturities, of \$30.6 billion and cash used to acquire property, plant and equipment of \$12.7 billion. Cash used in financing activities of \$20.5 billion during 2016 consisted primarily of cash used to repurchase common stock of \$29.7 billion, cash used to pay dividends and dividend equivalents of \$12.2 billion and cash used to repay term debt of \$2.5 billion, partially offset by proceeds from the issuance of term debt, net of \$25.0 billion.

Capital Assets

The Company's capital expenditures were \$14.9 billion during 2017. The Company anticipates utilizing approximately \$16.0 billion for capital expenditures during 2018, which includes product tooling and manufacturing process equipment; data centers; corporate facilities and infrastructure, including information systems hardware, software and enhancements; and retail store facilities.

Debt

The Company issues unsecured short-term promissory notes (Commercial Paper) pursuant to a commercial paper program. The Company uses the net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of September 30, 2017, the Company had \$12.0 billion of Commercial Paper outstanding, with a weighted-average interest rate of 1.20% and maturities generally less than nine months.

As of September 30, 2017, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$104.0 billion (collectively the "Notes"). During 2017, the Company repaid \$3.5 billion of its Notes upon maturity. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on the Notes. In addition, the Company has entered, and in the future may enter, into foreign currency swaps to manage foreign currency risk on the Notes. The future principal payments for the Company's Notes as of September 30, 2017 are as follows (in millions):

2018	\$	6,500
2019		8,863
2020		9,220
2021		7,750
2022		10,297
Thereafter		61,391
Total term debt	\$	<u>104,021</u>

Further information regarding the Company's debt issuances and related hedging activity can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 2, "Financial Instruments" and Note 6, "Debt."

Capital Return Program

In May 2017, the Company's Board of Directors increased the total capital return program from \$250 billion to \$300 billion, which included an increase in the share repurchase authorization from \$175 billion to \$210 billion of the Company's common stock. Additionally, the Company announced that the Board of Directors raised the Company's quarterly cash dividend from \$0.57 to \$0.63 per share, beginning with the dividend paid during the third quarter of 2017. The Company intends to increase its dividend on an annual basis, subject to declaration by the Board of Directors.

As of September 30, 2017, \$166 billion of the share repurchase program had been utilized. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

The following table presents the Company's dividends, dividend equivalents, share repurchases and net share settlement activity from the start of the capital return program in August 2012 through September 30, 2017 (in millions):

	Dividends and Dividend Equivalents Paid	Accelerated Share Repurchases	Open Market Share Repurchases	Taxes Related to Settlement of Equity Awards	Total
2017	\$ 12,769	\$ 15,000	\$ 18,001	\$ 1,874	\$ 47,644
2016	12,150	12,000	17,000	1,570	42,720
2015	11,561	6,000	30,026	1,499	49,086
2014	11,126	21,000	24,000	1,158	57,284
2013	10,564	13,950	9,000	1,082	34,596
2012	2,488	□	□	56	2,544
Total	<u>\$ 60,658</u>	<u>\$ 67,950</u>	<u>\$ 98,027</u>	<u>\$ 7,239</u>	<u>\$ 233,874</u>

The Company expects to execute its capital return program by the end of March 2019 by paying dividends and dividend equivalents, repurchasing shares and remitting withheld taxes related to net share settlement of restricted stock units. The Company plans to continue to access the domestic and international debt markets to assist in funding its capital return program.

Off-Balance Sheet Arrangements and Contractual Obligations

The Company has not entered into any transactions with unconsolidated entities whereby the Company has financial guarantees, subordinated retained interests, derivative instruments, or other contingent arrangements that expose the Company to material continuing risks, contingent liabilities, or any other obligation under a variable interest in an unconsolidated entity that provides financing, liquidity, market risk, or credit risk support to the Company, or engages in leasing, hedging, or R&D services with the Company.

The following table presents certain payments due by the Company as of September 30, 2017, and excludes amounts already recorded on the Consolidated Balance Sheet, except for term debt (in millions):

	Payments Due in Less Than 1 Year	Payments Due in 1-3 Years	Payments Due in 4-5 Years	Payments Due in More Than 5 Years	Total
Term debt	\$ 6,500	\$ 18,083	\$ 18,047	\$ 61,391	\$ 104,021
Operating leases	1,223	2,295	1,904	4,123	9,545
Manufacturing purchase obligations (1)	32,787	2,632	2,147	□	37,566
Other purchase obligations	4,019	1,669	417	14	6,119
Total	\$ 44,529	\$ 24,679	\$ 22,515	\$ 65,528	\$ 157,251

(1) Represents amount expected to be paid under manufacturing-related supplier arrangements, substantially all of which is noncancelable.

Operating Leases

As of September 30, 2017, the Company's total future minimum lease payments under noncancelable operating leases were \$9.5 billion. The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Manufacturing Purchase Obligations

The Company utilizes several outsourcing partners to manufacture sub-assemblies for the Company's products and to perform final assembly and testing of finished products. These outsourcing partners acquire components and build product based on demand information supplied by the Company, which typically covers periods up to 150 days. The Company also obtains individual components for its products from a wide variety of individual suppliers. As of September 30, 2017, the Company expects to pay \$37.6 billion under manufacturing-related supplier arrangements, substantially all of which is noncancelable.

Other Purchase Obligations

The Company's other purchase obligations consisted of noncancelable obligations to acquire capital assets, including product tooling and manufacturing process equipment, and noncancelable obligations related to advertising, licensing, R&D, internet and telecommunications services and other obligations. As of September 30, 2017, the Company had other purchase obligations of \$6.1 billion.

The Company's other non-current liabilities in the Consolidated Balance Sheets consist primarily of deferred tax liabilities, gross unrecognized tax benefits and the related gross interest and penalties. As of September 30, 2017, the Company had deferred tax liabilities of \$31.5 billion, gross unrecognized tax benefits of \$8.4 billion and an additional \$1.2 billion for gross interest and penalties. At this time, the Company is unable to make a reasonably reliable estimate of the timing of payments due to uncertainties in the timing of tax audit outcomes; therefore, such amounts are not included in the above contractual obligation table.

Indemnification

Agreements entered into by the Company sometimes include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to indemnification of third parties.

The Company offers an iPhone Upgrade Program, which is available to customers who purchase a qualifying iPhone in the U.S., the U.K. and mainland China. The iPhone Upgrade Program provides customers the right to trade in that iPhone for a specified amount when purchasing a new iPhone, provided certain conditions are met. The Company accounts for the trade-in right as a guarantee liability and recognizes arrangement revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within revenue.

The Company has entered into indemnification agreements with its directors and executive officers. Under these agreements, the Company has agreed to indemnify such individuals to the fullest extent permitted by law against liabilities that arise by reason of their status as directors or officers of the Company and to advance expenses incurred by such individuals in connection with related legal proceedings. It is not possible to determine the maximum potential amount of payments the Company could be required to make under these agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each claim. While the Company maintains directors and officers liability insurance coverage, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with U.S. generally accepted accounting principles ("GAAP") and the Company's discussion and analysis of its financial condition and operating results require the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and accompanying notes. Note 1, "Summary of Significant Accounting Policies," of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K describes the significant accounting policies and methods used in the preparation of the Company's consolidated financial statements. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates, and such differences may be material.

Management believes the Company's critical accounting policies and estimates are those related to revenue recognition, valuation and impairment of marketable securities, inventory valuation, valuation of manufacturing-related assets and estimation of purchase commitment cancellation fees, warranty costs, income taxes, and legal and other contingencies. Management considers these policies critical because they are both important to the portrayal of the Company's financial condition and operating results, and they require management to make judgments and estimates about inherently uncertain matters. The Company's senior management has reviewed these critical accounting policies and related disclosures with the Audit and Finance Committee of the Company's Board of Directors.

Revenue Recognition

Net sales consist primarily of revenue from the sale of hardware, software, digital content and applications, accessories, and service and support contracts. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collection is probable. Product is considered delivered to the customer once it has been shipped and title, risk of loss and rewards of ownership have been transferred. For most of the Company's product sales, these criteria are met at the time the product is shipped. For online sales to individuals, for some sales to education customers in the U.S., and for certain other sales, the Company defers revenue until the customer receives the product because the Company retains a portion of the risk of loss on these sales during transit. For payment terms in excess of the Company's standard payment terms, revenue is recognized as payments become due unless the Company has positive evidence that the sales price is fixed or determinable, such as a successful history of collection, without concession, on comparable arrangements. The Company recognizes revenue from the sale of hardware products, software bundled with hardware that is essential to the functionality of the hardware and third-party digital content sold on the iTunes Store in accordance with general revenue recognition accounting guidance. The Company recognizes revenue in accordance with industry-specific software accounting guidance for the following types of sales transactions: (i) standalone sales of software products, (ii) sales of software upgrades and (iii) sales of software bundled with hardware not essential to the functionality of the hardware.

For multi-element arrangements that include hardware products containing software essential to the hardware product's functionality, undelivered software elements that relate to the hardware product's essential software and/or undelivered non-software services, the Company allocates revenue to all deliverables based on their relative selling prices. In such circumstances, the Company uses a hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence of fair value ("VSOE"), (ii) third-party evidence of selling price ("TPE") and (iii) best estimate of selling price ("ESP"). VSOE generally exists only if the Company sells the deliverable separately and is the price actually charged by the Company for that deliverable. ESPs reflect the Company's best estimates of what the selling prices of elements would be if they were sold regularly on a stand-alone basis.

For sales of qualifying versions of iOS devices, Mac, Apple Watch and Apple TV, the Company has indicated it may from time to time provide future unspecified software upgrades to the device's essential software and/or non-software services free of charge. Because the Company has neither VSOE nor TPE for the unspecified software upgrade rights or the non-software services, revenue is allocated to these rights and services based on the Company's ESPs. Revenue allocated to the unspecified software upgrade rights and non-software services based on the Company's ESPs is deferred and recognized on a straight-line basis over the estimated period the software upgrades and non-software services are expected to be provided.

The Company's process for determining ESPs involves management's judgment and considers multiple factors that may vary over time depending upon the unique facts and circumstances related to each deliverable. Should future facts and circumstances change, the Company's ESPs and the future rate of related amortization for unspecified software upgrades and non-software services related to future sales of these devices could change. Factors subject to change include the unspecified software upgrade rights and non-software services offered, the estimated value of unspecified software upgrade rights and non-software services and the estimated period unspecified software upgrades and non-software services are expected to be provided.

The Company records reductions to revenue for estimated commitments related to price protection and other customer incentive programs. For transactions involving price protection, the Company recognizes revenue net of the estimated amount to be refunded, provided the refund amount can be reasonably and reliably estimated and the other conditions for revenue recognition have been met. The Company's policy requires that, if refunds cannot be reliably estimated, revenue is not recognized until reliable estimates can be made or the price protection lapses. For the Company's other customer incentive programs, the estimated cost is recognized at the later of the date at which the Company has sold the product or the date at which the program is offered. The Company also records reductions to revenue for expected future product returns based on the Company's historical experience. Future market conditions and product transitions may require the Company to increase customer incentive programs that could result in reductions to future revenue. Additionally, certain customer incentive programs require management to estimate the number of customers who will actually redeem the incentive. Management's estimates are based on historical experience and the specific terms and conditions of particular incentive programs. If a greater than estimated proportion of customers redeems such incentives, the Company would be required to record additional reductions to revenue, which would have an adverse impact on the Company's operating results.

Valuation and Impairment of Marketable Securities

The Company's investments in available-for-sale securities are reported at fair value. Unrealized gains and losses related to changes in the fair value of securities are recognized in accumulated other comprehensive income, net of tax, in the Company's Consolidated Balance Sheets. Changes in the fair value of available-for-sale securities impact the Company's net income only when such securities are sold or an other-than-temporary impairment is recognized. Realized gains and losses on the sale of securities are determined by specific identification of each security's cost basis. The Company regularly reviews its investment portfolio to determine if any security is other-than-temporarily impaired, which would require the Company to record an impairment charge in the period any such determination is made. In making this determination, the Company evaluates, among other things, the duration and extent to which the fair value of a security is less than its cost; the financial condition of the issuer and any changes thereto; and the Company's intent to sell, or whether it will more likely than not be required to sell, the security before recovery of its amortized cost basis. The Company's assessment of whether a security is other-than-temporarily impaired could change in the future due to new developments or changes in assumptions related to any particular security, which would have an adverse impact on the Company's financial condition and operating results.

Inventory Valuation, Valuation of Manufacturing-Related Assets and Estimation of Purchase Commitment Cancellation Fees

The Company must purchase components and build inventory in advance of product shipments and has invested in manufacturing-related assets, including capital assets held at its suppliers' facilities. In addition, the Company has made prepayments to certain of its suppliers associated with long-term supply agreements to secure supply of inventory components. The Company records a write-down for inventories of components and products, including third-party products held for resale, which have become obsolete or are in excess of anticipated demand or net realizable value. The Company performs a regular review of inventory that considers multiple factors including demand forecasts, product life cycle status, product development plans, current sales levels and component cost trends. The Company also reviews its manufacturing-related capital assets and inventory prepayments for impairment whenever events or circumstances indicate the carrying amount of such assets may not be recoverable. If the Company determines that an asset is not recoverable, it records an impairment loss equal to the amount by which the carrying value of such an asset exceeds its fair value.

The industries in which the Company competes are subject to a rapid and unpredictable pace of product and component obsolescence and demand changes. In certain circumstances the Company may be required to record additional write-downs of inventory and/or impairments of manufacturing-related assets or inventory prepayments. These circumstances include future demand or market conditions for the Company's products being less favorable than forecasted, unforeseen technological changes or changes to the Company's product development plans that negatively impact the utility of any of these assets, or significant deterioration in the financial condition of one or more of the Company's suppliers that hold any of the Company's manufacturing-related assets or to whom the Company has made an inventory prepayment. Such write downs would adversely affect the Company's financial condition and operating results in the period when the additional write-downs were recorded.

The Company accrues for estimated purchase commitment cancellation fees related to inventory orders that have been canceled or are expected to be canceled. Manufacturing purchase obligations typically cover the Company's forecasted component and manufacturing requirements for periods up to 150 days. If there is an abrupt and substantial decline in demand for one or more of the Company's products, a change in the Company's product development plans, or an unanticipated change in technological requirements for any of the Company's products, the Company may be required to record additional accruals for cancellation fees that would adversely affect its results of operations in the period when the cancellation fees were identified and recorded.

Warranty Costs

The Company accrues for the estimated cost of warranties in the period the related revenue is recognized based on historical and projected warranty claim rates, historical and projected cost per claim and knowledge of specific product failures that are outside of the Company's typical experience. The Company regularly reviews these estimates and the current installed base of products subject to warranty protection to assess the appropriateness of its recorded warranty liabilities and adjusts the amounts as necessary. If actual product failure rates or repair costs differ from estimates, revisions to the estimated warranty liabilities could be required and could materially affect the Company's financial condition and operating results.

Income Taxes

The Company records a tax provision for the anticipated tax consequences of its reported operating results. The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets and liabilities are expected to be realized or settled. The Company records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

The Company recognizes tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, together with future reversals of existing taxable temporary differences, will be sufficient to fully recover the Company's deferred tax assets. In the event that the Company determines all or part of its net deferred tax assets are not realizable in the future, the Company will record an adjustment to the valuation allowance that would be charged to earnings in the period such determination is made. In addition, the calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of GAAP and complex tax laws. Resolution of these uncertainties in a manner inconsistent with management's expectations could have a material impact on the Company's financial condition and operating results.

Legal and Other Contingencies

As discussed in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings" and in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies," the Company is subject to various legal proceedings and claims that arise in the ordinary course of business. The Company records a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims. However, the outcome of legal proceedings and claims brought against the Company is subject to significant uncertainty. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's consolidated financial statements for that reporting period could be materially adversely affected.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk**Interest Rate and Foreign Currency Risk Management**

The Company regularly reviews its foreign exchange forward and option positions and interest rate swaps, both on a stand-alone basis and in conjunction with its underlying foreign currency and interest rate exposures. Given the effective horizons of the Company's risk management activities and the anticipatory nature of the exposures, there can be no assurance these positions will offset more than a portion of the financial impact resulting from movements in either foreign exchange or interest rates. Further, the recognition of the gains and losses related to these instruments may not coincide with the timing of gains and losses related to the underlying economic exposures and, therefore, may adversely affect the Company's financial condition and operating results.

Interest Rate Risk

The Company's exposure to changes in interest rates relates primarily to the Company's investment portfolio and outstanding debt. While the Company is exposed to global interest rate fluctuations, the Company's interest income and expense are most sensitive to fluctuations in U.S. interest rates. Changes in U.S. interest rates affect the interest earned on the Company's cash, cash equivalents and marketable securities and the fair value of those securities, as well as costs associated with hedging and interest paid on the Company's debt.

The Company's investment policy and strategy are focused on preservation of capital and supporting the Company's liquidity requirements. The Company uses a combination of internal and external management to execute its investment strategy and achieve its investment objectives. The Company typically invests in highly-rated securities, and its investment policy generally limits the amount of credit exposure to any one issuer. The policy generally requires investments to be investment grade, with the primary objective of minimizing the potential risk of principal loss. To provide a meaningful assessment of the interest rate risk associated with the Company's investment portfolio, the Company performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investment portfolio assuming a 100 basis point parallel shift in the yield curve. Based on investment positions as of September 30, 2017 and September 24, 2016, a hypothetical 100 basis point increase in interest rates across all maturities would result in a \$6.0 billion and \$4.9 billion incremental decline in the fair market value of the portfolio, respectively. Such losses would only be realized if the Company sold the investments prior to maturity.

As of September 30, 2017 and September 24, 2016, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate carrying amount of \$103.7 billion and \$78.9 billion, respectively. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on its outstanding term debt. Interest rate swaps allow the Company to effectively convert fixed-rate payments into floating-rate payments or floating-rate payments into fixed-rate payments. Gains and losses on term debt are generally offset by the corresponding losses and gains on the related hedging instrument. A 100 basis point increase in market interest rates would cause interest expense on the Company's debt as of September 30, 2017 and September 24, 2016 to increase by \$376 million and \$271 million on an annualized basis, respectively.

Further details regarding the Company's debt is provided in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 6, "Debt."

Foreign Currency Risk

In general, the Company is a net receiver of currencies other than the U.S. dollar. Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, will negatively affect the Company's net sales and gross margins as expressed in U.S. dollars. There is a risk that the Company will have to adjust local currency product pricing due to competitive pressures when there has been significant volatility in foreign currency exchange rates.

The Company may enter into foreign currency forward and option contracts with financial institutions to protect against foreign exchange risks associated with certain existing assets and liabilities, certain firmly committed transactions, forecasted future cash flows and net investments in foreign subsidiaries. In addition, the Company has entered, and in the future may enter, into foreign currency contracts to partially offset the foreign currency exchange gains and losses on its foreign-denominated debt issuances. The Company typically hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months. However, the Company may choose not to hedge certain foreign exchange exposures for a variety of reasons, including but not limited to accounting considerations and the prohibitive economic cost of hedging particular exposures.

To provide a meaningful assessment of the foreign currency risk associated with certain of the Company's foreign currency derivative positions, the Company performed a sensitivity analysis using a value-at-risk ("VAR") model to assess the potential impact of fluctuations in exchange rates. The VAR model consisted of using a Monte Carlo simulation to generate thousands of random market price paths assuming normal market conditions. The VAR is the maximum expected loss in fair value, for a given confidence interval, to the Company's foreign currency derivative positions due to adverse movements in rates. The VAR model is not intended to represent actual losses but is used as a risk estimation and management tool. Forecasted transactions, firm commitments and assets and liabilities denominated in foreign currencies were excluded from the model. Based on the results of the model, the Company estimates with 95% confidence, a maximum one-day loss in fair value of \$485 million as of September 30, 2017 compared to a maximum one-day loss in fair value of \$434 million as of September 24, 2016. Because the Company uses foreign currency instruments for hedging purposes, the loss in fair value incurred on those instruments are generally offset by increases in the fair value of the underlying exposures.

Actual future gains and losses associated with the Company's investment portfolio and derivative positions may differ materially from the sensitivity analyses performed as of September 30, 2017 due to the inherent limitations associated with predicting the timing and amount of changes in interest rates, foreign currency exchange rates and the Company's actual exposures and positions.

Apple Inc. | 2017 Form 10-K | 37

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	39
Consolidated Statements of Comprehensive Income for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	40
Consolidated Balance Sheets as of September 30, 2017 and September 24, 2016	41
Consolidated Statements of Shareholders' Equity for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	42
Consolidated Statements of Cash Flows for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	43
Notes to Consolidated Financial Statements	44
Selected Quarterly Financial Information (Unaudited)	68
Reports of Ernst & Young LLP, Independent Registered Public Accounting Firm	70

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

Apple Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended		
	September 30, 2017	September 24, 2016	September 26, 2015
Net sales	\$ 229,234	\$ 215,639	\$ 233,715
Cost of sales	141,048	131,376	140,089
Gross margin	88,186	84,263	93,626
Operating expenses:			
Research and development	11,581	10,045	8,067
Selling, general and administrative	15,261	14,194	14,329
Total operating expenses	26,842	24,239	22,396
Operating income	61,344	60,024	71,230
Other income/(expense), net	2,745	1,348	1,285
Income before provision for income taxes	64,089	61,372	72,515
Provision for income taxes	15,738	15,685	19,121
Net income	\$ 48,351	\$ 45,687	\$ 53,394
Earnings per share:			
Basic	\$ 9.27	\$ 8.35	\$ 9.28
Diluted	\$ 9.21	\$ 8.31	\$ 9.22
Shares used in computing earnings per share:			
Basic	5,217,242	5,470,820	5,753,421
Diluted	5,251,692	5,500,281	5,793,069
Cash dividends declared per share	\$ 2.40	\$ 2.18	\$ 1.98

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended		
	September 30, 2017	September 24, 2016	September 26, 2015
Net income	\$ 48,351	\$ 45,687	\$ 53,394
Other comprehensive income/(loss):			
Change in foreign currency translation, net of tax effects of \$(77), \$8 and \$201, respectively	224	75	(411)
Change in unrealized gains/losses on derivative instruments:			
Change in fair value of derivatives, net of tax benefit/(expense) of \$(478), \$(7) and \$(441), respectively	1,315	7	2,905
Adjustment for net (gains)/losses realized and included in net income, net of tax expense/(benefit) of \$475, \$131 and \$630, respectively	(1,477)	(741)	(3,497)
Total change in unrealized gains/losses on derivative instruments, net of tax	(162)	(734)	(592)
Change in unrealized gains/losses on marketable securities:			
Change in fair value of marketable securities, net of tax benefit/(expense) of \$425, \$(863) and \$264, respectively	(782)	1,582	(483)
Adjustment for net (gains)/losses realized and included in net income, net of tax expense/(benefit) of \$35, \$(31) and \$(32), respectively	(64)	56	59
Total change in unrealized gains/losses on marketable securities, net of tax	(846)	1,638	(424)
Total other comprehensive income/(loss)	(784)	979	(1,427)
Total comprehensive income	\$ 47,567	\$ 46,666	\$ 51,967

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2017 Form 10-K | 40

Apple Inc.

CONSOLIDATED BALANCE SHEETS

(In millions, except number of shares which are reflected in thousands and par value)

	September 30, 2017	September 24, 2016
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 20,289	\$ 20,484
Short-term marketable securities	53,892	46,671
Accounts receivable, less allowances of \$58 and \$53, respectively	17,874	15,754
Inventories	4,855	2,132
Vendor non-trade receivables	17,799	13,545
Other current assets	13,936	8,283
Total current assets	128,645	106,869
Long-term marketable securities	194,714	170,430
Property, plant and equipment, net	33,783	27,010
Goodwill	5,717	5,414
Acquired intangible assets, net	2,298	3,206
Other non-current assets	10,162	8,757
Total assets	\$ 375,319	\$ 321,686
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	\$ 49,049	\$ 37,294
Accrued expenses	25,744	22,027
Deferred revenue	7,548	8,080
Commercial paper	11,977	8,105
Current portion of long-term debt	6,496	3,500
Total current liabilities	100,814	79,006
Deferred revenue, non-current	2,836	2,930
Long-term debt	97,207	75,427
Other non-current liabilities	40,415	36,074
Total liabilities	241,272	193,437
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 5,126,201 and 5,336,166 shares issued and outstanding, respectively	35,867	31,251
Retained earnings	98,330	96,364
Accumulated other comprehensive income/(loss)	(150)	634
Total shareholders' equity	134,047	128,249
Total liabilities and shareholders' equity	\$ 375,319	\$ 321,686

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In millions, except number of shares which are reflected in thousands)

	Common Stock and Additional Paid-In Capital		Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
	Shares	Amount			
Balances as of September 27, 2014	5,866,161	\$ 23,313	\$ 87,152	\$ 1,082	\$ 111,547
Net income	□	□	53,394	□	53,394
Other comprehensive income/(loss)	□	□	□	(1,427)	(1,427)
Dividends and dividend equivalents declared	□	□	(11,627)	□	(11,627)
Repurchase of common stock	(325,032)	□	(36,026)	□	(36,026)
Share-based compensation	□	3,586	□	□	3,586
Common stock issued, net of shares withheld for employee taxes	37,624	(231)	(609)	□	(840)
Tax benefit from equity awards, including transfer pricing adjustments	□	748	□	□	748
Balances as of September 26, 2015	5,578,753	27,416	92,284	(345)	119,355
Net income	□	□	45,687	□	45,687
Other comprehensive income/(loss)	□	□	□	979	979
Dividends and dividend equivalents declared	□	□	(12,188)	□	(12,188)
Repurchase of common stock	(279,609)	□	(29,000)	□	(29,000)
Share-based compensation	□	4,262	□	□	4,262
Common stock issued, net of shares withheld for employee taxes	37,022	(806)	(419)	□	(1,225)
Tax benefit from equity awards, including transfer pricing adjustments	□	379	□	□	379
Balances as of September 24, 2016	5,336,166	31,251	96,364	634	128,249
Net income	□	□	48,351	□	48,351
Other comprehensive income/(loss)	□	□	□	(784)	(784)
Dividends and dividend equivalents declared	□	□	(12,803)	□	(12,803)
Repurchase of common stock	(246,496)	□	(33,001)	□	(33,001)
Share-based compensation	□	4,909	□	□	4,909
Common stock issued, net of shares withheld for employee taxes	36,531	(913)	(581)	□	(1,494)
Tax benefit from equity awards, including transfer pricing adjustments	□	620	□	□	620
Balances as of September 30, 2017	5,126,201	\$ 35,867	\$ 98,330	\$ (150)	\$ 134,047

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)

	Years ended		
	September 30, 2017	September 24, 2016	September 26, 2015
Cash and cash equivalents, beginning of the year	\$ 20,484	\$ 21,120	\$ 13,844
Operating activities:			
Net income	48,351	45,687	53,394
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	10,157	10,505	11,257
Share-based compensation expense	4,840	4,210	3,586
Deferred income tax expense	5,966	4,938	1,382
Other	(166)	486	385
Changes in operating assets and liabilities:			
Accounts receivable, net	(2,093)	527	417
Inventories	(2,723)	217	(238)
Vendor non-trade receivables	(4,254)	(51)	(3,735)
Other current and non-current assets	(5,318)	1,055	(283)
Accounts payable	9,618	1,837	5,001
Deferred revenue	(626)	(1,554)	1,042
Other current and non-current liabilities	(154)	(2,033)	9,058
Cash generated by operating activities	63,598	65,824	81,266
Investing activities:			
Purchases of marketable securities	(159,486)	(142,428)	(166,402)
Proceeds from maturities of marketable securities	31,775	21,258	14,538
Proceeds from sales of marketable securities	94,564	90,536	107,447
Payments made in connection with business acquisitions, net	(329)	(297)	(343)
Payments for acquisition of property, plant and equipment	(12,451)	(12,734)	(11,247)
Payments for acquisition of intangible assets	(344)	(814)	(241)
Payments for strategic investments, net	(395)	(1,388)	□
Other	220	(110)	(26)
Cash used in investing activities	(46,446)	(45,977)	(56,274)
Financing activities:			
Proceeds from issuance of common stock	555	495	543
Excess tax benefits from equity awards	627	407	749
Payments for taxes related to net share settlement of equity awards	(1,874)	(1,570)	(1,499)
Payments for dividends and dividend equivalents	(12,769)	(12,150)	(11,561)
Repurchases of common stock	(32,900)	(29,722)	(35,253)
Proceeds from issuance of term debt, net	28,662	24,954	27,114
Repayments of term debt	(3,500)	(2,500)	□
Change in commercial paper, net	3,852	(397)	2,191
Cash used in financing activities	(17,347)	(20,483)	(17,716)
Increase/(Decrease) in cash and cash equivalents	(195)	(636)	7,276
Cash and cash equivalents, end of the year	\$ 20,289	\$ 20,484	\$ 21,120
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	\$ 11,591	\$ 10,444	\$ 13,252
Cash paid for interest	\$ 2,092	\$ 1,316	\$ 514

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

Notes to Consolidated Financial Statements

Note 1 – Summary of Significant Accounting Policies

Apple Inc. and its wholly-owned subsidiaries (collectively "Apple" or the "Company") designs, manufactures and markets mobile communication and media devices ; personal computers, and sells a variety of related software, services, accessories, networking solutions and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, Apple TV, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, iBooks Store and Apple Music (collectively "Digital Content and Services"). The Company sells its products worldwide through its retail stores, online stores and direct sales force, as well as through third-party cellular network carriers, wholesalers, retailers and value-added resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers.

Basis of Presentation and Preparation

The accompanying consolidated financial statements include the accounts of the Company. Intercompany accounts and transactions have been eliminated. In the opinion of the Company's management, the consolidated financial statements reflect all adjustments, which are normal and recurring in nature, necessary for fair financial statement presentation. The preparation of these consolidated financial statements in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported in these consolidated financial statements and accompanying notes. Actual results could differ materially from those estimates. Certain prior period amounts in the consolidated financial statements have been reclassified to conform to the current period's presentation.

The Company's fiscal year is the 52 or 53-week period that ends on the last Saturday of September. The Company's fiscal year 2017 included 53 weeks and ended on September 30, 2017. A 14th week was included in the first fiscal quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters. The Company's fiscal years 2016 and 2015 ended on September 24, 2016 and September 26, 2015, respectively, and spanned 52 weeks each. Unless otherwise stated, references to particular years, quarters, months and periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years.

Revenue Recognition

Net sales consist primarily of revenue from the sale of hardware, software, digital content and applications, accessories, and service and support contracts. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collection is probable. Product is considered delivered to the customer once it has been shipped and title, risk of loss and rewards of ownership have been transferred. For most of the Company's product sales, these criteria are met at the time the product is shipped. For online sales to individuals, for some sales to education customers in the U.S., and for certain other sales, the Company defers revenue until the customer receives the product because the Company retains a portion of the risk of loss on these sales during transit. For payment terms in excess of the Company's standard payment terms, revenue is recognized as payments become due unless the Company has positive evidence that the sales price is fixed or determinable, such as a successful history of collection, without concession, on comparable arrangements. The Company recognizes revenue from the sale of hardware products, software bundled with hardware that is essential to the functionality of the hardware and third-party digital content sold on the iTunes Store in accordance with general revenue recognition accounting guidance. The Company recognizes revenue in accordance with industry-specific software accounting guidance for the following types of sales transactions: (i) standalone sales of software products, (ii) sales of software upgrades and (iii) sales of software bundled with hardware not essential to the functionality of the hardware.

For the sale of most third-party products, the Company recognizes revenue based on the gross amount billed to customers because the Company establishes its own pricing for such products, retains related inventory risk for physical products, is the primary obligor to the customer and assumes the credit risk for amounts billed to its customers. For third-party applications sold through the App Store and Mac App Store and certain digital content sold through the iTunes Store, the Company does not determine the selling price of the products and is not the primary obligor to the customer. Therefore, the Company accounts for such sales on a net basis by recognizing in net sales only the commission it retains from each sale. The portion of the gross amount billed to customers that is remitted by the Company to third-party app developers and certain digital content owners is not reflected in the Company's Consolidated Statements of Operations.

The Company records deferred revenue when it receives payments in advance of the delivery of products or the performance of services. This includes amounts that have been deferred for unspecified and specified software upgrade rights and non-software services that are attached to hardware and software products. The Company sells gift cards redeemable at its retail and online stores, and also sells gift cards redeemable on iTunes Store, App Store, Mac App Store, TV App Store and iBooks Store for the purchase of digital content and software. The Company records deferred revenue upon the sale of the card, which is relieved upon redemption of the card by the customer. Revenue from AppleCare service and support contracts is deferred and recognized over the service coverage periods. AppleCare service and support contracts typically include extended phone support, repair services, web-based support resources and diagnostic tools offered under the Company's standard limited warranty.

The Company records reductions to revenue for estimated commitments related to price protection and other customer incentive programs. For transactions involving price protection, the Company recognizes revenue net of the estimated amount to be refunded. For the Company's other customer incentive programs, the estimated cost of these programs is recognized at the later of the date at which the Company has sold the product or the date at which the program is offered. The Company also records reductions to revenue for expected future product returns based on the Company's historical experience. Revenue is recorded net of taxes collected from customers that are remitted to governmental authorities, with the collected taxes recorded as current liabilities until remitted to the relevant government authority.

Revenue Recognition for Arrangements with Multiple Deliverables

For multi-element arrangements that include hardware products containing software essential to the hardware product's functionality, undelivered software elements that relate to the hardware product's essential software, and undelivered non-software services, the Company allocates revenue to all deliverables based on their relative selling prices. In such circumstances, the Company uses a hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence of fair value ("VSOE"), (ii) third-party evidence of selling price ("TPE") and (iii) best estimate of selling price ("ESP"). VSOE generally exists only if the Company sells the deliverable separately and is the price actually charged by the Company for that deliverable. ESPs reflect the Company's best estimates of what the selling prices of elements would be if they were sold regularly on a stand-alone basis. For multi-element arrangements accounted for in accordance with industry-specific software accounting guidance, the Company allocates revenue to all deliverables based on the VSOE of each element, and if VSOE does not exist revenue is recognized when elements lacking VSOE are delivered.

For sales of qualifying versions of iPhone, iPad, iPod touch, Mac, Apple Watch and Apple TV, the Company has indicated it may from time to time provide future unspecified software upgrades to the device's essential software and/or non-software services free of charge. The Company has identified up to three deliverables regularly included in arrangements involving the sale of these devices. The first deliverable, which represents the substantial portion of the allocated sales price, is the hardware and software essential to the functionality of the hardware device delivered at the time of sale. The second deliverable is the embedded right included with qualifying devices to receive, on a when-and-if-available basis, future unspecified software upgrades relating to the product's essential software. The third deliverable is the non-software services to be provided to qualifying devices. The Company allocates revenue between these deliverables using the relative selling price method. Because the Company has neither VSOE nor TPE for these deliverables, the allocation of revenue is based on the Company's ESPs. Revenue allocated to the delivered hardware and the related essential software is recognized at the time of sale, provided the other conditions for revenue recognition have been met. Revenue allocated to the embedded unspecified software upgrade rights and the non-software services is deferred and recognized on a straight-line basis over the estimated period the software upgrades and non-software services are expected to be provided. Cost of sales related to delivered hardware and related essential software, including estimated warranty costs, are recognized at the time of sale. Costs incurred to provide non-software services are recognized as cost of sales as incurred, and engineering and sales and marketing costs are recognized as operating expenses as incurred.

The Company's process for determining its ESP for deliverables without VSOE or TPE considers multiple factors that may vary depending upon the unique facts and circumstances related to each deliverable including, where applicable, prices charged by the Company and market trends in the pricing for similar offerings, product-specific business objectives, estimated cost to provide the non-software services and the relative ESP of the upgrade rights and non-software services as compared to the total selling price of the product.

Shipping Costs

Amounts billed to customers related to shipping and handling are classified as revenue, and the Company's shipping and handling costs are classified as cost of sales.

Warranty Costs

The Company generally provides for the estimated cost of hardware and software warranties in the period the related revenue is recognized. The Company assesses the adequacy of its accrued warranty liabilities and adjusts the amounts as necessary based on actual experience and changes in future estimates.

Software Development Costs

Research and development (R&D) costs are expensed as incurred. Development costs of computer software to be sold, leased, or otherwise marketed are subject to capitalization beginning when a product's technological feasibility has been established and ending when a product is available for general release to customers. In most instances, the Company's products are released soon after technological feasibility has been established and as a result software development costs were expensed as incurred.

Advertising Costs

Advertising costs are expensed as incurred and included in selling, general and administrative expenses.

Share-based Compensation

The Company recognizes expense related to share-based payment transactions in which it receives employee services in exchange for (a) equity instruments of the Company or (b) liabilities that are based on the fair value of the Company's equity instruments or that may be settled by the issuance of such equity instruments. Share-based compensation expense for restricted stock units (RSUs) and restricted stock is measured based on the closing fair market value of the Company's common stock on the date of grant. The Company estimates forfeitures expected to occur and recognizes share-based compensation expense for those equity awards expected to vest. The Company recognizes share-based compensation expense over the award's requisite service period on a straight-line basis for time-based RSUs and on a graded basis for RSUs that are contingent on the achievement of performance conditions. The Company recognizes a benefit from share-based compensation in the Consolidated Statements of Shareholders' Equity if an excess tax benefit is realized. In addition, the Company recognizes the indirect effects of share-based compensation on R&D tax credits, foreign tax credits and domestic manufacturing deductions in the Consolidated Statements of Operations. Further information regarding share-based compensation can be found in Note 9, Benefit Plans.

Income Taxes

The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that apply to taxable income in effect for the years in which those tax assets and liabilities are expected to be realized or settled. The Company records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

The Company recognizes the tax benefit from an uncertain tax position only if it is more likely than not the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon settlement. See Note 5, Income Taxes for additional information.

Earnings Per Share

Basic earnings per share is computed by dividing income available to common shareholders by the weighted-average number of shares of common stock outstanding during the period. Diluted earnings per share is computed by dividing income available to common shareholders by the weighted-average number of shares of common stock outstanding during the period increased to include the number of additional shares of common stock that would have been outstanding if the potentially dilutive securities had been issued. Potentially dilutive securities include unvested RSUs, unvested restricted stock, outstanding stock options and shares to be purchased by employees under the Company's employee stock purchase plan. The dilutive effect of potentially dilutive securities is reflected in diluted earnings per share by application of the treasury stock method. Under the treasury stock method, an increase in the fair market value of the Company's common stock can result in a greater dilutive effect from potentially dilutive securities.

The following table shows the computation of basic and diluted earnings per share for 2017, 2016 and 2015 (net income in millions and shares in thousands):

	2017	2016	2015
Numerator:			
Net income	\$ 48,351	\$ 45,687	\$ 53,394
Denominator:			
Weighted-average shares outstanding	5,217,242	5,470,820	5,753,421
Effect of dilutive securities	34,450	29,461	39,648
Weighted-average diluted shares	5,251,692	5,500,281	5,793,069
Basic earnings per share	\$ 9.27	\$ 8.35	\$ 9.28
Diluted earnings per share	\$ 9.21	\$ 8.31	\$ 9.22

Potentially dilutive securities whose effect would have been antidilutive are excluded from the computation of diluted earnings per share.

Financial Instruments

Cash Equivalents and Marketable Securities

All highly liquid investments with maturities of three months or less at the date of purchase are classified as cash equivalents. The Company's marketable debt and equity securities have been classified and accounted for as available-for-sale. Management determines the appropriate classification of its investments at the time of purchase and reevaluates the classifications at each balance sheet date. The Company classifies its marketable debt securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable debt securities with maturities of 12 months or less are classified as short-term and marketable debt securities with maturities greater than 12 months are classified as long-term. Marketable equity securities, including mutual funds, are classified as either short-term or long-term based on the nature of each security and its availability for use in current operations. The Company's marketable debt and equity securities are carried at fair value, with unrealized gains and losses, net of taxes, reported as a component of accumulated other comprehensive income/(loss) (AOCI) in shareholders' equity, with the exception of unrealized losses believed to be other-than-temporary which are reported in earnings in the current period. The cost of securities sold is based upon the specific identification method.

Derivative Financial Instruments

The Company accounts for its derivative instruments as either assets or liabilities and carries them at fair value.

For derivative instruments that hedge the exposure to variability in expected future cash flows that are designated as cash flow hedges, the effective portion of the gain or loss on the derivative instrument is reported as a component of AOCI in shareholders' equity and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. The ineffective portion of the gain or loss on the derivative instrument, if any, is recognized in earnings in the current period. To receive hedge accounting treatment, cash flow hedges must be highly effective in offsetting changes to expected future cash flows on hedged transactions. For options designated as cash flow hedges, changes in the time value are excluded from the assessment of hedge effectiveness and are recognized in earnings.

For derivative instruments that hedge the exposure to changes in the fair value of an asset or a liability and that are designated as fair value hedges, both the net gain or loss on the derivative instrument as well as the offsetting gain or loss on the hedged item are recognized in earnings in the current period.

For derivative instruments and foreign currency debt that hedge the exposure to changes in foreign currency exchange rates used for translation of the net investment in a foreign operation and that are designated as a net investment hedge, the net gain or loss on the effective portion of the derivative instrument is reported in the same manner as a foreign currency translation adjustment. For forward exchange contracts designated as net investment hedges, the Company excludes changes in fair value relating to changes in the forward carry component from its definition of effectiveness. Accordingly, any gains or losses related to this forward carry component are recognized in earnings in the current period.

Derivatives that do not qualify as hedges are adjusted to fair value through earnings in the current period.

Allowance for Doubtful Accounts

The Company records its allowance for doubtful accounts based upon its assessment of various factors, including historical experience, age of the accounts receivable balances, credit quality of the Company's customers, current economic conditions and other factors that may affect the customers' abilities to pay.

Inventories

Inventories are stated at the lower of cost, computed using the first-in, first-out method, and net realizable value. Any adjustments to reduce the cost of inventories to their net realizable value are recognized in earnings in the current period.

Property, Plant and Equipment

Property, plant and equipment are stated at cost. Depreciation is computed by use of the straight-line method over the estimated useful lives of the assets, which for buildings is the lesser of 30 years or the remaining life of the underlying building; between one and five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease term or useful life for leasehold improvements. The Company capitalizes eligible costs to acquire or develop internal-use software that are incurred subsequent to the preliminary project stage. Capitalized costs related to internal-use software are amortized using the straight-line method over the estimated useful lives of the assets, which range from three to five years. Depreciation and amortization expense on property and equipment was \$8.2 billion, \$8.3 billion and \$9.2 billion during 2017, 2016 and 2015, respectively.

Long-Lived Assets Including Goodwill and Other Acquired Intangible Assets

The Company reviews property, plant and equipment, inventory component prepayments and identifiable intangibles, excluding goodwill and intangible assets with indefinite useful lives, for impairment. Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability of these assets is measured by comparison of their carrying amounts to future undiscounted cash flows the assets are expected to generate. If property, plant and equipment, inventory component prepayments and certain identifiable intangibles are considered to be impaired, the impairment to be recognized equals the amount by which the carrying value of the asset exceeds its fair value.

The Company does not amortize goodwill and intangible assets with indefinite useful lives; rather, such assets are required to be tested for impairment at least annually or sooner if events or changes in circumstances indicate that the assets may be impaired. The Company performs its goodwill and intangible asset impairment tests in the fourth quarter of each year. The Company did not recognize any impairment charges related to goodwill or indefinite lived intangible assets during 2017, 2016 and 2015. For purposes of testing goodwill for impairment, the Company established reporting units based on its current reporting structure. Goodwill has been allocated to these reporting units to the extent it relates to each reporting unit. In 2017 and 2016, the Company's goodwill was primarily allocated to the Americas and Europe reporting units.

The Company amortizes its intangible assets with definite useful lives over their estimated useful lives and reviews these assets for impairment. The Company typically amortizes its acquired intangible assets with definite useful lives over periods from three to seven years.

Fair Value Measurements

The Company applies fair value accounting for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis. The Company defines fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities that are required to be recorded at fair value, the Company considers the principal or most advantageous market in which the Company would transact and the market-based risk measurements or assumptions that market participants would use to price the asset or liability, such as risks inherent in valuation techniques, transfer restrictions and credit risk. Fair value is estimated by applying the following hierarchy, which prioritizes the inputs used to measure fair value into three levels and bases the categorization within the hierarchy upon the lowest level of input that is available and significant to the fair value measurement:

Level 1 □ Quoted prices in active markets for identical assets or liabilities.

Level 2 □ Observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 □ Inputs that are generally unobservable and typically reflect management's estimate of assumptions that market participants would use in pricing the asset or liability.

The Company's valuation techniques used to measure the fair value of money market funds and certain marketable equity securities were derived from quoted prices in active markets for identical assets or liabilities. The valuation techniques used to measure the fair value of the Company's debt instruments and all other financial instruments, all of which have counterparties with high credit ratings, were valued based on quoted market prices or model-driven valuations using significant inputs derived from or corroborated by observable market data.

In accordance with the fair value accounting requirements, companies may choose to measure eligible financial instruments and certain other items at fair value. The Company has not elected the fair value option for any eligible financial instruments.

Foreign Currency Translation and Remeasurement

The Company translates the assets and liabilities of its non-U.S. dollar functional currency subsidiaries into U.S. dollars using exchange rates in effect at the end of each period. Revenue and expenses for these subsidiaries are translated using rates that approximate those in effect during the period. Gains and losses from these translations are recognized in foreign currency translation included in AOCI in shareholders' equity. The Company's subsidiaries that use the U.S. dollar as their functional currency remeasure monetary assets and liabilities at exchange rates in effect at the end of each period, and inventories, property and nonmonetary assets and liabilities at historical rates.

Note 2 – Financial Instruments

Cash, Cash Equivalents and Marketable Securities

The following tables show the Company's cash and available-for-sale securities by significant investment category as of September 30, 2017 and September 24, 2016 (in millions):

	2017						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 7,982	\$ □	\$ □	\$ 7,982	\$ 7,982	\$ □	\$ □
Level 1:							
Money market funds	6,534	□	□	6,534	6,534	□	□
Mutual funds	799	□	(88)	711	□	711	□
Subtotal	7,333	□	(88)	7,245	6,534	711	□
Level 2:							
U.S. Treasury securities	55,254	58	(230)	55,082	865	17,228	36,989
U.S. agency securities	5,162	2	(9)	5,155	1,439	2,057	1,659
Non-U.S. government securities	7,827	210	(37)	8,000	9	123	7,868
Certificates of deposit and time deposits	5,832	□	□	5,832	1,142	3,918	772
Commercial paper	3,640	□	□	3,640	2,146	1,494	□
Corporate securities	152,724	969	(242)	153,451	172	27,591	125,688
Municipal securities	961	4	(1)	964	□	114	850
Mortgage- and asset-backed securities	21,684	35	(175)	21,544	□	656	20,888
Subtotal	253,084	1,278	(694)	253,668	5,773	53,181	194,714
Total	\$ 268,399	\$ 1,278	\$ (782)	\$ 268,895	\$ 20,289	\$ 53,892	\$ 194,714

Apple Inc. | 2017 Form 10-K | 49

	2016						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 8,601	\$ □	\$ □	\$ 8,601	\$ 8,601	\$ □	\$ □
Level 1:							
Money market funds	3,666	□	□	3,666	3,666	□	□
Mutual funds	1,407	□	(146)	1,261	□	1,261	□
Subtotal	5,073	□	(146)	4,927	3,666	1,261	□
Level 2:							
U.S. Treasury securities	41,697	319	(4)	42,012	1,527	13,492	26,993
U.S. agency securities	7,543	16	□	7,559	2,762	2,441	2,356
Non-U.S. government securities	7,609	259	(27)	7,841	110	818	6,913
Certificates of deposit and time deposits	6,598	□	□	6,598	1,108	3,897	1,593
Commercial paper	7,433	□	□	7,433	2,468	4,965	□
Corporate securities	131,166	1,409	(206)	132,369	242	19,599	112,528
Municipal securities	956	5	□	961	□	167	794
Mortgage- and asset-backed securities	19,134	178	(28)	19,284	□	31	19,253
Subtotal	222,136	2,186	(265)	224,057	8,217	45,410	170,430
Total	\$ 235,810	\$ 2,186	\$ (411)	\$ 237,585	\$ 20,484	\$ 46,671	\$ 170,430

The Company may sell certain of its marketable securities prior to their stated maturities for strategic reasons including, but not limited to, anticipation of credit deterioration and duration management. The maturities of the Company's long-term marketable securities generally range from one to five years.

The Company considers the declines in market value of its marketable securities investment portfolio to be temporary in nature. The Company typically invests in highly-rated securities, and its investment policy generally limits the amount of credit exposure to any one issuer. The policy generally requires investments to be investment grade, with the primary objective of minimizing the potential risk of principal loss. Fair values were determined for each individual security in the investment portfolio. When evaluating an investment for other-than-temporary impairment, the Company reviews factors such as the length of time and extent to which fair value has been below its cost basis, the financial condition of the issuer and any changes thereto, changes in market interest rates and the Company's intent to sell, or whether it is more likely than not it will be required to sell the investment before recovery of the investment's cost basis. As of September 30, 2017, the Company does not consider any of its investments to be other-than-temporarily impaired.

Derivative Financial Instruments

The Company may use derivatives to partially offset its business exposure to foreign currency and interest rate risk on expected future cash flows, on net investments in certain foreign subsidiaries and on certain existing assets and liabilities. However, the Company may choose not to hedge certain exposures for a variety of reasons including, but not limited to, accounting considerations and the prohibitive economic cost of hedging particular exposures. There can be no assurance the hedges will offset more than a portion of the financial impact resulting from movements in foreign currency exchange or interest rates.

To help protect gross margins from fluctuations in foreign currency exchange rates, certain of the Company's subsidiaries whose functional currency is the U.S. dollar may hedge a portion of forecasted foreign currency revenue, and subsidiaries whose functional currency is not the U.S. dollar and who sell in local currencies may hedge a portion of forecasted inventory purchases not denominated in the subsidiaries' functional currencies. The Company may enter into forward contracts, option contracts or other instruments to manage this risk and may designate these instruments as cash flow hedges. The Company typically hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months.

To help protect the net investment in a foreign operation from adverse changes in foreign currency exchange rates, the Company may enter into foreign currency forward and option contracts to offset the changes in the carrying amounts of these investments due to fluctuations in foreign currency exchange rates. In addition, the Company may use non-derivative financial instruments, such as its foreign currency-denominated debt, as economic hedges of its net investments in certain foreign subsidiaries. In both of these cases, the Company designates these instruments as net investment hedges.

The Company may also enter into non-designated foreign currency contracts to partially offset the foreign currency exchange gains and losses generated by the remeasurement of certain assets and liabilities denominated in non-functional currencies.

The Company may enter into interest rate swaps, options, or other instruments to manage interest rate risk. These instruments may offset a portion of changes in income or expense, or changes in fair value of the Company's term debt or investments. The Company designates these instruments as either cash flow or fair value hedges. The Company's hedged interest rate transactions as of September 30, 2017 are expected to be recognized within 10 years.

The Company may enter into foreign currency swaps to manage currency risk on its foreign currency-denominated term debt. These instruments may offset a portion of the foreign currency remeasurement gains or losses on the Company's term debt and related interest payments. The Company designates these instruments as cash flow hedges. The Company's hedged term debt-related foreign currency transactions as of September 30, 2017 are expected to be recognized within 25 years.

Cash Flow Hedges

The effective portions of cash flow hedges are recorded in AOCI until the hedged item is recognized in earnings. Deferred gains and losses associated with cash flow hedges of foreign currency revenue are recognized as a component of net sales in the same period as the related revenue is recognized, and deferred gains and losses related to cash flow hedges of inventory purchases are recognized as a component of cost of sales in the same period as the related costs are recognized. Deferred gains and losses associated with cash flow hedges of interest income or expense are recognized in other income/(expense), net in the same period as the related income or expense is recognized. The ineffective portions and amounts excluded from the effectiveness testing of cash flow hedges are recognized in other income/(expense), net.

Derivative instruments designated as cash flow hedges must be de-designated as hedges when it is probable the forecasted hedged transaction will not occur in the initially identified time period or within a subsequent two-month time period. Deferred gains and losses in AOCI associated with such derivative instruments are reclassified into other income/(expense), net in the period of de-designation. Any subsequent changes in fair value of such derivative instruments are reflected in other income/(expense), net unless they are re-designated as hedges of other transactions.

Net Investment Hedges

The effective portions of net investment hedges are recorded in other comprehensive income/(loss) (OCI) as a part of the cumulative translation adjustment. The ineffective portions and amounts excluded from the effectiveness testing of net investment hedges are recognized in other income/(expense), net.

Fair Value Hedges

Gains and losses related to changes in fair value hedges are recognized in earnings along with a corresponding loss or gain related to the change in value of the underlying hedged item.

Non-Designated Derivatives

Derivatives that are not designated as hedging instruments are adjusted to fair value through earnings in the financial statement line item to which the derivative relates. As a result, the Company recognized a gain of \$20 million in net sales, a loss of \$40 million in cost of sales and a gain of \$606 million in other income/(expense), net for 2017.

The Company records all derivatives in the Consolidated Balance Sheets at fair value. The Company's accounting treatment for these derivative instruments is based on its hedge designation. The following tables show the Company's derivative instruments at gross fair value as of September 30, 2017 and September 24, 2016 (in millions):

	2017		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 1,049	\$ 363	\$ 1,412
Interest rate contracts	\$ 218	\$ □	\$ 218
Derivative liabilities (2):			
Foreign exchange contracts	\$ 759	\$ 501	\$ 1,260
Interest rate contracts	\$ 303	\$ □	\$ 303

Apple Inc. | 2017 Form 10-K | 51

	2016		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 518	\$ 153	\$ 671
Interest rate contracts	\$ 728	\$ □	\$ 728
Derivative liabilities (2):			
Foreign exchange contracts	\$ 935	\$ 134	\$ 1,069
Interest rate contracts	\$ 7	\$ □	\$ 7

(1) The fair value of derivative assets is measured using Level 2 fair value inputs and is recorded as other current assets and other non-current assets in the Consolidated Balance Sheets.

(2) The fair value of derivative liabilities is measured using Level 2 fair value inputs and is recorded as accrued expenses and other non-current liabilities in the Consolidated Balance Sheets.

The following table shows the pre-tax gains and losses of the Company's derivative and non-derivative instruments designated as cash flow, net investment and fair value hedges in OCI and the Consolidated Statements of Operations for 2017, 2016 and 2015 (in millions):

	2017	2016	2015
Gains/(Losses) recognized in OCI of effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ 1,797	\$ 109	\$ 3,592
Interest rate contracts	7	(57)	(111)
Total	\$ 1,804	\$ 52	\$ 3,481
Net investment hedges:			
Foreign exchange contracts	\$ □	\$ □	\$ 167
Foreign currency debt	67	(258)	(71)
Total	\$ 67	\$ (258)	\$ 96
Gains/(Losses) reclassified from AOCI into net income of effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ 1,958	\$ 885	\$ 4,092
Interest rate contracts	(2)	(11)	(17)
Total	\$ 1,956	\$ 874	\$ 4,075
Gains/(Losses) on derivative instruments:			
Fair value hedges:			
Interest rate contracts	\$ (810)	\$ 341	\$ 337
Gains/(Losses) related to hedged items:			
Fair value hedges:			
Fixed-rate debt	\$ 810	\$ (341)	\$ (337)

The following table shows the notional amounts of the Company's outstanding derivative instruments and credit risk amounts associated with outstanding or unsettled derivative instruments as of September 30, 2017 and September 24, 2016 (in millions):

	2017		2016	
	Notional Amount	Credit Risk Amount	Notional Amount	Credit Risk Amount
Instruments designated as accounting hedges:				
Foreign exchange contracts	\$ 56,156	\$ 1,049	\$ 44,678	\$ 518
Interest rate contracts	\$ 33,000	\$ 218	\$ 24,500	\$ 728
Instruments not designated as accounting hedges:				
Foreign exchange contracts	\$ 69,774	\$ 363	\$ 54,305	\$ 153

The notional amounts for outstanding derivative instruments provide one measure of the transaction volume outstanding and do not represent the amount of the Company's exposure to credit or market loss. The credit risk amounts represent the Company's gross exposure to potential accounting loss on derivative instruments that are outstanding or unsettled if all counterparties failed to perform according to the terms of the contract, based on then-current currency or interest rates at each respective date. The Company's exposure to credit loss and market risk will vary over time as currency and interest rates change. Although the table above reflects the notional and credit risk amounts of the Company's derivative instruments, it does not reflect the gains or losses associated with the exposures and transactions that the instruments are intended to hedge. The amounts ultimately realized upon settlement of these financial instruments, together with the gains and losses on the underlying exposures, will depend on actual market conditions during the remaining life of the instruments.

The Company generally enters into master netting arrangements, which are designed to reduce credit risk by permitting net settlement of transactions with the same counterparty. To further limit credit risk, the Company generally enters into collateral security arrangements that provide for collateral to be received or posted when the net fair value of certain financial instruments fluctuates from contractually established thresholds. The Company presents its derivative assets and derivative liabilities at their gross fair values in its Consolidated Balance Sheets. The net cash collateral received by the Company related to derivative instruments under its collateral security arrangements was \$35 million and \$163 million as of September 30, 2017 and September 24, 2016, respectively, which were recorded as accrued expenses in the Consolidated Balance Sheets.

Under master netting arrangements with the respective counterparties to the Company's derivative contracts, the Company is allowed to net settle transactions with a single net amount payable by one party to the other. As of September 30, 2017 and September 24, 2016, the potential effects of these rights of set-off associated with the Company's derivative contracts, including the effects of collateral, would be a reduction to both derivative assets and derivative liabilities of \$1.4 billion and \$1.5 billion, respectively, resulting in net derivative assets of \$32 million and \$160 million, respectively.

Accounts Receivable

Trade Receivables

The Company has considerable trade receivables outstanding with its third-party cellular network carriers, wholesalers, retailers, value-added resellers, small and mid-sized businesses and education, enterprise and government customers. The Company generally does not require collateral from its customers; however, the Company will require collateral in certain instances to limit credit risk. In addition, when possible, the Company attempts to limit credit risk on trade receivables with credit insurance for certain customers or by requiring third-party financing, loans or leases to support credit exposure. These credit-financing arrangements are directly between the third-party financing company and the end customer. As such, the Company generally does not assume any recourse or credit risk sharing related to any of these arrangements.

As of September 30, 2017, the Company had two customers that individually represented 10% or more of total trade receivables, each of which accounted for 10%. As of September 24, 2016, the Company had one customer that represented 10% or more of total trade receivables, which accounted for 10%. The Company's cellular network carriers accounted for 59% and 63% of trade receivables as of September 30, 2017 and September 24, 2016, respectively.

Vendor Non-Trade Receivables

The Company has non-trade receivables from certain of its manufacturing vendors resulting from the sale of components to these vendors who manufacture sub-assemblies or assemble final products for the Company. The Company purchases these components directly from suppliers. As of September 30, 2017, the Company had three vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 42%, 19% and 10%. As of September 24, 2016, the Company had two vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 47% and 21%.

Note 3 – Consolidated Financial Statement Details

The following tables show the Company's consolidated financial statement details as of September 30, 2017 and September 24, 2016 (in millions):

Property, Plant and Equipment, Net

	2017	2016
Land and buildings	\$ 13,587	\$ 10,185
Machinery, equipment and internal-use software	54,210	44,543
Leasehold improvements	7,279	6,517
Gross property, plant and equipment	75,076	61,245
Accumulated depreciation and amortization	(41,293)	(34,235)
Total property, plant and equipment, net	\$ 33,783	\$ 27,010

Other Non-Current Liabilities

	2017	2016
Deferred tax liabilities	\$ 31,504	\$ 26,019
Other non-current liabilities	8,911	10,055
Total other non-current liabilities	\$ 40,415	\$ 36,074

Other Income/(Expense), Net

The following table shows the detail of other income/(expense), net for 2017, 2016 and 2015 (in millions):

	2017	2016	2015
Interest and dividend income	\$ 5,201	\$ 3,999	\$ 2,921
Interest expense	(2,323)	(1,456)	(733)
Other expense, net	(133)	(1,195)	(903)
Total other income/(expense), net	\$ 2,745	\$ 1,348	\$ 1,285

Note 4 – Acquired Intangible Assets

The Company's acquired intangible assets with definite useful lives primarily consist of patents and licenses. The following table summarizes the components of acquired intangible asset balances as of September 30, 2017 and September 24, 2016 (in millions):

	2017			2016		
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Definite-lived and amortizable acquired intangible assets	\$ 7,507	\$ (5,309)	\$ 2,198	\$ 8,912	\$ (5,806)	\$ 3,106
Indefinite-lived and non-amortizable acquired intangible assets	100	□	100	100	□	100
Total acquired intangible assets	\$ 7,607	\$ (5,309)	\$ 2,298	\$ 9,012	\$ (5,806)	\$ 3,206

Apple Inc. | 2017 Form 10-K | 54

Amortization expense related to acquired intangible assets was \$1.2 billion, \$1.5 billion and \$1.3 billion in 2017, 2016 and 2015, respectively. As of September 30, 2017, the remaining weighted-average amortization period for acquired intangible assets is 3.4 years. The expected annual amortization expense related to acquired intangible assets as of September 30, 2017, is as follows (in millions):

2018	\$	948
2019		505
2020		323
2021		222
2022		131
Thereafter		69
Total	\$	<u>2,198</u>

Note 5 – Income Taxes

The provision for income taxes for 2017, 2016 and 2015, consisted of the following (in millions):

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Federal:			
Current	\$ 7,842	\$ 7,652	\$ 11,730
Deferred	5,980	5,043	3,408
Total (1)	<u>13,822</u>	<u>12,695</u>	<u>15,138</u>
State:			
Current	259	990	1,265
Deferred	2	(138)	(220)
Total	<u>261</u>	<u>852</u>	<u>1,045</u>
Foreign:			
Current	1,671	2,105	4,744
Deferred	(16)	33	(1,806)
Total	<u>1,655</u>	<u>2,138</u>	<u>2,938</u>
Provision for income taxes	<u>\$ 15,738</u>	<u>\$ 15,685</u>	<u>\$ 19,121</u>

(1) Includes taxes of \$7.9 billion, \$6.7 billion and \$7.3 billion provided on foreign pre-tax earnings in 2017, 2016 and 2015, respectively.

The foreign provision for income taxes is based on foreign pre-tax earnings of \$44.7 billion, \$41.1 billion and \$47.6 billion in 2017, 2016 and 2015, respectively. The Company's consolidated financial statements provide for any related tax liability on undistributed earnings that the Company does not intend to be indefinitely reinvested outside the U.S. Substantially all of the Company's undistributed international earnings intended to be indefinitely reinvested in operations outside the U.S. were generated by subsidiaries organized in Ireland, which has a statutory tax rate of 12.5%. As of September 30, 2017, U.S. income taxes have not been provided on a cumulative total of \$128.7 billion of such earnings. The amount of unrecognized deferred tax liability related to these temporary differences is estimated to be \$42.2 billion.

As of September 30, 2017 and September 24, 2016, \$252.3 billion and \$216.0 billion, respectively, of the Company's cash, cash equivalents and marketable securities were held by foreign subsidiaries and are generally based in U.S. dollar-denominated holdings. Amounts held by foreign subsidiaries are generally subject to U.S. income taxation on repatriation to the U.S.

A reconciliation of the provision for income taxes, with the amount computed by applying the statutory federal income tax rate (35% in 2017, 2016 and 2015) to income before provision for income taxes for 2017, 2016 and 2015, is as follows (dollars in millions):

	2017	2016	2015
Computed expected tax	\$ 22,431	\$ 21,480	\$ 25,380
State taxes, net of federal effect	185	553	680
Indefinitely invested earnings of foreign subsidiaries	(6,135)	(5,582)	(6,470)
Domestic production activities deduction	(209)	(382)	(426)
Research and development credit, net	(678)	(371)	(171)
Other	144	(13)	128
Provision for income taxes	\$ 15,738	\$ 15,685	\$ 19,121
Effective tax rate	24.6%	25.6%	26.4%

The Company's income taxes payable have been reduced by the tax benefits from employee stock plan awards. For RSUs, the Company receives an income tax benefit upon the award's vesting equal to the tax effect of the underlying stock's fair market value. The Company had net excess tax benefits from equity awards of \$620 million, \$379 million and \$748 million in 2017, 2016 and 2015, respectively, which were reflected as increases to common stock.

As of September 30, 2017 and September 24, 2016, the significant components of the Company's deferred tax assets and liabilities were (in millions):

	2017	2016
Deferred tax assets:		
Accrued liabilities and other reserves	\$ 4,019	\$ 4,135
Basis of capital assets	1,230	2,107
Deferred revenue	1,521	1,717
Deferred cost sharing	667	667
Share-based compensation	703	601
Other	834	788
Total deferred tax assets, net of valuation allowance of \$0	8,974	10,015
Deferred tax liabilities:		
Unremitted earnings of foreign subsidiaries	36,355	31,436
Other	207	485
Total deferred tax liabilities	36,562	31,921
Net deferred tax liabilities	\$ (27,588)	\$ (21,906)

Deferred tax assets and liabilities reflect the effects of tax losses, credits and the future income tax effects of temporary differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases and are measured using enacted tax rates that apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Uncertain Tax Positions

Tax positions are evaluated in a two-step process. The Company first determines whether it is more likely than not that a tax position will be sustained upon examination. If a tax position meets the more-likely-than-not recognition threshold it is then measured to determine the amount of benefit to recognize in the financial statements. The tax position is measured as the largest amount of benefit that is greater than 50% likely of being realized upon ultimate settlement. The Company classifies gross interest and penalties and unrecognized tax benefits that are not expected to result in payment or receipt of cash within one year as non-current liabilities in the Consolidated Balance Sheets.

As of September 30, 2017, the total amount of gross unrecognized tax benefits was \$8.4 billion, of which \$2.5 billion, if recognized, would affect the Company's effective tax rate. As of September 24, 2016, the total amount of gross unrecognized tax benefits was \$7.7 billion, of which \$2.8 billion, if recognized, would have affected the Company's effective tax rate.

The aggregate changes in the balance of gross unrecognized tax benefits, which excludes interest and penalties, for 2017, 2016 and 2015, is as follows (in millions):

	2017	2016	2015
Beginning balances	\$ 7,724	\$ 6,900	\$ 4,033
Increases related to tax positions taken during a prior year	333	1,121	2,056
Decreases related to tax positions taken during a prior year	(952)	(257)	(345)
Increases related to tax positions taken during the current year	1,880	1,578	1,278
Decreases related to settlements with taxing authorities	(539)	(1,618)	(109)
Decreases related to expiration of statute of limitations	(39)	□	(13)
Ending balances	\$ 8,407	\$ 7,724	\$ 6,900

The Company includes interest and penalties related to unrecognized tax benefits within the provision for income taxes. As of September 30, 2017 and September 24, 2016, the total amount of gross interest and penalties accrued was \$1.2 billion and \$1.0 billion, respectively, which is classified as non-current liabilities in the Consolidated Balance Sheets. In connection with tax matters, the Company recognized interest and penalty expense in 2017, 2016 and 2015 of \$165 million, \$295 million and \$709 million, respectively.

The Company is subject to taxation and files income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions. The U.S. Internal Revenue Service (the "IRS") concluded its review of the years 2010 through 2012 during the third quarter of 2017. All years prior to 2013 are closed, and the IRS is currently examining the years 2013 through 2015. The Company is also subject to audits by state, local and foreign tax authorities. In major states and major foreign jurisdictions, the years subsequent to 2003 generally remain open and could be subject to examination by the taxing authorities.

The Company believes that an adequate provision has been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner not consistent with its expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs. Although timing of the resolution and/or closure of audits is not certain, the Company does not believe it is reasonably possible that its gross unrecognized tax benefits would materially change in the next 12 months.

On August 30, 2016, the European Commission announced its decision that Ireland granted state aid to the Company by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of the Company (the "State Aid Decision"). The State Aid Decision orders Ireland to calculate and recover additional taxes from the Company for the period June 2003 through December 2014. Irish legislative changes, effective as of January 2015, eliminated the application of the tax opinions from that date forward. The Company believes the State Aid Decision to be without merit and appealed to the General Court of the Court of Justice of the European Union. Ireland has also appealed the State Aid Decision. Although Ireland is still computing the recovery amount, the Company expects the amount to be in line with the European Commission's announced recovery amount of €13 billion, plus interest of €1 billion. Once the recovery amount is finalized by Ireland, the Company anticipates funding it, including interest, out of foreign cash. These amounts are expected to be placed into escrow in 2018, where they will remain pending conclusion of all appeals. The Company believes that any incremental Irish corporate income taxes potentially due related to the State Aid Decision would be creditable against U.S. taxes.

Note 6 – Debt**Commercial Paper**

The Company issues unsecured short-term promissory notes (□Commercial Paper□) pursuant to a commercial paper program. The Company uses net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of September 30, 2017 and September 24, 2016, the Company had \$12.0 billion and \$8.1 billion of Commercial Paper outstanding, respectively, with maturities generally less than nine months. The weighted-average interest rate of the Company's Commercial Paper was 1.20% as of September 30, 2017 and 0.45% as of September 24, 2016.

The following table provides a summary of cash flows associated with the issuance and maturities of Commercial Paper for 2017 and 2016 (in millions):

	2017	2016
Maturities less than 90 days:		
Proceeds from/(Repayments of) commercial paper, net	\$ (1,782)	\$ (869)
Maturities greater than 90 days:		
Proceeds from commercial paper	17,932	3,632
Repayments of commercial paper	(12,298)	(3,160)
Proceeds from/(Repayments of) commercial paper, net	5,634	472
Total change in commercial paper, net	\$ 3,852	\$ (397)

Term Debt

As of September 30, 2017, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$104.0 billion (collectively the □Notes□). The Notes are senior unsecured obligations, and interest is payable in arrears, quarterly for the U.S. dollar-denominated and Australian dollar-denominated floating-rate notes, semi-annually for the U.S. dollar-denominated, Australian dollar-denominated, British pound-denominated, Japanese yen-denominated and Canadian dollar-denominated fixed-rate notes and annually for the euro-denominated and Swiss franc-denominated fixed-rate notes. The following table provides a summary of the Company's term debt as of September 30, 2017 and September 24, 2016:

	Maturities	2017			2016		
		Amount (in millions)	Effective Interest Rate		Amount (in millions)	Effective Interest Rate	
2013 debt issuance of \$17.0 billion:							
Floating-rate notes	2018	\$ 2,000	1.10%		\$ 2,000	1.10%	
Fixed-rate 1.000% □ 3.850% notes	2018 □ 2043	12,500	1.08% □ 3.91%		12,500	1.08% □ 3.91%	
2014 debt issuance of \$12.0 billion:							
Floating-rate notes	2019	1,000	1.61%		2,000	0.86% □ 1.09%	
Fixed-rate 2.100% □ 4.450% notes	2019 □ 2044	8,500	1.61% □ 4.48%		10,000	0.85% □ 4.48%	
2015 debt issuances of \$27.3 billion:							
Floating-rate notes	2019 □ 2020	1,549	1.56% □ 1.87%		1,781	0.87% □ 1.87%	
Fixed-rate 0.350% □ 4.375% notes	2019 □ 2045	24,522	0.28% □ 4.51%		25,144	0.28% □ 4.51%	
2016 debt issuances of \$24.9 billion:							
Floating-rate notes	2019 □ 2021	1,350	1.45% □ 2.44%		1,350	0.91% □ 1.95%	
Fixed-rate 1.100% □ 4.650% notes	2018 □ 2046	23,645	1.13% □ 4.78%		23,609	1.13% □ 4.58%	

Apple Inc. | 2017 Form 10-K | 58

(Continued)	Maturities	2017		2016	
		Amount (in millions)	Effective Interest Rate	Amount (in millions)	Effective Interest Rate
Second quarter 2017 debt issuance of \$10.0 billion:					
Floating-rate notes	2019	500	1.39%	□	□ %
Floating-rate notes	2020	500	1.51%	□	□ %
Floating-rate notes	2022	1,000	1.81%	□	□ %
Fixed-rate 1.550% notes	2019	500	1.59%	□	□ %
Fixed-rate 1.900% notes	2020	1,000	1.51%	□	□ %
Fixed-rate 2.500% notes	2022	1,500	1.80%	□	□ %
Fixed-rate 3.000% notes	2024	1,750	2.11%	□	□ %
Fixed-rate 3.350% notes	2027	2,250	2.25%	□	□ %
Fixed-rate 4.250% notes	2047	1,000	4.26%	□	□ %
Second quarter 2017 debt issuance of \$1.0 billion:					
Fixed-rate 4.300% notes	2047	1,000	4.30%	□	□ %
Third quarter 2017 debt issuance of \$7.0 billion:					
Floating-rate notes	2020	500	1.38%	□	□ %
Floating-rate notes	2022	750	1.66%	□	□ %
Fixed-rate 1.800% notes	2020	1,000	1.84%	□	□ %
Fixed-rate 2.300% notes	2022	1,000	2.34%	□	□ %
Fixed-rate 2.850% notes	2024	1,750	2.25%	□	□ %
Fixed-rate 3.200% notes	2027	2,000	2.43%	□	□ %
Third quarter 2017 euro-denominated debt issuance of □ 2.5 billion:					
Fixed-rate 0.875% notes	2025	1,469	3.03%	□	□ %
Fixed-rate 1.375% notes	2029	1,469	3.37%	□	□ %
Third quarter 2017 debt issuance of \$1.0 billion:					
Fixed-rate 3.000% notes	2027	1,000	3.03%	□	□ %
Fourth quarter 2017 Canadian dollar-denominated debt issuance of C\$2.5 billion:					
Fixed-rate 2.513% notes	2024	2,017	2.66%	□	□ %
Fourth quarter 2017 debt issuance of \$5.0 billion:					
Fixed-rate 1.500% notes	2019	1,000	1.54%	□	□ %
Fixed-rate 2.100% notes	2022	1,000	1.92%	□	□ %
Fixed-rate 2.900% notes	2027	2,000	2.55%	□	□ %
Fixed-rate 3.750% notes	2047	1,000	3.78%	□	□ %
Total term debt		104,021		78,384	
Unamortized premium/(discount) and issuance costs, net		(225)		(174)	
Hedge accounting fair value adjustments		(93)		717	
Less: Current portion of long-term debt		(6,496)		(3,500)	
Total long-term debt		<u>\$ 97,207</u>		<u>\$ 75,427</u>	

To manage interest rate risk on certain of its U.S. dollar-denominated fixed- or floating-rate notes, the Company has entered into interest rate swaps to effectively convert the fixed interest rates to floating interest rates or the floating interest rates to fixed interest rates on a portion of these notes. Additionally, to manage foreign currency risk on certain of its foreign currency-denominated notes, the Company has entered into foreign currency swaps to effectively convert these notes to U.S. dollar-denominated notes.

A portion of the Company's Japanese yen-denominated notes is designated as a hedge of the foreign currency exposure of the Company's net investment in a foreign operation. As of September 30, 2017 and September 24, 2016, the carrying value of the debt designated as a net investment hedge was \$1.6 billion and \$1.9 billion, respectively.

For further discussion regarding the Company's use of derivative instruments see the Derivative Financial Instruments section of Note 2, "Financial Instruments."

The effective interest rates for the Notes include the interest on the Notes, amortization of the discount or premium and, if applicable, adjustments related to hedging. The Company recognized \$2.2 billion, \$1.4 billion and \$722 million of interest expense on its term debt for 2017, 2016 and 2015, respectively.

The future principal payments for the Company's Notes as of September 30, 2017 are as follows (in millions):

2018	\$	6,500
2019		8,863
2020		9,220
2021		7,750
2022		10,297
Thereafter		61,391
Total term debt	\$	<u>104,021</u>

As of September 30, 2017 and September 24, 2016, the fair value of the Company's Notes, based on Level 2 inputs, was \$106.1 billion and \$81.7 billion, respectively.

Note 7 – Shareholders' Equity

Dividends

The Company declared and paid cash dividends per share during the periods presented as follows:

	<u>Dividends Per Share</u>	<u>Amount (in millions)</u>
2017:		
Fourth quarter	\$ 0.63	\$ 3,252
Third quarter	0.63	3,281
Second quarter	0.57	2,988
First quarter	0.57	3,042
Total cash dividends declared and paid	<u>\$ 2.40</u>	<u>\$ 12,563</u>
2016:		
Fourth quarter	\$ 0.57	\$ 3,071
Third quarter	0.57	3,117
Second quarter	0.52	2,879
First quarter	0.52	2,898
Total cash dividends declared and paid	<u>\$ 2.18</u>	<u>\$ 11,965</u>

Future dividends are subject to declaration by the Board of Directors.

Share Repurchase Program

In May 2017, the Company's Board of Directors increased the share repurchase authorization from \$175 billion to \$210 billion of the Company's common stock, of which \$166 billion had been utilized as of September 30, 2017. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under the program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

The Company has entered, and in the future may enter, into accelerated share repurchase arrangements ("ASRs") with financial institutions. In exchange for up-front payments, the financial institutions deliver shares of the Company's common stock during the purchase periods of each ASR. The total number of shares ultimately delivered, and therefore the average repurchase price paid per share, is determined at the end of the applicable purchase period of each ASR based on the volume-weighted average price of the Company's common stock during that period. The shares received are retired in the periods they are delivered, and the up-front payments are accounted for as a reduction to shareholders' equity in the Company's Consolidated Balance Sheets in the periods the payments are made. The Company reflects the ASRs as a repurchase of common stock in the period delivered for purposes of calculating earnings per share and as forward contracts indexed to its own common stock. The ASRs met all of the applicable criteria for equity classification, and therefore were not accounted for as derivative instruments.

The following table shows the Company's ASR activity and related information during the years ended September 30, 2017 and September 24, 2016:

	Purchase Period End Date	Number of Shares (in thousands)	Average Repurchase Price Per Share	ASR Amount (in millions)
August 2017 ASR	November 2017	15,069 (1)	(1)	\$ 3,000
May 2017 ASR	August 2017	20,108 (2)	\$ 149.20	\$ 3,000
February 2017 ASR	May 2017	20,949	\$ 143.20	\$ 3,000
November 2016 ASR	February 2017	51,157	\$ 117.29	\$ 6,000
August 2016 ASR	November 2016	26,850	\$ 111.73	\$ 3,000
May 2016 ASR	August 2016	60,452	\$ 99.25	\$ 6,000
November 2015 ASR	April 2016	29,122	\$ 103.02	\$ 3,000

(1) Number of Shares represents those shares delivered at the beginning of the purchase period and does not represent the final number of shares to be delivered under the ASR. The total number of shares ultimately delivered, and therefore the average repurchase price paid per share, will be determined at the end of the purchase period based on the volume-weighted average price of the Company's common stock during the period. The August 2017 ASR purchase period will end in November 2017.

(2) Includes 15.6 million shares delivered and retired at the beginning of the purchase period, which began in the third quarter of 2017, and 4.5 million shares delivered and retired at the end of the purchase period, which concluded in the fourth quarter of 2017.

Additionally, the Company repurchased shares of its common stock in the open market, which were retired upon repurchase, during the periods presented as follows:

	Number of Shares (in thousands)	Average Repurchase Price Per Share	Amount (in millions)
2017:			
Fourth quarter	29,073	\$ 154.78	\$ 4,500
Third quarter	30,356	\$ 148.24	4,500
Second quarter	31,070	\$ 128.74	4,001
First quarter	44,333	\$ 112.78	5,000
Total open market common stock repurchases	<u>134,832</u>		<u>\$ 18,001</u>
2016:			
Fourth quarter	28,579	\$ 104.97	\$ 3,000
Third quarter	41,238	\$ 97.00	4,000
Second quarter	71,766	\$ 97.54	7,000
First quarter	25,984	\$ 115.45	3,000
Total open market common stock repurchases	<u>167,567</u>		<u>\$ 17,000</u>

Note 8 – Comprehensive Income

Comprehensive income consists of two components, net income and OCI. OCI refers to revenue, expenses, and gains and losses that under GAAP are recorded as an element of shareholders' equity but are excluded from net income. The Company's OCI consists of foreign currency translation adjustments from those subsidiaries not using the U.S. dollar as their functional currency, net deferred gains and losses on certain derivative instruments accounted for as cash flow hedges and unrealized gains and losses on marketable securities classified as available-for-sale.

The following table shows the pre-tax amounts reclassified from AOCI into the Consolidated Statements of Operations, and the associated financial statement line item, for 2017 and 2016 (in millions):

Comprehensive Income Components	Financial Statement Line Item	2017	2016
Unrealized (gains)/losses on derivative instruments:			
Foreign exchange contracts	Revenue	\$ (662)	\$ (865)
	Cost of sales	(654)	(130)
	Other income/(expense), net	(638)	111
Interest rate contracts	Other income/(expense), net	2	12
		(1,952)	(872)
Unrealized (gains)/losses on marketable securities	Other income/(expense), net	(99)	87
Total amounts reclassified from AOCI		\$ (2,051)	\$ (785)

The following table shows the changes in AOCI by component for 2017 and 2016 (in millions):

	Cumulative Foreign Currency Translation	Unrealized Gains/Losses on Derivative Instruments	Unrealized Gains/Losses on Marketable Securities	Total
Balances as of September 26, 2015	\$ (653)	\$ 772	\$ (464)	\$ (345)
Other comprehensive income/(loss) before reclassifications	67	14	2,445	2,526
Amounts reclassified from AOCI	□	(872)	87	(785)
Tax effect	8	124	(894)	(762)
Other comprehensive income/(loss)	75	(734)	1,638	979
Balances as of September 24, 2016	(578)	38	1,174	634
Other comprehensive income/(loss) before reclassifications	301	1,793	(1,207)	887
Amounts reclassified from AOCI	□	(1,952)	(99)	(2,051)
Tax effect	(77)	(3)	460	380
Other comprehensive income/(loss)	224	(162)	(846)	(784)
Balances as of September 30, 2017	\$ (354)	\$ (124)	\$ 328	\$ (150)

Note 9 – Benefit Plans

2014 Employee Stock Plan

In the second quarter of 2014, shareholders approved the 2014 Employee Stock Plan (the "2014 Plan") and terminated the Company's authority to grant new awards under the 2003 Employee Stock Plan (the "2003 Plan"). The 2014 Plan provides for broad-based equity grants to employees, including executive officers, and permits the granting of RSUs, stock grants, performance-based awards, stock options and stock appreciation rights, as well as cash bonus awards. RSUs granted under the 2014 Plan generally vest over four years, based on continued employment, and are settled upon vesting in shares of the Company's common stock on a one-for-one basis. Each share issued with respect to RSUs granted under the 2014 Plan reduces the number of shares available for grant under the plan by two shares. RSUs canceled and shares withheld to satisfy tax withholding obligations increase the number of shares available for grant under the 2014 Plan utilizing a factor of two times the number of RSUs canceled or shares withheld. Currently, all RSUs granted under the 2014 Plan have dividend equivalent rights ("DERs"), which entitle holders of RSUs to the same dividend value per share as holders of common stock. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. Upon approval of the 2014 Plan, the Company reserved 385 million shares plus the number of shares remaining that were reserved but not issued under the 2003 Plan. Shares subject to outstanding awards under the 2003 Plan that expire, are canceled or otherwise terminate, or are withheld to satisfy tax withholding obligations with respect to RSUs, will also be available for awards under the 2014 Plan. As of September 30, 2017, approximately 327.9 million shares were reserved for future issuance under the 2014 Plan.

2003 Employee Stock Plan

The 2003 Plan is a shareholder approved plan that provided for broad-based equity grants to employees, including executive officers. The 2003 Plan permitted the granting of incentive stock options, nonstatutory stock options, RSUs, stock appreciation rights, stock purchase rights and performance-based awards. Options granted under the 2003 Plan generally expire seven to ten years after the grant date and generally become exercisable over a period of four years, based on continued employment, with either annual, semi-annual or quarterly vesting. RSUs granted under the 2003 Plan generally vest over two to four years, based on continued employment and are settled upon vesting in shares of the Company's common stock on a one-for-one basis. All RSUs, other than RSUs held by the Chief Executive Officer, granted under the 2003 Plan have DERs. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. In the second quarter of 2014, the Company terminated the authority to grant new awards under the 2003 Plan.

1997 Director Stock Plan

The 1997 Director Stock Plan (the "Director Plan") is a shareholder approved plan that (i) permits the Company to grant awards of RSUs or stock options to the Company's non-employee directors, (ii) provides for automatic initial grants of RSUs upon a non-employee director joining the Board of Directors and automatic annual grants of RSUs at each annual meeting of shareholders, and (iii) permits the Board of Directors to prospectively change the relative mixture of stock options and RSUs for the initial and annual award grants and the methodology for determining the number of shares of the Company's common stock subject to these grants without shareholder approval. Each share issued with respect to RSUs granted under the Director Plan reduces the number of shares available for grant under the plan by two shares. The Director Plan expires November 9, 2019. All RSUs granted under the Director Plan are entitled to DERs. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. As of September 30, 2017, approximately 1.1 million shares were reserved for future issuance under the Director Plan.

Rule 10b5-1 Trading Plans

During the three months ended September 30, 2017, Section 16 officers Angela Ahrendts, Timothy D. Cook, Luca Maestri, Daniel Riccio and Philip Schiller had equity trading plans in place in accordance with Rule 10b5-1(c)(1) under the Exchange Act. An equity trading plan is a written document that pre-establishes the amounts, prices and dates (or formula for determining the amounts, prices and dates) of future purchases or sales of the Company's stock, including shares acquired pursuant to the Company's employee and director equity plans.

Employee Stock Purchase Plan

The Employee Stock Purchase Plan (the "Purchase Plan") is a shareholder approved plan under which substantially all employees may purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of six-month offering periods. An employee's payroll deductions under the Purchase Plan are limited to 10% of the employee's compensation and employees may not purchase more than \$25,000 of stock during any calendar year. As of September 30, 2017, approximately 41.5 million shares were reserved for future issuance under the Purchase Plan.

401(k) Plan

The Company's 401(k) Plan is a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, participating U.S. employees may defer a portion of their pre-tax earnings, up to the IRS annual contribution limit (\$18,000 for calendar year 2017). The Company matches 50% to 100% of each employee's contributions, depending on length of service, up to a maximum 6% of the employee's eligible earnings.

Restricted Stock Units

A summary of the Company's RSU activity and related information for 2017, 2016 and 2015, is as follows:

	Number of RSUs (in thousands)	Weighted-Average Grant Date Fair Value Per Share	Aggregate Fair Value (in millions)
Balance as of September 27, 2014	103,822	\$ 70.98	
RSUs granted	45,587	\$ 105.51	
RSUs vested	(41,684)	\$ 71.32	
RSUs canceled	(6,258)	\$ 80.34	
Balance as of September 26, 2015	101,467	\$ 85.77	
RSUs granted	49,468	\$ 109.28	
RSUs vested	(46,313)	\$ 84.44	
RSUs canceled	(5,533)	\$ 96.48	
Balance as of September 24, 2016	99,089	\$ 97.54	
RSUs granted	50,112	\$ 121.65	
RSUs vested	(45,735)	\$ 95.48	
RSUs canceled	(5,895)	\$ 106.87	
Balance as of September 30, 2017	97,571	\$ 110.33	\$ 15,038

The fair value as of the respective vesting dates of RSUs was \$6.1 billion, \$5.1 billion and \$4.8 billion for 2017, 2016 and 2015, respectively. The majority of RSUs that vested in 2017, 2016 and 2015 were net share settled such that the Company withheld shares with value equivalent to the employees' minimum statutory obligation for the applicable income and other employment taxes, and remitted the cash to the appropriate taxing authorities. The total shares withheld were approximately 15.4 million, 15.9 million and 14.1 million for 2017, 2016 and 2015, respectively, and were based on the value of the RSUs on their respective vesting dates as determined by the Company's closing stock price. Total payments for the employees' tax obligations to taxing authorities were \$2.0 billion, \$1.7 billion and \$1.6 billion in 2017, 2016 and 2015, respectively, and are reflected as a financing activity within the Consolidated Statements of Cash Flows. These net share settlements had the effect of share repurchases by the Company as they reduced the number of shares that would have otherwise been issued as a result of the vesting and did not represent an expense to the Company.

Share-based Compensation

The following table shows a summary of the share-based compensation expense included in the Consolidated Statements of Operations for 2017, 2016 and 2015 (in millions):

	2017	2016	2015
Cost of sales	\$ 877	\$ 769	\$ 575
Research and development	2,299	1,889	1,536
Selling, general and administrative	1,664	1,552	1,475
Total share-based compensation expense	\$ 4,840	\$ 4,210	\$ 3,586

The income tax benefit related to share-based compensation expense was \$1.6 billion, \$1.4 billion and \$1.2 billion for 2017, 2016 and 2015, respectively. As of September 30, 2017, the total unrecognized compensation cost related to outstanding RSUs, restricted stock and stock options was \$8.1 billion, which the Company expects to recognize over a weighted-average period of 2.5 years.

Note 10 – Commitments and Contingencies

Accrued Warranty and Indemnification

The following table shows changes in the Company's accrued warranties and related costs for 2017, 2016 and 2015 (in millions):

	2017	2016	2015
Beginning accrued warranty and related costs	\$ 3,702	\$ 4,780	\$ 4,159
Cost of warranty claims	(4,322)	(4,663)	(4,401)
Accruals for product warranty	4,454	3,585	5,022
Ending accrued warranty and related costs	\$ 3,834	\$ 3,702	\$ 4,780

Agreements entered into by the Company sometimes include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to indemnification of third parties.

The Company offers an iPhone Upgrade Program, which is available to customers who purchase a qualifying iPhone in the U.S., the U.K. and mainland China. The iPhone Upgrade Program provides customers the right to trade in that iPhone for a specified amount when purchasing a new iPhone, provided certain conditions are met. The Company accounts for the trade-in right as a guarantee liability and recognizes arrangement revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within revenue.

The Company has entered into indemnification agreements with its directors and executive officers. Under these agreements, the Company has agreed to indemnify such individuals to the fullest extent permitted by law against liabilities that arise by reason of their status as directors or officers of the Company and to advance expenses incurred by such individuals in connection with related legal proceedings. It is not possible to determine the maximum potential amount of payments the Company could be required to make under these agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each claim. While the Company maintains directors and officers liability insurance coverage, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

Concentrations in the Available Sources of Supply of Materials and Product

Although most components essential to the Company's business are generally available from multiple sources, a few components are currently obtained from single or limited sources. In addition, the Company competes for various components with other participants in the markets for mobile communication and media devices and personal computers. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortage and significant pricing fluctuations that could materially adversely affect the Company's financial condition and operating results.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source. Continued availability of these components at acceptable prices, or at all, may be affected if those suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

Substantially all of the Company's hardware products are manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. Certain of these outsourcing partners are the sole-sourced suppliers of components and manufacturers for many of the Company's products. Although the Company works closely with its outsourcing partners on manufacturing schedules, the Company's operating results could be adversely affected if its outsourcing partners were unable to meet their production commitments. The Company's manufacturing purchase obligations typically cover its requirements for periods up to 150 days.

Other Off-Balance Sheet Commitments

Operating Leases

The Company leases various equipment and facilities, including retail space, under noncancelable operating lease arrangements. The Company does not currently utilize any other off-balance sheet financing arrangements. As of September 30, 2017, the Company's total future minimum lease payments under noncancelable operating leases were \$9.5 billion. The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Rent expense under all operating leases, including both cancelable and noncancelable leases, was \$1.1 billion, \$939 million and \$794 million in 2017, 2016 and 2015, respectively. Future minimum lease payments under noncancelable operating leases having initial or remaining terms in excess of one year as of September 30, 2017, are as follows (in millions):

2018	\$	1,223
2019		1,187
2020		1,108
2021		1,033
2022		871
Thereafter		4,123
Total	\$	<u>9,545</u>

Unconditional Purchase Obligations

The Company has entered into certain off-balance sheet arrangements which require the future purchase of goods or services ("Unconditional Purchase Obligations"). The Company's Unconditional Purchase Obligations primarily consist of payments for supplier arrangements, internet and telecommunication services and intellectual property licenses. Future payments under noncancelable Unconditional Purchase Obligations having a remaining term in excess of one year as of September 30, 2017, are as follows (in millions):

2018	\$	1,798
2019		2,675
2020		1,626
2021		1,296
2022		1,268
Thereafter		14
Total	\$	<u>8,677</u>

Contingencies

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and that have not been fully adjudicated, as further discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors" and in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings." In opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims. However, the outcome of litigation is inherently uncertain. Therefore, although management considers the likelihood of such an outcome to be remote, if one or more of these legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's consolidated financial statements for that reporting period could be materially adversely affected.

Apple Inc. v. Samsung Electronics Co., Ltd., et al.

On August 24, 2012, a jury returned a verdict awarding the Company \$1.05 billion in its lawsuit against Samsung Electronics Co., Ltd. and affiliated parties in the United States District Court, Northern District of California, San Jose Division. On March 6, 2014, the District Court entered final judgment in favor of the Company in the amount of approximately \$930 million. On May 18, 2015, the U.S. Court of Appeals for the Federal Circuit affirmed in part, and reversed in part, the decision of the District Court. As a result, the Court of Appeals ordered entry of final judgment on damages in the amount of approximately \$548 million, with the District Court to determine supplemental damages and interest, as well as damages owed for products subject to the reversal in part. Samsung paid \$548 million to the Company in December 2015, which was included in net sales in the Consolidated Statement of Operations. On December 6, 2016, the U.S. Supreme Court remanded the case to the U.S. Court of Appeals for the Federal Circuit for further proceedings related to the \$548 million in damages. On February 7, 2017, the U.S. Court of Appeals for the Federal Circuit remanded the case to the District Court to determine what additional proceedings, if any, are needed. On October 22, 2017, on remand from the U.S. Supreme Court, the District Court ordered a new trial on damages.

Note 11 – Segment Information and Geographic Data

The Company reports segment information based on the "management" approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of the Company's reportable segments.

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. The accounting policies of the various segments are the same as those described in Note 1, "Summary of Significant Accounting Policies."

The Company evaluates the performance of its reportable segments based on net sales and operating income. Net sales for geographic segments are generally based on the location of customers and sales through the Company's retail stores located in those geographic locations. Operating income for each segment includes net sales to third parties, related cost of sales and operating expenses directly attributable to the segment. Advertising expenses are generally included in the geographic segment in which the expenditures are incurred. Operating income for each segment excludes other income and expense and certain expenses managed outside the reportable segments. Costs excluded from segment operating income include various corporate expenses such as R&D, corporate marketing expenses, certain share-based compensation expenses, income taxes, various nonrecurring charges and other separately managed general and administrative costs. The Company does not include intercompany transfers between segments for management reporting purposes.

The following table shows information by reportable segment for 2017, 2016 and 2015 (in millions):

	2017	2016	2015
Americas:			
Net sales	\$ 96,600	\$ 86,613	\$ 93,864
Operating income	\$ 30,684	\$ 28,172	\$ 31,186
Europe:			
Net sales	\$ 54,938	\$ 49,952	\$ 50,337
Operating income	\$ 16,514	\$ 15,348	\$ 16,527
Greater China:			
Net sales	\$ 44,764	\$ 48,492	\$ 58,715
Operating income	\$ 17,032	\$ 18,835	\$ 23,002
Japan:			
Net sales	\$ 17,733	\$ 16,928	\$ 15,706
Operating income	\$ 8,097	\$ 7,165	\$ 7,617
Rest of Asia Pacific:			
Net sales	\$ 15,199	\$ 13,654	\$ 15,093
Operating income	\$ 5,304	\$ 4,781	\$ 5,518

A reconciliation of the Company's segment operating income to the Consolidated Statements of Operations for 2017, 2016 and 2015 is as follows (in millions):

	2017	2016	2015
Segment operating income	\$ 77,631	\$ 74,301	\$ 83,850
Research and development expense	(11,581)	(10,045)	(8,067)
Other corporate expenses, net	(4,706)	(4,232)	(4,553)
Total operating income	\$ 61,344	\$ 60,024	\$ 71,230

The U.S. and China were the only countries that accounted for more than 10% of the Company's net sales in 2017, 2016 and 2015. There was no single customer that accounted for more than 10% of net sales in 2017, 2016 and 2015. Net sales for 2017, 2016 and 2015 and long-lived assets as of September 30, 2017 and September 24, 2016 were as follows (in millions):

	2017	2016	2015
Net sales:			
U.S.	\$ 84,339	\$ 75,667	\$ 81,732
China (1)	44,764	48,492	58,715
Other countries	100,131	91,480	93,268
Total net sales	<u>\$ 229,234</u>	<u>\$ 215,639</u>	<u>\$ 233,715</u>

	2017	2016
Long-lived assets:		
U.S.	\$ 20,637	\$ 16,364
China (1)	10,211	7,875
Other countries	2,935	2,771
Total long-lived assets	<u>\$ 33,783</u>	<u>\$ 27,010</u>

(1) China includes Hong Kong and Taiwan. Long-lived assets located in China consist primarily of product tooling and manufacturing process equipment and assets related to retail stores and related infrastructure.

Net sales by product for 2017, 2016 and 2015 were as follows (in millions):

	2017	2016	2015
iPhone (1)	\$ 141,319	\$ 136,700	\$ 155,041
iPad (1)	19,222	20,628	23,227
Mac (1)	25,850	22,831	25,471
Services (2)	29,980	24,348	19,909
Other Products (1)(3)	12,863	11,132	10,067
Total net sales	<u>\$ 229,234</u>	<u>\$ 215,639</u>	<u>\$ 233,715</u>

(1) Includes deferrals and amortization of related software upgrade rights and non-software services.

(2) Includes revenue from Digital Content and Services, AppleCare, Apple Pay, licensing and other services. Services net sales in the fourth quarter of 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

(3) Includes sales of Apple TV, Apple Watch, Beats products, iPod touch and Apple-branded and third-party accessories.

Note 12 – Selected Quarterly Financial Information (Unaudited)

The following tables show a summary of the Company's quarterly financial information for each of the four quarters of 2017 and 2016 (in millions, except per share amounts):

	Fourth Quarter		Third Quarter		Second Quarter		First Quarter	
2017:								
Net sales	\$ 52,579	\$ 45,408	\$ 52,896	\$ 78,351				
Gross margin	\$ 19,931	\$ 17,488	\$ 20,591	\$ 30,176				
Net income	\$ 10,714	\$ 8,717	\$ 11,029	\$ 17,891				

Earnings per share (1):								
Basic	\$ 2.08	\$ 1.68	\$ 2.11	\$ 3.38				
Diluted	\$ 2.07	\$ 1.67	\$ 2.10	\$ 3.36				

	<u>Fourth Quarter</u>	<u>Third Quarter</u>	<u>Second Quarter</u>	<u>First Quarter</u>
2016:				
Net sales	\$ 46,852	\$ 42,358	\$ 50,557	\$ 75,872
Gross margin	\$ 17,813	\$ 16,106	\$ 19,921	\$ 30,423
Net income	\$ 9,014	\$ 7,796	\$ 10,516	\$ 18,361
Earnings per share (1):				
Basic	\$ 1.68	\$ 1.43	\$ 1.91	\$ 3.30
Diluted	\$ 1.67	\$ 1.42	\$ 1.90	\$ 3.28

(1) Basic and diluted earnings per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted earnings per share.

Apple Inc. | 2017 Form 10-K | 69

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Apple Inc.

We have audited the accompanying consolidated balance sheets of Apple Inc. as of September 30, 2017 and September 24, 2016, and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 30, 2017. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Apple Inc. at September 30, 2017 and September 24, 2016, and the consolidated results of its operations and its cash flows for each of the three years in the period ended September 30, 2017, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Apple Inc.'s internal control over financial reporting as of September 30, 2017, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 3, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, California
November 3, 2017

Apple Inc. | 2017 Form 10-K | 70

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm

The Board of Directors and Shareholders of Apple Inc.

We have audited Apple Inc.'s internal control over financial reporting as of September 30, 2017, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Apple Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Apple Inc. maintained, in all material respects, effective internal control over financial reporting as of September 30, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the 2017 consolidated financial statements of Apple Inc. and our report dated November 3, 2017 expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP

San Jose, California
November 3, 2017

Apple Inc. | 2017 Form 10-K | 71

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures**Evaluation of Disclosure Controls and Procedures**

Based on an evaluation under the supervision and with the participation of the Company's management, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act were effective as of September 30, 2017 to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Inherent Limitations Over Internal Controls

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles ("GAAP"). The Company's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that the Company's receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's Annual Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of the Company's internal control over financial reporting based on the criteria set forth in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the Company's assessment, management has concluded that its internal control over financial reporting was effective as of September 30, 2017 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. The Company's independent registered public accounting firm, Ernst & Young LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the fourth quarter of 2017, which were identified in connection with management's evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

Not applicable.

PART III**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item is set forth under the headings "Corporate Governance," "Directors," "Executive Officers" and "Other Information" Security Ownership of Certain Beneficial Owners and Management" in the Company's 2018 Proxy Statement to be filed with the SEC within 120 days after September 30, 2017 in connection with the solicitation of proxies for the Company's 2018 annual meeting of shareholders and is incorporated herein by reference.

The Company has a code of ethics, "Business Conduct: The way we do business worldwide," that applies to all employees, including the Company's principal executive officer, principal financial officer, and principal accounting officer, as well as to the members of the Board of Directors of the Company. The code is available at investor.apple.com/corporate-governance.cfm. The Company intends to disclose any changes in, or waivers from, this code by posting such information on the same website or by filing a Form 8-K, in each case to the extent such disclosure is required by rules of the SEC or Nasdaq.

Item 11. Executive Compensation

The information required by this Item is set forth under the heading "Executive Compensation," under the subheadings "Board Oversight of Risk Management" ; "Compensation Committee Interlocks and Insider Participation" under the heading "Corporate Governance" and under the subheadings "Compensation of Directors" "Director Compensation" 2017" under the heading "Directors" in the Company's 2018 Proxy Statement to be filed with the SEC within 120 days after September 30, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is set forth under the headings "Other Information" Security Ownership of Certain Beneficial Owners and Management" and "Other Information" Equity Compensation Plan Information" in the Company's 2018 Proxy Statement to be filed with the SEC within 120 days after September 30, 2017 and incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is set forth under the subheadings "Board Committees," "Review, Approval, or Ratification of Transactions with Related Persons" ; "Transactions with Related Persons" under the heading "Corporate Governance" in the Company's 2018 Proxy Statement to be filed with the SEC within 120 days September 30, 2017 and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item is set forth under the subheadings "Fees Paid to Auditors" and "Policy on Audit Committee Pre-Approval of Audit and Non-Audit Services Performed by the Independent Registered Public Accounting Firm" under the proposal "Ratification of Appointment of Independent Registered Public Accounting Firm" in the Company's 2018 Proxy Statement to be filed with the SEC within 120 days after September 30, 2017 and is incorporated herein by reference.

Apple Inc. | 2017 Form 10-K | 73

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report

(1) All financial statements

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	39
Consolidated Statements of Comprehensive Income for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	40
Consolidated Balance Sheets as of September 30, 2017 and September 24, 2016	41
Consolidated Statements of Shareholders' Equity for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	42
Consolidated Statements of Cash Flows for the years ended September 30, 2017, September 24, 2016 and September 26, 2015	43
Notes to Consolidated Financial Statements	44
Selected Quarterly Financial Information (Unaudited)	68
Reports of Ernst & Young LLP, Independent Registered Public Accounting Firm	70

(2) Financial Statement Schedules

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto included in this Form 10-K.

(3) Exhibits required by Item 601 of Regulation S-K (1)

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
3.1	Restated Articles of Incorporation of the Registrant effective as of June 6, 2014.	8-K	3.1	6/6/14
3.2	Amended and Restated Bylaws of the Registrant effective as of December 13, 2016.	8-K	3.2	12/15/16
4.1	Form of Common Stock Certificate of the Registrant.	10-Q	4.1	12/30/06
4.2	Indenture, dated as of April 29, 2013, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as Trustee.	S-3	4.1	4/29/13
4.3	Officer's Certificate of the Registrant, dated as of May 3, 2013, including forms of global notes representing the Floating Rate Notes due 2016, Floating Rate Notes due 2018, 0.45% Notes due 2016, 1.00% Notes due 2018, 2.40% Notes due 2023 and 3.85% Notes due 2043.	8-K	4.1	5/3/13
4.4	Officer's Certificate of the Registrant, dated as of May 6, 2014, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2019, 1.05% Notes due 2017, 2.10% Notes due 2019, 2.85% Notes due 2021, 3.45% Notes due 2024 and 4.45% Notes due 2044.	8-K	4.1	5/6/14
4.5	Officer's Certificate of the Registrant, dated as of November 10, 2014, including forms of global notes representing the 1.000% Notes due 2022 and 1.625% Notes due 2026.	8-K	4.1	11/10/14
4.6	Officer's Certificate of the Registrant, dated as of February 9, 2015, including forms of global notes representing the Floating Rate Notes due 2020, 1.55% Notes due 2020, 2.15% Notes due 2022, 2.50% Notes due 2025 and 3.45% Notes due 2045.	8-K	4.1	2/9/15
4.7	Officer's Certificate of the Registrant, dated as of May 13, 2015, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2020, 0.900% Notes due 2017, 2.000% Notes due 2020, 2.700% Notes due 2022, 3.200% Notes due 2025, and 4.375% Notes due 2045.	8-K	4.1	5/13/15
4.8	Officer's Certificate of the Registrant, dated as of June 10, 2015, including forms of global notes representing the 0.350% Notes due 2020.	8-K	4.1	6/10/15

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
4.9	Officer's Certificate of the Registrant, dated as of July 31, 2015, including forms of global notes representing the 3.05% Notes due 2029 and 3.60% Notes due 2042.	8-K	4.1	7/31/15
4.10	Officer's Certificate of the Registrant, dated as of September 17, 2015, including forms of global notes representing the 1.375% Notes due 2024 and 2.000% Notes due 2027.	8-K	4.1	9/17/15
4.11	Officer's Certificate of the Registrant, dated as of February 23, 2016, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2021, 1.300% Notes due 2018, 1.700% Notes due 2019, 2.250% Notes due 2021, 2.850% Notes due 2023, 3.250% Notes due 2026, 4.500% Notes due 2036 and 4.650% Notes due 2046.	8-K	4.1	2/23/16
4.12	Supplement No. 1 to the Officer's Certificate of the Registrant, dated as of March 24, 2016.	8-K	4.1	3/24/16
4.13	Officer's Certificate of the Registrant, dated as of June 22, 2016, including form of global note representing 4.15% Notes due 2046.	8-K	4.1	6/22/16
4.14	Officer's Certificate of the Registrant, dated as of August 4, 2016, including forms of global notes representing the Floating Rate Notes due 2019, 1.100% Notes due 2019, 1.550% Notes due 2021, 2.450% Notes due 2026 and 3.850% Notes due 2046.	8-K	4.1	8/4/16
4.15	Officer's Certificate of the Registrant, dated as of February 9, 2017, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.550% Notes due 2019, 1.900% Notes due 2020, 2.500% Notes due 2022, 3.000% Notes due 2024, 3.350% Notes due 2027 and 4.250% Notes due 2047.	8-K	4.1	2/9/17
4.16	Officer's Certificate of the Registrant, dated as of March 3, 2017, including form of global note representing 4.300% Notes due 2047.	8-K	4.1	3/3/17
4.17	Officer's Certificate of the Registrant, dated as of May 11, 2017, including forms of global notes representing the Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.800% Notes due 2020, 2.300% Notes due 2022, 2.850% Notes due 2024 and 3.200% Notes due 2027.	8-K	4.1	5/11/17
4.18	Officer's Certificate of the Registrant, dated as of May 24, 2017, including forms of global notes representing the 0.875% Notes due 2025 and 1.375% Notes due 2029.	8-K	4.1	5/24/17
4.19	Officer's Certificate of the Registrant, dated as of June 20, 2017, including form of global note representing the 3.000% Notes due 2027.	8-K	4.1	6/20/17
4.20	Officer's Certificate of the Registrant, dated as of August 18, 2017, including form of global note representing the 2.513% Notes due 2024.	8-K	4.1	8/18/17
4.21	Officer's Certificate of the Registrant, dated as of September 12, 2017, including forms of global notes representing the 1.500% Notes due 2019, 2.100% Notes due 2022, 2.900% Notes due 2027 and 3.750% Notes due 2047.	8-K	4.1	9/12/17
10.1*	Employee Stock Purchase Plan, as amended and restated as of March 10, 2015.	8-K	10.1	3/13/15
10.2*	Form of Indemnification Agreement between the Registrant and each director and executive officer of the Registrant.	10-Q	10.2	6/27/09
10.3*	1997 Director Stock Plan, as amended through August 23, 2012.	10-Q	10.3	12/28/13
10.4*	2003 Employee Stock Plan, as amended through February 25, 2010.	8-K	10.1	3/1/10
10.5*	Form of Restricted Stock Unit Award Agreement under 2003 Employee Stock Plan effective as of November 16, 2010.	10-Q	10.10	12/25/10
10.6*	Form of Restricted Stock Unit Award Agreement under 2003 Employee Stock Plan effective as of April 6, 2012.	10-Q	10.8	3/31/12
10.7*	Summary Description of Amendment, effective as of May 24, 2012, to certain Restricted Stock Unit Award Agreements outstanding as of April 5, 2012.	10-Q	10.8	6/30/12
10.8*, **	2014 Employee Stock Plan, as amended and restated as of October 1, 2017.			
10.9*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan as of February 28, 2014.	8-K	10.2	3/5/14
10.10*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of February 28, 2014.	8-K	10.3	3/5/14
10.11*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of August 26, 2014.	10-K	10.11	9/27/14

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
10.12*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of August 26, 2014.	10-K	10.12	9/27/14
10.13*	Form of Amendment, effective as of August 26, 2014, to Restricted Stock Unit Award Agreements and Performance Award Agreements outstanding as of August 26, 2014.	10-K	10.13	9/27/14
10.14*	Offer Letter, dated August 1, 2013, from the Registrant to Angela Ahrendts.	10-Q	10.14	12/27/14
10.15*	Form of Restricted Stock Unit Award Agreement under the 1997 Director Stock Plan as of November 17, 2015.	10-Q	10.15	12/26/15
10.16*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 5, 2015.	10-Q	10.16	3/26/16
10.17*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of October 5, 2015.	10-Q	10.17	3/26/16
10.18*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 14, 2016.	10-K	10.18	9/24/16
10.19*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of October 14, 2016.	10-K	10.19	9/24/16
10.20*, **	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.			
10.21*, **	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.			
12.1**	Computation of Ratio of Earnings to Fixed Charges.			
21.1**	Subsidiaries of the Registrant.			
23.1**	Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm.			
24.1**	Power of Attorney (included on the Signatures page of this Annual Report on Form 10-K).			
31.1**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer.			
31.2**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer.			
32.1***	Section 1350 Certifications of Chief Executive Officer and Chief Financial Officer.			
101.INS**	XBRL Instance Document.			
101.SCH**	XBRL Taxonomy Extension Schema Document.			
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document.			
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.			
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document.			
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document.			

* Indicates management contract or compensatory plan or arrangement.

** Filed herewith.

*** Furnished herewith.

(1) Certain instruments defining the rights of holders of long-term debt securities of the Registrant are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: November 3, 2017

Apple Inc.

By: /s/ Luca Maestri

Luca Maestri
Senior Vice President,
Chief Financial Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy D. Cook and Luca Maestri, jointly and severally, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Name	Title	Date
<u> /s/ Timothy D. Cook </u> TIMOTHY D. COOK	Chief Executive Officer and Director (Principal Executive Officer)	November 3, 2017
<u> /s/ Luca Maestri </u> LUCA MAESTRI	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	November 3, 2017
<u> /s/ Chris Kondo </u> CHRIS KONDO	Senior Director of Corporate Accounting (Principal Accounting Officer)	November 3, 2017
<u> /s/ James A. Bell </u> JAMES A. BELL	Director	November 3, 2017
<u> /s/ Al Gore </u> AL GORE	Director	November 3, 2017
<u> /s/ Robert A. Iger </u> ROBERT A. IGER	Director	November 3, 2017
<u> /s/ Andrea Jung </u> ANDREA JUNG	Director	November 3, 2017
<u> /s/ Arthur D. Levinson </u> ARTHUR D. LEVINSON	Director	November 3, 2017
<u> /s/ Ronald D. Sugar </u> RONALD D. SUGAR	Director	November 3, 2017
<u> /s/ Susan L. Wagner </u> SUSAN L. WAGNER	Director	November 3, 2017

Apple Inc. | 2017 Form 10-K | 77

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

Cao v. Apple
Apple Trial Exhibit
58

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 29, 2018

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number: **001-36743**

Apple Inc.

(Exact name of Registrant as specified in its charter)

California

(State or other jurisdiction of incorporation or organization)

94-2404110

(I.R.S. Employer Identification No.)

**One Apple Park Way
Cupertino, California**

(Address of principal executive offices)

95014

(Zip Code)

(408) 996-1010

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Common Stock, \$0.00001 par value per share

1.000% Notes due 2022
1.375% Notes due 2024
0.875% Notes due 2025
1.625% Notes due 2026
2.000% Notes due 2027
1.375% Notes due 2029
3.050% Notes due 2029
3.600% Notes due 2042

(Title of each class)

The Nasdaq Stock Market LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC
New York Stock Exchange LLC

(Name of each exchange on which registered)

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit and post such files).

Yes No Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act.Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

The aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant, as of March 30, 2018, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately \$828,880,000,000. Solely for purposes of this disclosure, shares of common stock held by executive officers and directors of the Registrant as of such date have been excluded because such persons may be deemed to be affiliates. This determination of executive officers and directors as affiliates is not necessarily a conclusive determination for any other purposes.

4,745,398,000 shares of common stock were issued and outstanding as of October 26, 2018.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement relating to its 2019 annual meeting of shareholders (the 2019 Proxy Statement) are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. The 2019 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

Apple Inc.
Form 10-K
For the Fiscal Year Ended September 29, 2018
TABLE OF CONTENTS

		<u>Page</u>
Part I		
Item 1.	Business	1
Item 1A.	Risk Factors	8
Item 1B.	Unresolved Staff Comments	17
Item 2.	Properties	18
Item 3.	Legal Proceedings	18
Item 4.	Mine Safety Disclosures	18
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	19
Item 6.	Selected Financial Data	21
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	22
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	35
Item 8.	Financial Statements and Supplementary Data	37
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	67
Item 9A.	Controls and Procedures	67
Item 9B.	Other Information	67
Part III		
Item 10.	Directors, Executive Officers and Corporate Governance	68
Item 11.	Executive Compensation	68
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	68
Item 13.	Certain Relationships and Related Transactions, and Director Independence	68
Item 14.	Principal Accounting Fees and Services	68
Part IV		
Item 15.	Exhibits, Financial Statement Schedules	69
Item 16.	Form 10-K Summary	71

This Annual Report on Form 10-K ("Form 10-K") contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Many of the forward-looking statements are located in Part II, Item 7 of this Form 10-K under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. All information presented herein is based on the Company's fiscal calendar. Unless otherwise stated, references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly-owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

PART I

Item 1. Business

Company Background

The Company designs, manufactures and markets mobile communication and media devices and personal computers, and sells a variety of related software, services, accessories and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, AirPods, Apple TV, HomePod, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of other accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, Book Store and Apple Music (collectively Digital Content and Services). The Company sells its products worldwide through its retail stores, online store and direct sales force, as well as through third-party cellular network carriers, wholesalers, retailers and resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories, through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers. The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company is a California corporation established in 1977.

Business Strategy

The Company is committed to bringing the best user experience to its customers through its innovative hardware, software and services. The Company's business strategy leverages its unique ability to design and develop its own operating systems, hardware, application software and services to provide its customers products and solutions with innovative design, superior ease-of-use and seamless integration. As part of its strategy, the Company continues to expand its platform for the discovery and delivery of digital content and applications through its Digital Content and Services, which allows customers to discover and download or stream digital content, iOS, Mac, Apple Watch and Apple TV applications, and books through either a Mac or Windows personal computer or through iPhone, iPad and iPod touch devices (iOS devices), Apple TV, Apple Watch and HomePod. The Company also supports a community for the development of third-party software and hardware products and digital content that complement the Company's offerings. The Company believes a high-quality buying experience with knowledgeable salespersons who can convey the value of the Company's products and services greatly enhances its ability to attract and retain customers. Therefore, the Company's strategy also includes building and expanding its own retail and online stores and its third-party distribution network to effectively reach more customers and provide them with a high-quality sales and post-sales support experience. The Company believes ongoing investment in research and development (R&D), marketing and advertising is critical to the development and sale of innovative products, services and technologies.

Products

iPhone

iPhone is the Company's line of smartphones based on its iOS operating system. iPhone includes Siri, an intelligent assistant, and Apple Pay, Touch ID and Face ID on qualifying devices. In September 2018, the Company introduced three new iPhones. iPhone Xs and Xs Max feature a Super Retina OLED display, an all-screen stainless steel and glass design, faster processors and enhanced cameras, and were available beginning in September 2018. iPhone XR features a Liquid Retina LCD display in an all-screen aluminum and glass design, and was available beginning in October 2018. The Company's line of smartphones also includes iPhone 8, 8 Plus, 7 and 7 Plus models. iPhone works with the iTunes Store, App Store, Book Store and Apple Music for purchasing, organizing and playing digital content and apps.

iPad

iPad is the Company's line of multi-purpose tablets based on its iOS operating system, which includes iPad Pro, iPad and iPad mini. iPad includes Siri, Apple Pay and Touch ID. In March 2018, the Company released a new 9.7-inch iPad with Apple Pencil compatibility. In October 2018, the Company introduced a new version of iPad Pro as well as a new Apple Pencil and Smart Keyboard Folio. The new 11-inch and 12.9-inch iPad Pro models feature a Liquid Retina LCD display in an all-screen aluminum and glass design and integrate Face ID. iPad works with the iTunes Store, App Store, Book Store and Apple Music for purchasing, organizing and playing digital content and apps.

Mac

Mac is the Company's line of desktop and portable personal computers based on its macOS operating system. Mac includes Siri and supports Apple Pay, and also includes Touch ID on qualifying devices. The Company's desktop computers include iMac 21.5-inch, iMac 21.5-inch with Retina 4K display, iMac 27-inch with Retina 5K display, iMac Pro, Mac Pro and Mac mini. The Company's portable computers include MacBook, MacBook Air, MacBook Pro and MacBook Pro with Touch Bar. In October 2018, the Company introduced a new MacBook Air featuring a Retina display and Touch ID, and a new Mac mini with upgraded performance.

Operating Systems

iOS

iOS is the Company's mobile operating system that serves as the foundation for iOS devices. Devices running iOS are compatible with both Mac and Windows personal computers and Apple's iCloud services. In September 2018, the Company released iOS 12, which includes improved performance and responsiveness, new augmented reality capabilities and expressive communication features, and introduces Siri Shortcuts, enabling Siri to intelligently pair with third-party apps.

macOS

macOS is the Company's desktop operating system and is built on an open-source UNIX-based foundation and provides an intuitive and integrated computer experience. Support for iCloud is built into macOS so users can access content and information from Mac, iOS devices and other supported devices and access downloaded content and apps from the iTunes Store. macOS Mojave, released in September 2018, is the 15th major release of macOS and makes apps such as News, Stocks, Voice Memos and Home available on the Mac for the first time. macOS Mojave also adds desktop and Finder enhancements, such as Dark Mode, and introduces a full redesign of the Mac App Store.

watchOS

watchOS is the Company's operating system for Apple Watch. In September 2018, the Company released watchOS 5, which helps users stay healthy and connected with new features including Activity Sharing competitions, auto-workout detection, advanced running features, Walkie-Talkie, Apple Podcasts and third-party apps on the Siri watch face.

tvOS

tvOS is the Company's operating system for Apple TV. The tvOS operating system is based on the Company's iOS platform and enables developers to create new apps and games specifically for Apple TV and deliver them to customers through the Apple TV App Store. tvOS incorporates Siri capabilities that allow searching across apps and services. In September 2018, the Company released tvOS 12, which supports enhanced sound quality and provides additional 4K high dynamic range (HDR) content.

Services

Digital Content and Services

The iTunes Store, available for iOS devices, Mac and Windows personal computers and Apple TV, allows customers to purchase and download or stream music and TV shows, rent or purchase movies and download free podcasts. The App Store, available for iOS devices, allows customers to discover and download apps and purchase in-app content. The Mac App Store, available for Mac computers, allows customers to discover, download and install Mac applications. The TV App Store allows customers access to apps and games specifically for Apple TV. The Book Store, available for iOS devices and Mac computers, features e-books from major and independent publishers. Apple Music offers users a curated listening experience with on-demand radio stations that evolve based on a user's play or download activity and a subscription-based internet streaming service that also provides unlimited access to the Apple Music library.

iCloud

iCloud is the Company's cloud service which stores music, photos, contacts, calendars, mail, documents and more, keeping them up-to-date and available across multiple iOS devices, Mac and Windows personal computers and Apple TV. iCloud services include iCloud Drive, iCloud Photos, Family Sharing, Find My iPhone, iPad or Mac, Find My Friends, Notes, iCloud Keychain and iCloud Backup for iOS devices.

AppleCare

The Company offers a range of support options for its customers. These include assistance that is built into software products, electronic product manuals, online support including comprehensive product information as well as technical assistance, AppleCare+ (AC+) and the AppleCare Protection Plan (APP). AC+ and APP are fee based services that extend the coverage of phone support eligibility and hardware repairs. AC+ offers additional coverage for instances of accidental damage and is available in certain countries for certain products. Additionally, AC+ with theft and loss protection is available for iPhone in the U.S.

Apple Pay

Apple Pay is the Company's cashless payment service available in certain countries that offers an easy, secure and private way to pay. Apple Pay allows users to pay for purchases in participating stores accepting contactless payments and to pay for purchases within participating apps on qualifying devices. Apple Pay accepts credit and debit cards across major card networks and also supports reward programs and store-issued credit and debit cards. In December 2017, the Company released an update to iOS 11 and watchOS 4 introducing Apple Pay Cash in the U.S., allowing peer-to-peer payments using Apple Pay.

Other Products

Apple TV

Apple TV connects to consumers' TVs and enables them to access digital content directly for streaming video, playing music and games, and viewing photos. Content from Apple Music and other media services is also available on Apple TV. Apple TV allows streaming digital content from Mac and Windows personal computers through Home Sharing and from compatible Mac and iOS devices through AirPlay. Apple TV runs on the Company's tvOS operating system and is based on apps built for the television. Additionally, the Apple TV remote features Siri, allowing users to search and access content with their voice. The Company offers Apple TV and Apple TV 4K, which supports 4K and HDR content.

Apple Watch

Apple Watch is a personal electronic device that combines the watchOS user interface and technologies created specifically for a smaller device, including the Digital Crown, a unique navigation tool that allows users to seamlessly scroll, zoom and navigate, and Force Touch, a technology that senses the difference between a tap and a press and allows users to access controls within apps. Apple Watch enables users to communicate from their wrist, track their health and fitness through activity and workout apps, and includes Siri and Apple Pay. In September 2018, the Company introduced Apple Watch Series 4, with a new design including a larger display and thinner case, and featuring new health monitoring capabilities.

Other

The Company also sells AirPods, Beats products, HomePod, iPod touch and other Apple-branded and third-party accessories. AirPods are the Company's wireless headphones that interact with Siri. In February 2018, the Company released HomePod, a high-fidelity wireless smart speaker that interacts with Siri and Apple Music.

Developer Programs

The Company's developer programs support app developers with building, testing and distributing apps for iOS, macOS, watchOS and tvOS. Developer program membership provides access to beta software and advanced app capabilities (e.g., CloudKit, HealthKit and Apple Pay), the ability to test apps using TestFlight, distribution on the App Store, access to App Analytics and code-level technical support. Developer programs also exist for businesses creating apps for internal use (the Apple Developer Enterprise Program) and developers creating accessories for Apple devices (the MFi Program). All developers, even those who are not developer program members, can sign in with their Apple ID to post on the Apple Developer Forums and use Xcode, the Company's integrated development environment for creating apps for Apple platforms. Xcode includes project management tools; analysis tools to collect, display and compare app performance data; simulation tools to locally run, test and debug apps; and tools to simplify the design and development of user interfaces. All developers also have access to extensive technical documentation and sample code.

Markets and Distribution

The Company's customers are primarily in the consumer, small and mid-sized business, education, enterprise and government markets. The Company sells its products and resells third-party products in most of its major markets directly to consumers and small and mid-sized businesses through its retail and online stores and its direct sales force. The Company also employs a variety of indirect distribution channels, such as third-party cellular network carriers, wholesalers, retailers and resellers. During 2018, the Company's net sales through its direct and indirect distribution channels accounted for 29% and 71%, respectively, of total net sales.

The Company believes that sales of its innovative and differentiated products and services are enhanced by knowledgeable salespersons who can convey the value of the hardware and software integration and demonstrate the unique solutions that are available on its products. The Company further believes providing direct contact with its targeted customers is an effective way to demonstrate the advantages of its products over those of its competitors and providing a high-quality sales and after-sales support experience is critical to attracting new and retaining existing customers.

To ensure a high-quality buying experience for its products in which service and education are emphasized, the Company continues to build and improve its distribution capabilities by expanding the number of its own retail stores worldwide. The Company's retail stores are typically located at high-traffic locations in quality shopping malls and urban shopping districts. By operating its own stores and locating them in desirable high-traffic locations the Company is better positioned to ensure a high-quality customer buying experience and attract new customers. The stores are designed to simplify and enhance the presentation and marketing of the Company's products and related solutions. The retail stores employ experienced and knowledgeable personnel who provide product advice, service and training, and offer a wide selection of third-party hardware, software and other accessories that complement the Company's products.

The Company has also invested in programs to enhance reseller sales by placing high-quality Apple fixtures, merchandising materials and other resources within selected third-party reseller locations. Through the Apple Premium Reseller Program, certain third-party resellers focus on the Apple platform by providing a high level of product expertise, integration and support services.

The Company is committed to delivering solutions to help educators teach and students learn. The Company believes effective integration of technology into classroom instruction can result in higher levels of student achievement and has designed a range of products, services and programs to address the needs of education customers. The Company also supports mobile learning and real-time distribution of, and access to, education-related materials through iTunes U, a platform that allows students and teachers to share and distribute educational media online. The Company sells its products to the education market through its direct sales force, select third-party resellers and its retail and online stores.

The Company also sells its hardware and software products to enterprise and government customers in each of its reportable segments. The Company's products are deployed in these markets because of their performance, productivity, ease-of-use and seamless integration into information technology environments. The Company's products are compatible with thousands of third-party business applications and services, and its tools enable the development and secure deployment of custom applications as well as remote device administration.

No single customer accounted for more than 10% of net sales in 2018, 2017 and 2016.

Competition

The markets for the Company's products and services are highly competitive and the Company is confronted by aggressive competition in all areas of its business. These markets are characterized by frequent product introductions and rapid technological advances that have substantially increased the capabilities and use of mobile communication and media devices, personal computers and other digital electronic devices. Many of the Company's competitors that sell mobile devices and personal computers based on other operating systems seek to compete primarily through aggressive pricing and very low cost structures. The Company's financial condition and operating results can be adversely affected by these and other industry-wide downward pressures on gross margins. Principal competitive factors important to the Company include price, product and service features (including security features), relative price and performance, product and service quality and reliability, design innovation, a strong third-party software and accessories ecosystem, marketing and distribution capability, service and support and corporate reputation.

The Company is focused on expanding its market opportunities related to personal computers and mobile communication and media devices. These markets are highly competitive and include many large, well-funded and experienced participants. The Company expects competition in these markets to intensify significantly as competitors attempt to imitate some of the features of the Company's products and applications within their own products or, alternatively, collaborate with each other to offer solutions that are more competitive than those they currently offer. These markets are characterized by aggressive price competition, frequent product introductions, evolving design approaches and technologies, rapid adoption of technological advancements by competitors and price sensitivity on the part of consumers and businesses.

The Company's services also face substantial competition, including from companies that have significant resources and experience and have established service offerings with large customer bases. The Company competes with business models that provide content to users for free. The Company also competes with illegitimate means to obtain third-party digital content and applications.

The Company's future financial condition and operating results depend on the Company's ability to continue to develop and offer new innovative products and services in each of the markets in which it competes. The Company believes it offers superior innovation and integration of the entire solution including the hardware (iOS devices, Mac, Apple Watch and Apple TV), software (iOS, macOS, watchOS and tvOS), online services and distribution of digital content and applications (Digital Content and Services). Some of the Company's current and potential competitors have substantial resources and may be able to provide such products and services at little or no profit or even at a loss to compete with the Company's offerings.

Supply of Components

Although most components essential to the Company's business are generally available from multiple sources, certain components are currently obtained from single or limited sources. In addition, the Company competes for various components with other participants in the markets for mobile communication and media devices and personal computers. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortages and significant commodity pricing fluctuations that could materially adversely affect the Company's financial condition and operating results.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source. Continued availability of these components at acceptable prices, or at all, may be affected if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

Substantially all of the Company's hardware products are manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. Certain of these outsourcing partners are single-sourced suppliers of components and manufacturers for many of the Company's products. Although the Company works closely with its outsourcing partners on manufacturing schedules, the Company's financial condition and operating results could be materially adversely affected if its outsourcing partners were unable to meet their production commitments. The Company's manufacturing purchase obligations typically cover its requirements for periods up to 150 days.

Research and Development

Because the industries in which the Company competes are characterized by rapid technological advances, the Company's ability to compete successfully depends heavily upon its ability to ensure a continual and timely flow of competitive products, services and technologies to the marketplace. The Company continues to develop new technologies to enhance existing products and services, and to expand the range of its offerings through R&D, licensing of intellectual property and acquisition of third-party businesses and technology.

Intellectual Property

The Company currently holds a broad collection of intellectual property rights relating to certain aspects of its hardware devices, accessories, software and services. This includes patents, copyrights, trademarks, service marks, trade dress and other forms of intellectual property rights in the U.S. and a number of foreign countries. Although the Company believes the ownership of such intellectual property rights is an important factor in its business and that its success does depend in part on such ownership, the Company relies primarily on the innovative skills, technical competence and marketing abilities of its personnel.

The Company regularly files patent applications to protect innovations arising from its research, development and design, and is currently pursuing thousands of patent applications around the world. Over time, the Company has accumulated a large portfolio of issued patents, including utility patents, design patents and others. The Company also holds copyrights relating to certain aspects of its products and services. No single intellectual property right is solely responsible for protecting the Company's products. The Company believes the duration of its intellectual property rights is adequate relative to the expected lives of its products.

Many of the Company's products are designed to include intellectual property obtained from third parties. It may be necessary in the future to seek or renew licenses relating to various aspects of the Company's products, processes and services. While the Company has generally been able to obtain such licenses on commercially reasonable terms in the past, there is no guarantee that such licenses could be obtained in the future on reasonable terms or at all. Because of technological changes in the industries in which the Company competes, current extensive patent coverage and the rapid rate of issuance of new patents, it is possible that certain components of the Company's products, processes and services may unknowingly infringe existing patents or intellectual property rights of others. From time to time, the Company has been notified that it may be infringing certain patents or other intellectual property rights of third parties.

Foreign and Domestic Operations and Geographic Data

During 2018, the Company's domestic and international net sales accounted for 37% and 63%, respectively, of total net sales. Gross margins on the Company's products in foreign countries and on products that include components obtained from foreign suppliers, can be adversely affected by foreign currency exchange rate fluctuations and by international trade regulations, including duties, tariffs and antidumping penalties.

Business Seasonality and Product Introductions

The Company has historically experienced higher net sales in its first quarter compared to other quarters in its fiscal year due in part to seasonal holiday demand. Additionally, new product introductions can significantly impact net sales, product costs and operating expenses. Product introductions can also impact the Company's net sales to its indirect distribution channels as these channels are filled with new product inventory following a product introduction, and channel inventory of a particular product often declines as the next related major product launch approaches. Net sales can also be affected when consumers and distributors anticipate a product introduction. However, neither historical seasonal patterns nor historical patterns of product introductions should be considered reliable indicators of the Company's future pattern of product introductions, future net sales or financial performance.

Warranty

The Company offers a limited parts and labor warranty on its hardware products. The basic warranty period is typically one year from the date of purchase by the original end user. The Company also offers a 90-day limited warranty on the service parts used to repair the Company's hardware products. In certain jurisdictions, local law requires that manufacturers guarantee their products for a period prescribed by statute, typically at least two years. In addition, where available, consumers may purchase APP or AC+, which extends service coverage on many of the Company's hardware products.

Backlog

In the Company's experience, the actual amount of product backlog at any particular time is not a meaningful indication of its future business prospects. In particular, backlog often increases immediately following new product introductions as customers anticipate shortages. Backlog is often reduced once customers believe they can obtain sufficient supply. Because of the foregoing, backlog should not be considered a reliable indicator of the Company's ability to achieve any particular level of revenue or financial performance.

Employees

As of September 29, 2018, the Company had approximately 132,000 full-time equivalent employees.

Available Information

The Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are filed with the Securities and Exchange Commission (the "SEC"). Company is subject to the informational requirements of the Exchange Act and files or furnishes reports, proxy statements and other information with the SEC. Such reports and other information filed by the Company with the SEC are available free of charge at investor.apple.com/investor-relations/sec-filings/default.aspx when such reports are available on the SEC's website. The SEC maintains an internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. The Company periodically provides other information for investors on its corporate website, www.apple.com, and its investor relations website, investor.apple.com. This includes press releases and other information about financial performance, information on corporate governance and details related to the Company's annual meeting of shareholders. The information contained on the websites referenced in this Form 10-K is not incorporated by reference into this filing. Further, the Company's references to website URLs are intended to be inactive textual references only.

Apple Inc. | 2018 Form 10-K | 7

Item 1A. Risk Factors

The following discussion of risk factors contains forward-looking statements. These risk factors may be important to understanding other statements in this Form 10-K. The following information should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes in Part II, Item 8, "Financial Statements and Supplementary Data" of this Form 10-K.

The business, financial condition and operating results of the Company can be affected by a number of factors, whether currently known or unknown, including but not limited to those described below, any one or more of which could, directly or indirectly, cause the Company's actual financial condition and operating results to vary materially from past, or from anticipated future, financial condition and operating results. Any of these factors, in whole or in part, could materially and adversely affect the Company's business, financial condition, operating results and stock price.

Because of the following factors, as well as other factors affecting the Company's financial condition and operating results, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

Global and regional economic conditions could materially adversely affect the Company's business, results of operations, financial condition and growth.

The Company has international operations with sales outside the U.S. representing a majority of the Company's total net sales. In addition, a majority of the Company's supply chain, and its manufacturing and assembly activities, are located outside the U.S. As a result, the Company's operations and performance depend significantly on global and regional economic conditions.

Adverse macroeconomic conditions, including inflation, slower growth or recession, new or increased tariffs, changes to fiscal and monetary policy, tighter credit, higher interest rates, high unemployment and currency fluctuations could materially adversely affect demand for the Company's products and services. In addition, consumer confidence and spending could be adversely affected in response to financial market volatility, negative financial news, conditions in the real estate and mortgage markets, declines in income or asset values, changes to fuel and other energy costs, labor and healthcare costs and other economic factors.

In addition to an adverse impact on demand for the Company's products, uncertainty about, or a decline in, global or regional economic conditions could have a significant impact on the Company's suppliers, contract manufacturers, logistics providers, distributors, cellular network carriers and other channel partners. Potential effects include financial instability; inability to obtain credit to finance operations and purchases of the Company's products; and insolvency.

A downturn in the economic environment could also lead to increased credit and collectibility risk on the Company's trade receivables; the failure of derivative counterparties and other financial institutions; limitations on the Company's ability to issue new debt; reduced liquidity; and declines in the fair value of the Company's financial instruments. These and other economic factors could materially adversely affect the Company's business, results of operations, financial condition and growth.

Global markets for the Company's products and services are highly competitive and subject to rapid technological change, and the Company may be unable to compete effectively in these markets.

The Company's products and services are offered in highly competitive global markets characterized by aggressive price competition and resulting downward pressure on gross margins, frequent introduction of new products and services, short product life cycles, evolving industry standards, continual improvement in product price/performance characteristics, rapid adoption of technological advancements by competitors and price sensitivity on the part of consumers and businesses.

The Company's ability to compete successfully depends heavily on its ability to ensure a continuing and timely introduction of innovative new products, services and technologies to the marketplace. The Company believes it is unique in that it designs and develops nearly the entire solution for its products, including the hardware, operating system, numerous software applications and related services. As a result, the Company must make significant investments in R&D. There can be no assurance that these investments will achieve expected returns, and the Company may not be able to develop and market new products and services successfully.

The Company currently holds a significant number of patents and copyrights and has registered, and applied to register, numerous patents, trademarks and service marks. In contrast, many of the Company's competitors seek to compete primarily through aggressive pricing and very low cost structures, and emulating the Company's product and infringing on its intellectual property. If the Company is unable to continue to develop and sell innovative new products with attractive margins or if competitors infringe on the Company's intellectual property, the Company's ability to maintain a competitive advantage could be adversely affected.

The Company has a minority market share in the global smartphone, tablet and personal computer markets. The Company faces substantial competition in these markets from companies that have significant technical, marketing, distribution and other resources, as well as established hardware, software and digital content supplier relationships. In addition, some of the Company's competitors have broader product lines, lower-priced products and a larger installed base of active devices. Competition has been particularly intense as competitors have aggressively cut prices and lowered product margins. Certain competitors may have the resources, experience or cost structures to provide products at little or no profit or even at a loss.

Additionally, the Company faces significant competition as competitors attempt to imitate the Company's product features and applications within their own products or, alternatively, collaborate with each other to offer solutions that are more competitive than those they currently offer. The Company also expects competition to intensify as competitors attempt to imitate the Company's approach to providing components seamlessly within their individual offerings or work collaboratively to offer integrated solutions.

Some of the markets in which the Company competes, including the market for personal computers, have from time to time experienced little to no growth or contracted. In addition, an increasing number of internet-enabled devices that include software applications and are smaller, simpler and cheaper than traditional personal computers compete with some of the Company's existing products.

The Company's services also face substantial competition, including from companies that have significant resources and experience and have established service offerings with large customer bases. The Company competes with business models that provide content to users for free. The Company also competes with illegitimate means to obtain third-party digital content and applications.

The Company's financial condition and operating results depend substantially on the Company's ability to continually improve its products and services in order to maintain their functional and design advantages. There can be no assurance the Company will be able to continue to provide products and services that compete effectively.

To remain competitive and stimulate customer demand, the Company must successfully manage frequent introductions and transitions of products and services.

Due to the highly volatile and competitive nature of the industries in which the Company competes, the Company must continually introduce new products, services and technologies, enhance existing products and services, effectively stimulate customer demand for new and upgraded products and services and successfully manage the transition to these new and upgraded products and services. The success of new product and service introductions depends on a number of factors including, but not limited to, timely and successful development, market acceptance, the Company's ability to manage the risks associated with new product production ramp-up issues, the availability of application software for new products, the effective management of purchase commitments and inventory levels in line with anticipated product demand, the availability of products in appropriate quantities and at expected costs to meet anticipated demand and the risk that new products and services may have quality or other defects or deficiencies. Accordingly, the Company cannot determine in advance the ultimate effect of new product and service introductions and transitions.

The Company depends on the performance of carriers, wholesalers, retailers and other resellers.

The Company distributes its products through cellular network carriers, wholesalers, retailers and resellers, many of whom distribute products from competing manufacturers. The Company also sells its products and third-party products in most of its major markets directly to education, enterprise and government customers and consumers and small and mid-sized businesses through its retail and online stores.

Some carriers providing cellular network service for iPhone offer financing, installment payment plans or subsidies for users' purchases of the device. There is no assurance that such offers will be continued at all or in the same amounts upon renewal of the Company's agreements with these carriers or in agreements the Company enters into with new carriers.

The Company has invested and will continue to invest in programs to enhance reseller sales, including staffing selected resellers' stores with Company employees and contractors, and improving product placement displays. These programs could require a substantial investment while providing no assurance of return or incremental revenue. The financial condition of these resellers could weaken, these resellers could stop distributing the Company's products, or uncertainty regarding demand for some or all of the Company's products could cause resellers to reduce their ordering and marketing of the Company's products.

The Company faces substantial inventory and other asset risk in addition to purchase commitment cancellation risk.

The Company records a write-down for product and component inventories that have become obsolete or exceed anticipated demand, or for which cost exceeds net realizable value. The Company also accrues necessary cancellation fee reserves for orders of excess products and components. The Company reviews long-lived assets, including capital assets held at its suppliers' facilities and inventory prepayments, for impairment whenever events or circumstances indicate the assets may not be recoverable. If the Company determines that an impairment has occurred, it records a write-down equal to the amount by which the carrying value of the asset exceeds its fair value. Although the Company believes its inventory, capital assets, inventory prepayments and other assets and purchase commitments are currently recoverable, no assurance can be given that the Company will not incur write-downs, fees, impairments and other charges given the rapid and unpredictable pace of product obsolescence in the industries in which the Company competes.

The Company orders components for its products and builds inventory in advance of product announcements and shipments. Manufacturing purchase obligations cover the Company's forecasted component and manufacturing requirements, typically for periods up to 150 days. Because the Company's markets are volatile, competitive and subject to rapid technology and price changes, there is a risk the Company will forecast incorrectly and order or produce excess or insufficient amounts of components or products, or not fully utilize firm purchase commitments.

Future operating results depend upon the Company's ability to obtain components in sufficient quantities on commercially reasonable terms.

Because the Company currently obtains certain components from single or limited sources, the Company is subject to significant supply and pricing risks. Many components, including those that are available from multiple sources, are at times subject to industry-wide shortages and significant commodity pricing fluctuations that could materially adversely affect the Company's financial condition and operating results. While the Company has entered into agreements for the supply of many components, there can be no assurance that the Company will be able to extend or renew these agreements on similar terms, or at all. Component suppliers may suffer from poor financial conditions, which can lead to business failure for the supplier or consolidation within a particular industry, further limiting the Company's ability to obtain sufficient quantities of components on commercially reasonable terms. The effects of global or regional economic conditions on the Company's suppliers, described in "Global and regional economic conditions could materially adversely affect the Company's business, results of operations, financial condition and growth" above, also could affect the Company's ability to obtain components. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

The Company's new products often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. Continued availability of these components at acceptable prices, or at all, may be affected for any number of reasons, including if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source.

The Company depends on component and product manufacturing and logistical services provided by outsourcing partners, many of which are located outside of the U.S.

Substantially all of the Company's manufacturing is performed in whole or in part by outsourcing partners located primarily in Asia. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. The Company has also outsourced much of its transportation and logistics management. While these arrangements may lower operating costs, they also reduce the Company's direct control over production and distribution. Such diminished control may have an adverse effect on the quality or quantity of products or services, or the Company's flexibility to respond to changing conditions. Although arrangements with these partners may contain provisions for warranty expense reimbursement, the Company may remain responsible to the consumer for warranty service in the event of product defects and could experience an unanticipated product defect or warranty liability. While the Company relies on its partners to adhere to its supplier code of conduct, material violations of the supplier code of conduct could occur.

The Company relies on single-sourced outsourcing partners in the U.S., Asia and Europe to supply and manufacture many components, and on outsourcing partners primarily located in Asia, for final assembly of substantially all of the Company's hardware products. Any failure of these partners to perform may have a negative impact on the Company's cost or supply of components or finished goods. In addition, manufacturing or logistics in these locations or transit to final destinations may be disrupted for a variety of reasons including, but not limited to, natural and man-made disasters, information technology system failures, commercial disputes, military actions, economic, business, labor, environmental, public health or political issues, or international trade disputes.

The Company has invested in manufacturing process equipment, much of which is held at certain of its outsourcing partners, and has made prepayments to certain of its suppliers associated with long-term supply agreements. While these arrangements help ensure the supply of components and finished goods, if these outsourcing partners or suppliers experience severe financial problems or other disruptions in their business, such continued supply could be reduced or terminated and the recoverability of manufacturing process equipment or prepayments could be negatively impacted.

The Company's products and services may be affected from time to time by design and manufacturing defects that could materially adversely affect the Company's business and result in harm to the Company's reputation.

The Company offers complex hardware and software products and services that can be affected by design and manufacturing defects. Sophisticated operating system software and applications, such as those offered by the Company, often have issues that can unexpectedly interfere with the intended operation of hardware or software products. Defects may also exist in components and products the Company purchases from third parties. Component defects could make the Company's products unsafe and create a risk of environmental or property damage and personal injury. These risks may increase as the Company's products are introduced into specialized applications, including healthcare. In addition, the Company's service offerings may have quality issues and from time to time experience outages, service slowdowns or errors. As a result, the Company's services may not perform as anticipated and may not meet customer expectations. There can be no assurance the Company will be able to detect and fix all issues and defects in the hardware, software and services it offers. Failure to do so could result in widespread technical and performance issues affecting the Company's products and services. In addition, the Company may be exposed to product liability claims, recalls, product replacements or modifications, write-offs of inventory, property, plant and equipment, and/or intangible assets, and significant warranty and other expenses, including litigation costs and regulatory fines. Quality problems could also adversely affect the experience for users of the Company's products and services, and result in harm to the Company's reputation, loss of competitive advantage, poor market acceptance, reduced demand for products and services, delay in new product and services introductions and lost revenue.

The Company relies on access to third-party digital content, which may not be available to the Company on commercially reasonable terms or at all.

The Company contracts with numerous third parties to offer their digital content to customers. This includes the right to sell currently available music, movies, TV shows and books. The licensing or other distribution arrangements with these third parties are for relatively short terms and do not guarantee the continuation or renewal of these arrangements on reasonable terms, if at all. Some third-party content providers and distributors currently or in the future may offer competing products and services, and could take action to make it more difficult or impossible for the Company to license or otherwise distribute their content in the future. Other content owners, providers or distributors may seek to limit the Company's access to, or increase the cost of, such content. The Company may be unable to continue to offer a wide variety of content at reasonable prices with acceptable usage rules, or continue to expand its geographic reach. Failure to obtain the right to make third-party digital content available, or to make such content available on commercially reasonable terms, could have a material adverse impact on the Company's financial condition and operating results.

Some third-party digital content providers require the Company to provide digital rights management and other security solutions. If requirements change, the Company may have to develop or license new technology to provide these solutions. There is no assurance the Company will be able to develop or license such solutions at a reasonable cost and in a timely manner. In addition, certain countries have passed or may propose and adopt legislation that would force the Company to license its digital rights management, which could lessen the protection of content and subject it to piracy and also could negatively affect arrangements with the Company's content providers.

The Company's future performance depends in part on support from third-party software developers.

The Company believes decisions by customers to purchase its hardware products depend in part on the availability of third-party software applications and services. There is no assurance that third-party developers will continue to develop and maintain software applications and services for the Company's products. If third-party software applications and services cease to be developed and maintained for the Company's products, customers may choose not to buy the Company's products.

The Company believes the availability of third-party software applications and services for its products depends in part on the developers' perception and analysis of the relative benefits of developing, maintaining and upgrading such software and services for the Company's products compared to competitors' platforms, such as Android for smartphones and tablets and Windows for personal computers. This analysis may be based on factors such as the market position of the Company and its products, the anticipated revenue that may be generated, expected future growth of product sales and the costs of developing such applications and services.

The Company's minority market share in the global smartphone, tablet and personal computer markets could make developers less inclined to develop or upgrade software for the Company's products and more inclined to devote their resources to developing and upgrading software for competitors' products with larger market share. If developers focus their efforts on these competing platforms, the availability and quality of applications for the Company's devices may suffer.

The Company relies on the continued availability and development of compelling and innovative software applications for its products. The Company's products and operating systems are subject to rapid technological change, and if third-party developers are unable to or choose not to keep up with this pace of change, third-party applications might not take advantage of these changes to deliver improved customer experiences or might not operate correctly and may result in dissatisfied customers.

The Company sells and delivers third-party applications for its products through the App Store, Mac App Store and TV App Store. The Company retains a commission from sales through these platforms. If developers reduce their use of these platforms to distribute their applications and offer in-app purchases to customers, then the volume of sales, and the commission that the Company earns on those sales, would decrease.

The Company relies on access to third-party intellectual property, which may not be available to the Company on commercially reasonable terms or at all.

Many of the Company's products include third-party intellectual property, which requires licenses from those third parties. Based on past experience and industry practice, the Company believes such licenses generally can be obtained on reasonable terms. There is, however, no assurance that the necessary licenses can be obtained on acceptable terms or at all. Failure to obtain the right to use third-party intellectual property, or to use such intellectual property on commercially reasonable terms, could preclude the Company from selling certain products or services, or otherwise have a material adverse impact on the Company's financial condition and operating results.

The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights.

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and have not yet been fully resolved, and new claims may arise in the future. In addition, agreements entered into by the Company sometimes include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party.

Claims against the Company based on allegations of patent infringement or other violations of intellectual property rights have generally increased over time and may continue to increase. In particular, the Company has historically faced a significant number of patent claims relating to its cellular-enabled products, and new claims may arise in the future. For example, technology and other patent-holding companies frequently assert their patents and seek royalties and often enter into litigation based on allegations of patent infringement or other violations of intellectual property rights. The Company is vigorously defending infringement actions in courts in a number of U.S. jurisdictions and before the U.S. International Trade Commission, as well as internationally in various countries. The plaintiffs in these actions frequently seek injunctions and substantial damages.

Regardless of the merit of particular claims, litigation may be expensive, time consuming, disruptive to the Company's operations and distracting to management. In recognition of these considerations, the Company may enter into licensing agreements or other arrangements to settle litigation and resolve such disputes. No assurance can be given that such agreements can be obtained on acceptable terms or that litigation will not occur. These agreements may also significantly increase the Company's operating expenses.

Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 9, "Commitments and Contingencies" under the heading "Contingencies," in the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims, including matters related to infringement of intellectual property rights.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company or an indemnified third party in a reporting period for amounts in excess of management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. Further, such an outcome could result in significant compensatory, punitive or trebled monetary damages, disgorgement of revenue or profits, remedial corporate measures or injunctive relief against the Company that could materially adversely affect its financial condition and operating results.

While the Company maintains insurance coverage for certain types of claims, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company is subject to laws and regulations worldwide, changes to which could increase the Company's costs and individually or in the aggregate adversely affect the Company's business.

The Company is subject to laws and regulations affecting its domestic and international operations in a number of areas. These U.S. and foreign laws and regulations affect the Company's activities in areas including, but not limited to, labor, advertising, digital content, consumer protection, real estate, billing, e-commerce, promotions, quality of services, telecommunications, mobile communications and media, television, intellectual property ownership and infringement, tax, import and export requirements, anti-corruption, foreign exchange controls and cash repatriation restrictions, data privacy and data localization requirements, anti-competition, environmental, health and safety.

By way of example, laws and regulations related to mobile communications and media devices in the many jurisdictions in which the Company operates are extensive and subject to change. Such changes could include, among others, restrictions on the production, manufacture, distribution and use of devices, locking devices to a carrier's network, or mandating the use of devices on more than one carrier's network. These devices are also subject to certification and regulation by governmental and standardization bodies, as well as by cellular network carriers for use on their networks. These certification processes are extensive and time consuming, and could result in additional testing requirements, product modifications, or delays in product shipment dates, or could preclude the Company from selling certain products.

Compliance with these laws, regulations and similar requirements may be onerous and expensive, and they may be inconsistent from jurisdiction to jurisdiction, further increasing the cost of compliance and doing business. Any such costs, which may rise in the future as a result of changes in these laws and regulations or in their interpretation, could individually or in the aggregate make the Company's products and services less attractive to the Company's customers, delay the introduction of new products in one or more regions, or cause the Company to change or limit its business practices. The Company has implemented policies and procedures designed to ensure compliance with applicable laws and regulations, but there can be no assurance that the Company's employees, contractors, or agents will not violate such laws and regulations or the Company's policies and procedures.

The Company's business is subject to the risks of international operations.

The Company derives a majority of its revenue and earnings from its international operations. Compliance with applicable U.S. and foreign laws and regulations, such as import and export requirements, anti-corruption laws, tax laws, foreign exchange controls and cash repatriation restrictions, data privacy and data localization requirements, environmental laws, labor laws and anti-competition regulations, increases the costs of doing business in foreign jurisdictions. Although the Company has implemented policies and procedures to comply with these laws and regulations, a violation by the Company's employees, contractors or agents could nevertheless occur. In some cases, compliance with the laws and regulations of one country could violate the laws and regulations of another country. Violations of these laws and regulations could materially adversely affect the Company's brand, international growth efforts and business.

The Company also could be significantly affected by other risks associated with international activities including, but not limited to, economic and labor conditions, increased duties, taxes and other costs, political instability and international trade disputes. Gross margins on the Company's products in foreign countries, and on products that include components obtained from foreign suppliers, could be materially adversely affected by international trade regulations, including duties, tariffs and antidumping penalties. The Company is also exposed to credit and collectibility risk on its trade receivables with customers in certain international markets. There can be no assurance the Company can effectively limit its credit risk and avoid losses.

The Company's retail stores have required and will continue to require a substantial investment and commitment of resources and are subject to numerous risks and uncertainties.

The Company's retail stores have required substantial investment in equipment and leasehold improvements, information systems, inventory and personnel. The Company also has entered into substantial operating lease commitments for retail space. Certain stores have been designed and built to serve as high-profile venues to promote brand awareness. Because of their unique design elements, locations and size, these stores require substantially more investment than the Company's more typical retail stores. Due to the high cost structure associated with the Company's retail stores, a decline in sales or the closure or poor performance of individual or multiple stores could result in significant lease termination costs, write-offs of equipment and leasehold improvements and severance costs.

The Company's retail operations are subject to many factors that pose risks and uncertainties and could adversely impact the Company's financial condition and operating results, including macro-economic factors that could have an adverse effect on general retail activity. Other factors include, but are not limited to, the Company's ability to manage costs associated with retail store construction and operation; manage relationships with existing retail partners; manage costs associated with fluctuations in the value of retail inventory; and obtain and renew leases in quality retail locations at a reasonable cost.

Investment in new business strategies and acquisitions could disrupt the Company's ongoing business and present risks not originally contemplated.

The Company has invested, and in the future may invest, in new business strategies or acquisitions. Such endeavors may involve significant risks and uncertainties, including distraction of management from current operations, greater than expected liabilities and expenses, inadequate return of capital and unidentified issues not discovered in the Company's due diligence. These new ventures are inherently risky and may not be successful.

The Company's business and reputation may be impacted by information technology system failures or network disruptions.

The Company may be subject to information technology system failures or network disruptions caused by natural disasters, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, physical or electronic break-ins, or other events or disruptions. System redundancy and other continuity measures may be ineffective or inadequate, and the Company's business continuity and disaster recovery planning may not be sufficient for all eventualities. Such failures or disruptions could adversely impact the Company's business by, among other things, preventing access to the Company's online services, interfering with customer transactions or impeding the manufacturing and shipping of the Company's products. These events could materially adversely affect the Company's reputation financial condition and operating results.

There may be losses or unauthorized access to or releases of confidential information, including personally identifiable information, that could subject the Company to significant reputational, financial, legal and operational consequences.

The Company's business requires it to use and store confidential information including, among other things, personally identifiable information ("PII") with respect to the Company's customers and employees. The Company devotes significant resources to network and data security, including through the use of encryption and other security measures intended to protect its systems and data. But these measures cannot provide absolute security, and losses or unauthorized access to or releases of confidential information occur and could materially adversely affect the Company's reputation, financial condition and operating results.

The Company's business also requires it to share confidential information with suppliers and other third parties. Although the Company takes steps to secure confidential information that is provided to third parties, such measures are not always effective and losses or unauthorized access to or releases of confidential information occur and could materially adversely affect the Company's reputation, financial condition and operating results.

For example, the Company may experience a security breach impacting the Company's information technology systems that compromises the confidentiality, integrity or availability of confidential information. Such an incident could, among other things, impair the Company's ability to attract and retain customers for its products and services, impact the Company's stock price, materially damage supplier relationships, and expose the Company to litigation or government investigations, which could result in penalties, fines or judgments against the Company.

Although malicious attacks perpetrated to gain access to confidential information, including PII, affect many companies across various industries, the Company is at a relatively greater risk of being targeted because of its high profile and the value of the confidential information it creates, owns, manages, stores and processes.

The Company has implemented systems and processes intended to secure its information technology systems and prevent unauthorized access to or loss of sensitive data, including through the use of encryption and authentication technologies. As with all companies, these security measures may not be sufficient for all eventualities and may be vulnerable to hacking, employee error, malfeasance, system error, faulty password management or other irregularities. For example, third parties attempt to fraudulently induce employees or customers into disclosing user names, passwords or other sensitive information, which may in turn be used to access the Company's information technology systems. To help protect customers and the Company, the Company monitors its services and systems for unusual activity and may freeze accounts under suspicious circumstances, which, among other things, may result in the delay or loss of customer orders or impede customer access to the Company's products and services.

In addition to the risks relating to general confidential information described above, the Company may also be subject to specific obligations relating to health data and payment card data. Health data may be subject to additional privacy, security and breach notification requirements, and the Company may be subject to audit by governmental authorities regarding the Company's compliance with these obligations. If the Company fails to adequately comply with these rules and requirements, or if health data is handled in a manner not permitted by law or under the Company's agreements with healthcare institutions, the Company could be subject to litigation or government investigations, may be liable for associated investigatory expenses, and could also incur significant fees or fines.

Under payment card rules and obligations, if cardholder information is potentially compromised, the Company could be liable for associated investigatory expenses and could also incur significant fees or fines if the Company fails to follow payment card industry data security standards. The Company could also experience a significant increase in payment card transaction costs or lose the ability to process payment cards if it fails to follow payment card industry data security standards, which would materially adversely affect the Company's reputation, financial condition and operating results.

While the Company maintains insurance coverage that is intended to address certain aspects of data security risks, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company's business is subject to a variety of U.S. and international laws, rules, policies and other obligations regarding data protection.

The Company is subject to federal, state and international laws relating to the collection, use, retention, security and transfer of PII. In many cases, these laws apply not only to third-party transactions, but also may restrict transfers of PII among the Company and its international subsidiaries. Several jurisdictions have passed laws in this area, and other jurisdictions are considering imposing additional restrictions. These laws continue to develop and may be inconsistent from jurisdiction to jurisdiction. Complying with emerging and changing international requirements may cause the Company to incur substantial costs or require the Company to change its business practices. Noncompliance could result in significant penalties or legal liability.

The Company makes statements about its use and disclosure of PII through its privacy policy, information provided on its website and press statements. Any failure by the Company to comply with these public statements or with other federal, state or international privacy-related or data protection laws and regulations could result in proceedings against the Company by governmental entities or others. In addition to reputational impacts, penalties could include ongoing audit requirements and significant legal liability.

The Company's success depends largely on the continued service and availability of key personnel.

Much of the Company's future success depends on the continued availability and service of key personnel, including its Chief Executive Officer, executive team and other highly skilled employees. Experienced personnel in the technology industry are in high demand and competition for their talents is intense, especially in Silicon Valley, where most of the Company's key personnel are located.

The Company's business may be impacted by political events, international trade disputes, war, terrorism, natural disasters, public health issues, industrial accidents and other business interruptions.

Political events, international trade disputes, war, terrorism, natural disasters, public health issues, industrial accidents and other business interruptions could harm or disrupt international commerce and the global economy, and could have a material adverse effect on the Company and its customers, suppliers, contract manufacturers, logistics providers, distributors, cellular network carriers and other channel partners.

International trade disputes could result in tariffs and other protectionist measures that could adversely affect the Company's business. Tariffs could increase the cost of the Company's products and the components and raw materials that go into making them. These increased costs could adversely impact the gross margin that the Company earns on its products. Tariffs could also make the Company's products more expensive for customers, which could make the Company's products less competitive and reduce consumer demand. Countries may also adopt other protectionist measures that could limit the Company's ability to offer its products and services. Political uncertainty surrounding international trade disputes and protectionist measures could also have a negative effect on consumer confidence and spending, which could adversely affect the Company's business.

Many of the Company's operations and facilities as well as critical business operations of the Company's suppliers and contract manufacturers are in locations that are prone to earthquakes and other natural disasters. In addition, such operations and facilities are subject to the risk of interruption by fire, power shortages, nuclear power plant accidents and other industrial accidents, terrorist attacks and other hostile acts, labor disputes, public health issues and other events beyond the Company's control. Global climate change could result in certain types of natural disasters occurring more frequently or with more intense effects. Such events could make it difficult or impossible for the Company to manufacture and deliver products to its customers, create delays and inefficiencies in the Company's supply and manufacturing chain, and result in slowdowns and outages to the Company's service offerings. Following an interruption to its business, the Company could require substantial recovery time, experience significant expenditures in order to resume operations, and lose significant revenue. Because the Company relies on single or limited sources for the supply and manufacture of many critical components, a business interruption affecting such sources would exacerbate any negative consequences to the Company.

The Company's operations are also subject to the risks of industrial accidents at its suppliers and contract manufacturers. While the Company's suppliers are required to maintain safe working environments and operations, an industrial accident could occur and could result in disruption to the Company's business and harm to the Company's reputation. Should major public health issues, including pandemics, arise, the Company could be adversely affected by more stringent employee travel restrictions, additional limitations in freight services, governmental actions limiting the movement of products between regions, delays in production ramps of new products and disruptions in the operations of the Company's suppliers and contract manufacturers.

The Company expects its quarterly revenue and operating results to fluctuate.

The Company's profit margins vary across its products, services, geographic segments and distribution channels. For example, gross margins on the Company's hardware products vary across product lines and can change over time as a result of product transitions, pricing and configuration changes, and component, warranty and other cost fluctuations. The Company's financial results may be materially adversely impacted as a result of shifts in the mix of products and services that the Company sells; shifts in the geographic, currency or channel mix of the Company's sales; component cost increases; price competition; or the introduction of new products, including new products with higher cost structures.

The Company has typically experienced higher net sales in its first quarter compared to other quarters due in part to seasonal holiday demand. Additionally, new product introductions can significantly impact net sales, product costs and operating expenses. Further, the Company generates a majority of its net sales from a single product and a decline in demand for that product could significantly impact quarterly net sales. The Company could also be subject to unexpected developments, such as lower-than-anticipated demand for the Company's products, issues with new product introductions, information technology system failures or network disruptions, or failure of one of the Company's logistics, components supply, or manufacturing partners.

The Company's stock price is subject to volatility.

The Company's stock price has experienced substantial price volatility in the past and may continue to do so in the future. Additionally, the Company, the technology industry and the stock market as a whole have experienced extreme stock price and volume fluctuations that have affected stock prices in ways that may have been unrelated to these companies' operating performance. Price volatility over a given period may cause the average price at which the Company repurchases its own stock to exceed the stock's price at a given point in time. The Company believes its stock price should reflect expectations of future growth and profitability. The Company also believes its stock price should reflect expectations that its cash dividend will continue at current levels or grow and that its current share repurchase program will be fully consummated. Future dividends are subject to declaration by the Company's Board of Directors, and the Company's share repurchase program does not obligate it to acquire any specific number of shares. If the Company fails to meet expectations related to future growth, profitability, dividends, share repurchases or other market expectations, its stock price may decline significantly, which could have a material adverse impact on investor confidence and employee retention.

The Company's financial performance is subject to risks associated with changes in the value of the U.S. dollar relative to local currencies.

The Company's primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar-denominated sales and operating expenses worldwide. Gross margins on the Company's products in foreign countries and on products that include components obtained from foreign suppliers could be materially adversely affected by foreign currency exchange rate fluctuations.

Weakening of foreign currencies relative to the U.S. dollar adversely affects the U.S. dollar value of the Company's foreign currency-denominated sales and earnings, and generally leads the Company to raise international pricing, potentially reducing demand for the Company's products. In some circumstances, for competitive or other reasons, the Company may decide not to raise international pricing to offset the U.S. dollar's strengthening, which would adversely affect the U.S. dollar value of the gross margins the Company earns on foreign currency-denominated sales.

Conversely, a strengthening of foreign currencies relative to the U.S. dollar, while generally beneficial to the Company's foreign currency-denominated sales and earnings could cause the Company to reduce international pricing and incur losses on its foreign currency derivative instruments, thereby limiting the benefit. Additionally, strengthening of foreign currencies may increase the Company's cost of product components denominated in those currencies, thus adversely affecting gross margins.

The Company uses derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not be effective to offset any, or more than a portion, of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place.

The Company is exposed to credit risk and fluctuations in the market values of its investment portfolio.

The Company's investments can be negatively affected by liquidity, credit deterioration, financial results, market and economic conditions, political risk, sovereign risk, interest rate fluctuations or other factors. As a result, the value and liquidity of the Company's cash, cash equivalents and marketable securities may fluctuate substantially. Therefore, although the Company has not realized any significant losses on its cash, cash equivalents and marketable securities, future fluctuations in their value could result in significant realized losses and could have a material adverse impact on the Company's financial condition and operating results.

The Company is exposed to credit risk on its trade accounts receivable, vendor non-trade receivables and prepayments related to long-term supply agreements, and this risk is heightened during periods when economic conditions worsen.

The Company distributes its products through third-party cellular network carriers, wholesalers, retailers and resellers. The Company also sells its products directly to small and mid-sized businesses and education, enterprise and government customers. A substantial majority of the Company's outstanding trade receivables are not covered by collateral, third-party bank support or financing arrangements, or credit insurance. The Company's exposure to credit and collectibility risk on its trade receivables is higher in certain international markets and its ability to mitigate such risks may be limited. The Company also has unsecured vendor non-trade receivables resulting from purchases of components by outsourcing partners and other vendors that manufacture sub-assemblies or assemble final products for the Company. In addition, the Company has made prepayments associated with long-term supply agreements to secure supply of inventory components. As of September 29, 2018, a significant portion of the Company's trade receivables was concentrated within cellular network carriers, and its vendor non-trade receivables and prepayments related to long-term supply agreements were concentrated among a few individual vendors located primarily in Asia. While the Company has procedures to monitor and limit exposure to credit risk on its trade and vendor non-trade receivables, as well as long-term prepayments, there can be no assurance such procedures will effectively limit its credit risk and avoid losses.

The Company could be subject to changes in its tax rates, the adoption of new U.S. or international tax legislation or exposure to additional tax liabilities.

The Company is subject to taxes in the U.S. and numerous foreign jurisdictions, including Ireland, where a number of the Company's subsidiaries are organized. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. The Company's effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation, including in the U.S. and Ireland.

The Company is also subject to the examination of its tax returns and other tax matters by the U.S. Internal Revenue Service (the "IRS") and other tax authorities and governmental bodies. The Company regularly assesses the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of its provision for taxes. There can be no assurance as to the outcome of these examinations. If the Company's effective tax rates were to increase, particularly in the U.S. or Ireland, or if the ultimate determination of the Company's taxes owed is for an amount in excess of amounts previously accrued, the Company's financial condition, operating results and cash flows could be materially adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company's headquarters are located in Cupertino, California. As of September 29, 2018, the Company owned 16.5 million square feet and leased 24.3 million square feet of building space, primarily in the U.S. Additionally, the Company owned a total of 7,376 acres of land, primarily in the U.S.

As of September 29, 2018, the Company owned facilities and land for corporate functions, R&D and data centers at various locations throughout the U.S. Outside the U.S., the Company owned additional facilities and land for various purposes.

The Company believes its existing facilities and equipment, which are used by all reportable segments, are in good operating condition and are suitable for the conduct of its business. The Company has invested in internal capacity and strategic relationships with outside manufacturing vendors and continues to make investments in capital equipment as needed to meet anticipated demand for its products and services.

Item 3. Legal Proceedings

The Company is subject to legal proceedings and claims that have not been fully resolved and that have arisen in the ordinary course of business. Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 9, "Commitments and Contingencies" under the heading "Contingencies," in opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. Refer to the risk factor "The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights" in Part I, Item 1A of this Form 10-K under the heading "Risk Factors." The Company settled certain matters during the fourth quarter of 2018 that did not individually or in the aggregate have a material impact on the Company's financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

The Company's common stock is traded on The Nasdaq Stock Market LLC (Nasdaq) under the symbol AAPL.

Holders

As of October 26, 2018, there were 23,712 shareholders of record.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

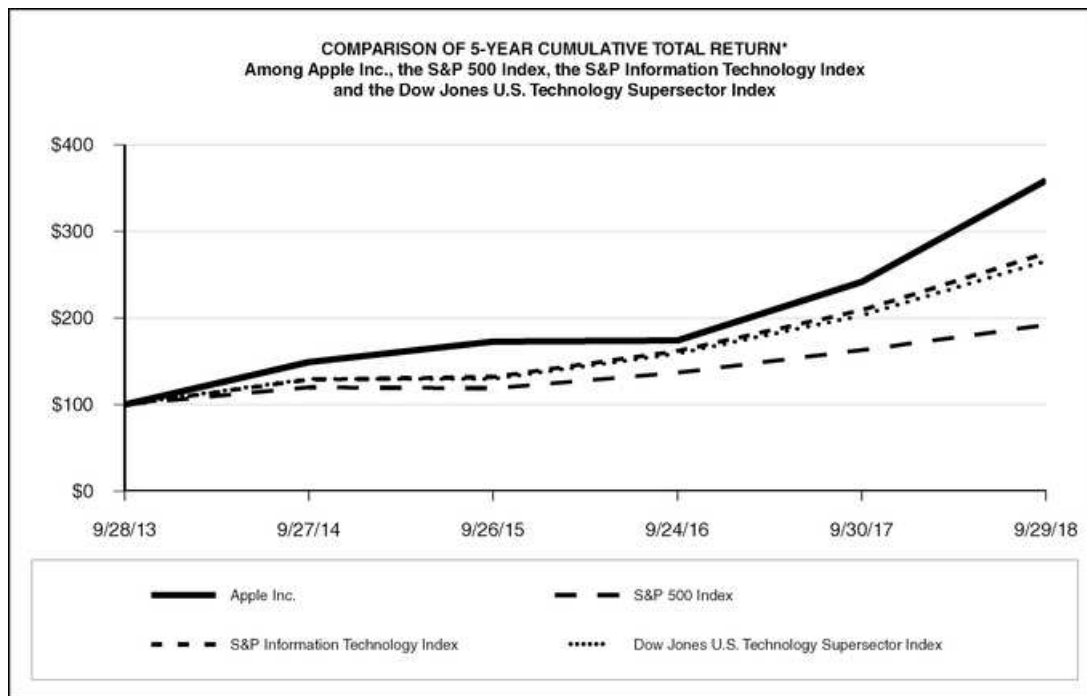
Share repurchase activity during the three months ended September 29, 2018 was as follows (in millions, except number of shares, which are reflected in thousands, and per share amounts):

Periods	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
July 1, 2018 to August 4, 2018:				
Open market and privately negotiated purchases	26,859	\$ 192.50	26,859	
August 5, 2018 to September 1, 2018:				
Open market and privately negotiated purchases	36,575	\$ 214.07	36,575	
September 2, 2018 to September 29, 2018:				
Open market and privately negotiated purchases	29,029	\$ 222.07	29,029	
Total	<u>92,463</u>			<u>\$ 70,970</u>

- (1) On May 1, 2018, the Company announced the Board of Directors had authorized a program to repurchase up to \$100 billion of the Company's common stock, of which \$29.0 billion had been utilized as of September 29, 2018. The remaining \$71.0 billion in the table represents the amount available to repurchase shares under the authorized repurchase program as of September 29, 2018. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

Company Stock Performance

The following graph shows a comparison of cumulative total shareholder return, calculated on a dividend-reinvested basis, for the Company, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index for the five years ended September 29, 2018. The graph assumes \$100 was invested in each of the Company's common stock, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index as of the market close on September 27, 2013. Note that historic stock price performance is not necessarily indicative of future stock price performance.



* \$100 invested on September 27, 2013 in stock or index, including reinvestment of dividends. Data points are the last day of each fiscal year for the Company's common stock and September 30th for indexes.

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	September 2013	September 2014	September 2015	September 2016	September 2017	September 2018
Apple Inc.	\$ 100	\$ 149	\$ 173	\$ 174	\$ 242	\$ 359
S&P 500 Index	\$ 100	\$ 120	\$ 119	\$ 137	\$ 163	\$ 192
S&P Information Technology Index	\$ 100	\$ 129	\$ 132	\$ 162	\$ 209	\$ 275
Dow Jones U.S. Technology Supersector Index	\$ 100	\$ 130	\$ 130	\$ 159	\$ 203	\$ 266

Item 6. Selected Financial Data

The information set forth below for the five years ended September 29, 2018, is not necessarily indicative of results of future operations, and should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and related notes thereto included in Part II, Item 8 of this Form 10-K to fully understand factors that may affect the comparability of the information presented below (in millions, except number of shares, which are reflected in thousands, and per share amounts).

	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net sales	\$ 265,595	\$ 229,234	\$ 215,639	\$ 233,715	\$ 182,795
Net income	\$ 59,531	\$ 48,351	\$ 45,687	\$ 53,394	\$ 39,510
Earnings per share:					
Basic	\$ 12.01	\$ 9.27	\$ 8.35	\$ 9.28	\$ 6.49
Diluted	\$ 11.91	\$ 9.21	\$ 8.31	\$ 9.22	\$ 6.45
Cash dividends declared per share	\$ 2.72	\$ 2.40	\$ 2.18	\$ 1.98	\$ 1.82
Shares used in computing earnings per share:					
Basic	4,955,377	5,217,242	5,470,820	5,753,421	6,085,572
Diluted	5,000,109	5,251,692	5,500,281	5,793,069	6,122,663
Total cash, cash equivalents and marketable securities	\$ 237,100	\$ 268,895	\$ 237,585	\$ 205,666	\$ 155,239
Total assets	\$ 365,725	\$ 375,319	\$ 321,686	\$ 290,345	\$ 231,839
Non-current portion of term debt	\$ 93,735	\$ 97,207	\$ 75,427	\$ 53,329	\$ 28,987
Other non-current liabilities	\$ 45,180	\$ 40,415	\$ 36,074	\$ 33,427	\$ 24,826

Apple Inc. | 2018 Form 10-K | 21

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This section and other parts of this Annual Report on Form 10-K ("Form 10-K") contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included in Part II, Item 8 of this Form 10-K. All information presented herein is based on the Company's fiscal calendar. Unless otherwise stated, references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly-owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

Overview and Highlights

The Company designs, manufactures and markets mobile communication and media devices and personal computers, and sells a variety of related software, services, accessories and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, AirPods, Apple TV, HomePod, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of other accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, Book Store and Apple Music (collectively "Digital Content and Services"). The Company sells its products worldwide through its retail stores, online stores and direct sales force as well as through third-party cellular network carriers, wholesalers, retailers and resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories, through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers.

Fiscal Period

The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company's fiscal years 2018 and 2016 spanned 52 weeks each whereas fiscal year 2017 included 53 weeks. A 14th week was included in the first quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters.

Fiscal 2018 Highlights

Net sales increased 16% or \$36.4 billion during 2018 compared to 2017, driven by higher net sales of iPhone, Services and Other Products. Net sales increased year-over-year in each of the geographic reportable segments.

In May 2018, the Company announced a new capital return program of \$100 billion and raised its quarterly dividend from \$0.63 to \$0.73 per share beginning in May 2018. During 2018, the Company spent \$73.1 billion to repurchase shares of its common stock and paid dividends and dividend equivalents of \$13.7 billion.

Fiscal 2017 Highlights

Net sales increased 6% or \$13.6 billion during 2017 compared to 2016, primarily driven by growth in Services, iPhone and Mac. The year-over-year increase in net sales reflected growth in each of the geographic reportable segments, with the exception of Greater China. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on net sales during 2017.

In May 2017, the Company announced an increase to its capital return program by raising the total size of the program from \$250 billion to \$300 billion. This included increasing its share repurchase authorization from \$175 billion to \$210 billion and raising its quarterly dividend from \$0.57 to \$0.63 per share beginning in May 2017. During 2017, the Company spent \$33.0 billion to repurchase shares of its common stock and paid dividends and dividend equivalents of \$12.8 billion. The \$210 billion share repurchase program was completed in the third quarter of 2018.

The Company issued \$24.0 billion of U.S. dollar-denominated term debt, 2.5 billion of euro-denominated term debt and C\$2.5 billion of Canadian dollar-denominated term debt during 2017.

Sales Data

The following table shows net sales by reportable segment and net sales and unit sales by product for 2018, 2017 and 2016 (dollars in millions and units in thousands):

	2018	Change	2017	Change	2016
Net Sales by Reportable Segment:					
Americas	\$ 112,093	16 %	\$ 96,600	12 %	\$ 86,613
Europe	62,420	14 %	54,938	10 %	49,952
Greater China	51,942	16 %	44,764	(8)%	48,492
Japan	21,733	23 %	17,733	5 %	16,928
Rest of Asia Pacific	17,407	15 %	15,199	11 %	13,654
Total net sales	<u>\$ 265,595</u>	16 %	<u>\$ 229,234</u>	6 %	<u>\$ 215,639</u>

Net Sales by Product:

iPhone (1)	\$ 166,699	18 %	\$ 141,319	3 %	\$ 136,700
iPad (1)	18,805	(2)%	19,222	(7)%	20,628
Mac (1)	25,484	(1)%	25,850	13 %	22,831
Services (2)	37,190	24 %	29,980	23 %	24,348
Other Products (1)(3)	17,417	35 %	12,863	16 %	11,132
Total net sales	<u>\$ 265,595</u>	16 %	<u>\$ 229,234</u>	6 %	<u>\$ 215,639</u>

Unit Sales by Product:

iPhone	217,722	□ %	216,756	2 %	211,884
iPad	43,535	□ %	43,753	(4)%	45,590
Mac	18,209	(5)%	19,251	4 %	18,484

(1) Includes deferrals and amortization of related software upgrade rights and non-software services.

(2) Includes revenue from Digital Content and Services, AppleCare, Apple Pay, licensing and other services. Services net sales in 2018 included a favorable one-time item of \$236 million in connection with the final resolution of various lawsuits. Services net sales in 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

(3) Includes sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and other Apple-branded and third-party accessories.

Product Performance*iPhone*

The following table presents iPhone net sales and unit sales information for 2018, 2017 and 2016 (dollars in millions and units in thousands):

	2018	Change	2017	Change	2016
Net sales	\$ 166,699	18%	\$ 141,319	3%	\$ 136,700
Percentage of total net sales	63%		62%		63%
Unit sales	217,722	□ %	216,756	2%	211,884

iPhone net sales increased during 2018 compared to 2017 due primarily to a different mix of iPhones resulting in higher average selling prices.

iPhone net sales increased during 2017 compared to 2016 due to higher iPhone unit sales and a different mix of iPhones with higher average selling prices. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on iPhone net sales during 2017.

iPad

The following table presents iPad net sales and unit sales information for 2018, 2017 and 2016 (dollars in millions and units in thousands):

	2018	Change	2017	Change	2016
Net sales	\$ 18,805	(2)%	\$ 19,222	(7)%	\$ 20,628
Percentage of total net sales	7%		8%		10%
Unit sales	43,535	□ %	43,753	(4)%	45,590

iPad net sales decreased during 2018 compared to 2017 due primarily to a different mix of iPads resulting in lower average selling prices. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on iPad net sales during 2018.

iPad net sales decreased during 2017 compared to 2016 due to lower iPad unit sales and a different mix of iPads with lower average selling prices. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on iPad net sales during 2017.

Mac

The following table presents Mac net sales and unit sales information for 2018, 2017 and 2016 (dollars in millions and units in thousands):

	2018	Change	2017	Change	2016
Net sales	\$ 25,484	(1)%	\$ 25,850	13%	\$ 22,831
Percentage of total net sales	10%		11%		11%
Unit sales	18,209	(5)%	19,251	4%	18,484

Mac net sales decreased during 2018 compared to 2017 due primarily to lower Mac unit sales, partially offset by a different mix of Macs with higher average selling prices. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Mac net sales during 2018.

Mac net sales increased during 2017 compared to 2016 due primarily to a different mix of Macs with higher average selling prices and higher Mac unit sales. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Mac net sales during 2017.

Services

The following table presents Services net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 37,190	24%	\$ 29,980	23%	\$ 24,348
Percentage of total net sales	14%		13%		11%

The year-over-year growth in Services net sales in 2018 was due primarily to licensing, App Store and AppleCare. During 2018, the Company recognized a favorable one-time item of \$236 million in connection with the final resolution of various lawsuits.

The year-over-year growth in Services net sales in 2017 was due primarily to increases in App Store and licensing sales. Services net sales in 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

Segment Operating Performance

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. Further information regarding the Company's reportable segments can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Segment Information and Geographic Data."

Americas

The following table presents Americas net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 112,093	16%	\$ 96,600	12%	\$ 86,613
Percentage of total net sales	42%		42%		40%

Americas net sales increased during 2018 compared to 2017 due to higher net sales of iPhone, Services and Other Products.

Americas net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone, Services and Mac.

Europe

The following table presents Europe net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 62,420	14%	\$ 54,938	10%	\$ 49,952
Percentage of total net sales	24%		24%		23%

Europe net sales increased during 2018 compared to 2017 due primarily to higher net sales of iPhone and Services. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Europe net sales during 2018.

Europe net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone and Services. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Europe net sales during 2017.

Greater China

The following table presents Greater China net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 51,942	16%	\$ 44,764	(8)%	\$ 48,492
Percentage of total net sales	20%		20%		22%

Greater China net sales increased during 2018 compared to 2017 due primarily to higher net sales of iPhone and Services. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Greater China net sales during 2018.

Greater China net sales decreased during 2017 compared to 2016 due primarily to lower net sales of iPhone, partially offset by higher net sales of Services. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Greater China net sales during 2017.

Japan

The following table presents Japan net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 21,733	23%	\$ 17,733	5%	\$ 16,928
Percentage of total net sales	8%		8%		8%

Japan net sales increased during 2018 compared to 2017 due primarily to higher net sales of iPhone and Services.

The year-over-year increase in Japan net sales in 2017 was due to higher net sales of Services and the strength in the Japanese yen relative to the U.S. dollar.

Rest of Asia Pacific

The following table presents Rest of Asia Pacific net sales information for 2018, 2017 and 2016 (dollars in millions):

	<u>2018</u>	<u>Change</u>	<u>2017</u>	<u>Change</u>	<u>2016</u>
Net sales	\$ 17,407	15%	\$ 15,199	11%	\$ 13,654
Percentage of total net sales	7%		7%		6%

Rest of Asia Pacific net sales increased during 2018 compared to 2017 due primarily to higher net sales of iPhone and Services. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Rest of Asia Pacific net sales during 2018.

Rest of Asia Pacific net sales increased during 2017 compared to 2016 due primarily to higher net sales of iPhone, Services and Mac. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on Rest of Asia Pacific net sales during 2017.

Gross Margin

Gross margin for 2018, 2017 and 2016 was as follows (dollars in millions):

	<u>2018</u>	<u>2017</u>	<u>2016</u>
Net sales	\$ 265,595	\$ 229,234	\$ 215,639
Cost of sales	163,756	141,048	131,376
Gross margin	\$ 101,839	\$ 88,186	\$ 84,263
Gross margin percentage	38.3%	38.5%	39.1%

Gross margin increased in 2018 compared to 2017 due primarily to a favorable shift in mix of iPhones with higher average selling prices and higher Services net sales, partially offset by higher product cost structures. Gross margin percentage decreased year-over-year due primarily to higher product cost structures, partially offset by higher Services net sales. The strength in foreign currencies relative to the U.S. dollar had a favorable impact on gross margin and gross margin percentage during 2018.

Gross margin increased in 2017 compared to 2016 due primarily to a shift in mix to Services and an overall increase in product volumes. Gross margin percentage decreased year-over-year due primarily to higher product costs, partially offset by a favorable shift in mix to Services. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on gross margin and gross margin percentage during 2017.

The Company anticipates gross margin percentage during the first quarter of 2019 to be between 38.0% and 38.5%. The foregoing statement regarding the Company's expected gross margin percentage in the first quarter of 2019 is forward-looking and could differ from actual results. The Company's future gross margins can be impacted by multiple factors including, but not limited to, those set forth in Part I, Item 1A of this Form 10-K under the heading "Risk Factors" and those described in this paragraph. In general, the Company believes gross margins will be subject to volatility and remain under downward pressure due to a variety of factors, including: continued industry-wide global product pricing pressures and product pricing actions that the Company may take in response to such pressures; increased competition; the Company's ability to effectively stimulate demand for certain of its products; compressed product life cycles; potential increases in the cost of components and outside manufacturing services; the Company's ability to manage product quality and warranty costs effectively; shifts in the mix of products and services, or in the geographic, currency or channel mix; fluctuations in exchange rates; and costs associated with the Company's frequent introductions and transitions of products and services.

Operating Expenses

Operating expenses for 2018, 2017 and 2016 were as follows (dollars in millions):

	2018	Change	2017	Change	2016
Research and development	\$ 14,236	23%	\$ 11,581	15%	\$ 10,045
Percentage of total net sales	5%		5%		5%
Selling, general and administrative	\$ 16,705	9%	\$ 15,261	8%	\$ 14,194
Percentage of total net sales	6%		7%		7%
Total operating expenses	\$ 30,941	15%	\$ 26,842	11%	\$ 24,239
Percentage of total net sales	12%		12%		11%

Research and Development

The year-over-year growth in R&D expense in 2018 was driven primarily by increases in headcount-related expenses, infrastructure-related costs and material costs to support expanded R&D activities. R&D expense increased during 2017 compared to 2016 due primarily to increases in headcount-related expenses and material costs to support expanded R&D activities. The Company continues to believe that focused investments in R&D are critical to its future growth and competitive position in the marketplace, and to the development of new and updated products and services that are central to the Company's core business strategy.

Selling, General and Administrative

The year-over-year growth in selling, general and administrative expense in 2018 was driven primarily by increases in headcount-related expenses, professional services and infrastructure-related costs. The increase in selling, general and administrative expense in 2017 compared to 2016 was driven primarily by an increase in headcount-related expenses, variable selling expenses and infrastructure-related costs.

Other Income/(Expense), Net

Other income/(expense), net for 2018, 2017 and 2016 was as follows (dollars in millions):

	2018	Change	2017	Change	2016
Interest and dividend income	\$ 5,686		\$ 5,201		\$ 3,999
Interest expense	(3,240)		(2,323)		(1,456)
Other expense, net	(441)		(133)		(1,195)
Total other income/(expense), net	\$ 2,005	(27)%	\$ 2,745	104%	\$ 1,348

The year-over-year decrease in other income/(expense), net during 2018 was due primarily to higher interest expense on debt and the impact of foreign exchange-related items, partially offset by higher interest income. The year-over-year increase in other income/(expense), net during 2017 was due primarily to higher interest income and the favorable impact of foreign exchange-related items, partially offset by higher interest expense on debt. The weighted-average interest rate earned by the Company on its cash, cash equivalents and marketable securities was 2.16%, 1.99% and 1.73% in 2018, 2017 and 2016, respectively.

Provision for Income Taxes

Provision for income taxes and effective tax rates for 2018, 2017 and 2016 were as follows (dollars in millions):

	2018	2017	2016
Provision for income taxes	\$ 13,372	\$ 15,738	\$ 15,685
Effective tax rate	18.3%	24.6%	25.6%

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the "Act"), which significantly changed U.S. tax law. The Act lowered the Company's U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018, while also imposing a deemed repatriation tax on previously deferred foreign income. By operation of law, the Company applied a blended U.S. statutory federal income tax rate of 24.5% for 2018 (the "2018 blended U.S. tax rate"). The Act also created a new minimum tax on certain future foreign earnings.

The Company's effective tax rate for 2018 was lower than the 2018 blended U.S. tax rate due primarily to the lower tax rate on foreign earnings, partially offset by the remeasurement of deferred tax assets and liabilities as a result of the Act.

The Company's effective tax rates for 2017 and 2016 were lower than the historical statutory federal income tax rate of 35% due primarily to certain undistributed foreign earnings, a substantial portion of which was generated by subsidiaries organized in Ireland, for which no U.S. taxes were provided when such earnings were intended to be indefinitely reinvested outside the U.S.

The lower effective tax rate in 2018 compared to 2017 was due primarily to the lower 2018 blended U.S. tax rate, partially offset by the remeasurement of deferred tax assets and liabilities as a result of the Act. The lower effective tax rate in 2017 compared to 2016 was due to a different geographic mix of earnings and higher U.S. R&D tax credits.

As a result of adopting Accounting Standards Update ("ASU") No. 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), in 2018, the Company records any excess tax benefits or deficiencies from its equity awards as part of the provision for income taxes. The Company anticipates that these excess tax benefits or deficiencies will have the greatest impact on its effective tax rates in the first and third quarters, as the majority of the Company's equity awards vest in those quarters.

As of September 29, 2018, the Company had deferred tax assets arising from deductible temporary differences, tax losses and tax credits of \$6.3 billion and deferred tax liabilities of \$426 million. Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, together with future reversals of existing taxable temporary differences, will be sufficient to recover the deferred tax assets. The Company will continue to evaluate the realizability of deferred tax assets quarterly by assessing the need for and the amount of a valuation allowance.

On August 30, 2016, the European Commission announced its decision that Ireland granted state aid to the Company by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of the Company (the "State Aid Decision"). The State Aid Decision ordered Ireland to calculate and recover additional taxes from the Company for the period June 2003 through December 2014. The recovery amount was calculated to be €13.1 billion, plus interest of €1.2 billion. Irish legislative changes, effective as of January 2015, eliminated the application of the tax opinions from that date forward. The Company believes the State Aid Decision to be without merit and appealed to the General Court of the Court of Justice of the European Union. Ireland has also appealed the State Aid Decision. The Company believes that any incremental Irish corporate income taxes potentially due related to the State Aid Decision would be creditable against U.S. taxes, subject to any foreign tax credit limitations in the Act. As of September 29, 2018, the entire recovery amount plus interest was funded into escrow, where it will remain restricted from general use pending conclusion of all appeals.

On July 24, 2018, the U.S. Ninth Circuit Court of Appeals reversed the U.S. Tax Court's decision in *Altera Corp v. Commissioner*, regarding the inclusion of share-based compensation in cost-sharing arrangements with foreign subsidiaries. The reversal was subsequently withdrawn, and the Company believes adequate provision has been made for any adjustments that may result from the final resolution of the case.

Recent Accounting Pronouncements

Hedging

In August 2017, the Financial Accounting Standards Board (the "FASB") issued ASU No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"). ASU 2017-12 expands component and fair value hedging, specifies the presentation of the effects of hedging instruments, and eliminates the separate measurement and presentation of hedge ineffectiveness. The Company will adopt ASU 2017-12 in its first quarter of 2020 utilizing the modified retrospective transition method and is currently evaluating the impact of adoption on its consolidated financial statements.

Income Taxes

In October 2016, the FASB issued ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory* (□ASU 2016-16□), which requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The Company will adopt ASU 2016-16 in its first quarter of 2019 utilizing the modified retrospective transition method. Currently, the Company estimates recording \$3 billion of net deferred tax assets on its Condensed Consolidated Balance Sheets upon adoption. However, the ultimate impact of adopting ASU 2016-16 will depend on the balance of intellectual property transferred between its subsidiaries as of the adoption date, as well as the deferred tax impact of the new minimum tax on certain future foreign earnings. The Company will recognize incremental deferred income tax expense thereafter as these net deferred tax assets are utilized.

Leases

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (□ASU 2016-02□), which modifies lease accounting for lessees to increase transparency and comparability by recording lease assets and liabilities for operating leases and disclosing key information about leasing arrangements. The Company will adopt ASU 2016-02 utilizing the modified retrospective transition method through a cumulative-effect adjustment at the beginning of its first quarter of 2020. While the Company is currently evaluating the impact of adopting ASU 2016-02, based on the lease portfolio as of September 29, 2018, the Company anticipates recording lease assets and liabilities of approximately \$8.9 billion on its Condensed Consolidated Balance Sheets, with no material impact to its Condensed Consolidated Statements of Operations. However, the ultimate impact of adopting ASU 2016-02 will depend on the Company's lease portfolio as of the adoption date.

Financial Instruments

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities* (□ASU 2016-01□), which updates certain aspects of recognition, measurement, presentation and disclosure of financial instruments. The Company will adopt ASU 2016-01 in its first quarter of 2019 utilizing the modified retrospective transition method. Based on the composition of the Company's investment portfolio, the adoption of ASU 2016-01 is not expected to have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* (□ASU 2016-13□), which modifies the measurement of expected credit losses of certain financial instruments. The Company will adopt ASU 2016-13 in its first quarter of 2021 utilizing the modified retrospective transition method. Based on the composition of the Company's investment portfolio, current market conditions, and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on its consolidated financial statements.

Revenue Recognition

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* (□ASU 2014-09□), which amends the existing accounting standard for revenue recognition. ASU 2014-09 is based on principles that govern the recognition of revenue at an amount an entity expects to be entitled when products are transferred to customers.

Subsequently, the FASB issued additional ASUs to clarify the guidance in ASU 2014-09. ASU 2014-09 and its related ASUs are collectively referred to herein as the □new revenue standard.□ The new revenue standard may be applied retrospectively to each prior period presented or retrospectively with the cumulative effect recognized as of the date of adoption. The Company will adopt the new revenue standard in its first quarter of 2019 utilizing the full retrospective transition method. The new revenue standard will not have a material impact on the amount and timing of revenue recognized in the Company's consolidated financial statements.

Liquidity and Capital Resources

The following table presents selected financial information and statistics as of and for the years ended September 29, 2018, September 30, 2017 and September 24, 2016 (in millions):

	2018	2017	2016
Cash, cash equivalents and marketable securities (1)	\$ 237,100	\$ 268,895	\$ 237,585
Property, plant and equipment, net	\$ 41,304	\$ 33,783	\$ 27,010
Commercial paper	\$ 11,964	\$ 11,977	\$ 8,105
Total term debt	\$ 102,519	\$ 103,703	\$ 78,927
Working capital	\$ 14,473	\$ 27,831	\$ 27,863
Cash generated by operating activities (2)	\$ 77,434	\$ 64,225	\$ 66,231
Cash generated by/(used in) investing activities	\$ 16,066	\$ (46,446)	\$ (45,977)
Cash used in financing activities (2)	\$ (87,876)	\$ (17,974)	\$ (20,890)

(1) As of September 29, 2018, total cash, cash equivalents and marketable securities included \$20.3 billion that was restricted from general use, related to the State Aid Decision and other agreements.

(2) Refer to Note 1, Summary of Significant Accounting Policies in the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K for more information on the prior period reclassification related to the Company's adoption of ASU 2016-09.

The Company believes its existing balances of cash, cash equivalents and marketable securities will be sufficient to satisfy its working capital needs, capital asset purchases, outstanding commitments and other liquidity requirements associated with its existing operations over the next 12 months. The Company currently anticipates the cash used for future dividends, the share repurchase program and debt repayments will come from its current cash and cash generated from ongoing operating activities.

In connection with the State Aid Decision, as of September 29, 2018, the entire recovery amount of \$13.1 billion plus interest of \$1.2 billion was funded into escrow, where it will remain restricted from general use pending conclusion of all appeals.

The Company's marketable securities investment portfolio is primarily invested in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer.

During 2018, cash generated by operating activities of \$77.4 billion was a result of \$59.5 billion of net income and an increase in the net change in operating assets and liabilities of \$34.7 billion, partially offset by non-cash adjustments to net income of \$16.8 billion. Cash generated by investing activities of \$16.1 billion during 2018 consisted primarily of proceeds from maturities and sales of marketable securities, net of purchases, of \$32.4 billion, partially offset by cash used to acquire property, plant and equipment of \$13.3 billion. Cash used in financing activities of \$87.9 billion during 2018 consisted primarily of cash used to repurchase common stock of \$72.7 billion, cash used to pay dividends and dividend equivalents of \$13.7 billion and cash used to repay term debt of \$6.5 billion, partially offset by proceeds from the issuance of term debt, net of \$7.0 billion.

During 2017, cash generated by operating activities of \$64.2 billion was a result of \$48.4 billion of net income, non-cash adjustments to net income of \$20.8 billion and a decrease in the net change in operating assets and liabilities of \$4.9 billion, which included a one-time payment of \$1.9 billion related to a multi-year license agreement. Cash used in investing activities of \$46.4 billion during 2017 consisted primarily of cash used for purchases of marketable securities, net of sales and maturities, of \$33.1 billion and cash used to acquire property, plant and equipment of \$12.5 billion. Cash used in financing activities of \$18.0 billion during 2017 consisted primarily of cash used to repurchase common stock of \$32.9 billion, cash used to pay dividends and dividend equivalents of \$12.8 billion and cash used to repay term debt of \$3.5 billion, partially offset by proceeds from the issuance of term debt, net of \$28.7 billion and proceeds from commercial paper, net of \$3.9 billion.

Capital Assets

The Company's capital expenditures were \$16.7 billion during 2018. The Company anticipates utilizing approximately \$14.0 billion for capital expenditures during 2019, which includes product tooling and manufacturing process equipment; data centers; corporate facilities and infrastructure, including information systems hardware, software and enhancements; and retail store facilities.

Debt

The Company issues unsecured short-term promissory notes (Commercial Paper) pursuant to a commercial paper program. The Company uses the net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of September 29, 2018, the Company had \$12.0 billion of Commercial Paper outstanding, with a weighted-average interest rate of 2.18% and maturities generally less than nine months.

As of September 29, 2018, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$104.2 billion (collectively the "Notes"). During 2018, the Company issued \$7.0 billion and repaid \$6.5 billion of Notes. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on the Notes. In addition, the Company has entered, and in the future may enter, into foreign currency swaps to manage foreign currency risk on the Notes.

Further information regarding the Company's debt issuances and related hedging activity can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 2, "Financial Instruments" and Note 5, "Debt."

Capital Return Program

During 2018, the Company repurchased 405.5 million shares of its common stock for \$73.1 billion in connection with two separate share repurchase programs. Of the \$73.1 billion, \$44.0 billion was repurchased under the Company's previous share repurchase program of up to \$210 billion, thereby completing that program. On May 1, 2018, the Company announced the Board of Directors had authorized a new program to repurchase up to \$100 billion of the Company's common stock. The remaining \$29.0 billion repurchased during 2018 was in connection with the new share repurchase program. The Company's new share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

On May 1, 2018, the Company also announced the Board of Directors raised the Company's quarterly cash dividend from \$0.63 to \$0.73 per share, beginning with the dividend paid during the third quarter of 2018. The Company intends to increase its dividend on an annual basis, subject to declaration by the Board of Directors. The Company plans to use current cash and cash generated from ongoing operating activities to fund its share repurchase program and quarterly cash dividend.

Contractual Obligations

The following table presents certain payments due by the Company as of September 29, 2018, and excludes amounts already recorded on the Consolidated Balance Sheet, except for term debt and the deemed repatriation tax payable (in millions):

	Payments Due in 2019	Payments Due in 2020–2021	Payments Due in 2022–2023	Payments Due After 2023	Total
Term debt	\$ 8,797	\$ 18,933	\$ 17,978	\$ 58,485	\$ 104,193
Operating leases	1,298	2,507	1,838	3,984	9,627
Manufacturing purchase obligations (1)	41,548	2,469	1,183	□	45,200
Other purchase obligations	3,784	2,482	681	66	7,013
Deemed repatriation tax payable	□	5,366	5,942	22,281	33,589
Total	\$ 55,427	\$ 31,757	\$ 27,622	\$ 84,816	\$ 199,622

(1) Represents amount expected to be paid under manufacturing-related supplier arrangements, substantially all of which is noncancelable.

Operating Leases

The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Manufacturing Purchase Obligations

The Company utilizes several outsourcing partners to manufacture sub-assemblies for the Company's products and to perform final assembly and testing of finished products. These outsourcing partners acquire components and build product based on demand information supplied by the Company, which typically covers periods up to 150 days. The Company also obtains individual components for its products from a wide variety of individual suppliers.

Other Purchase Obligations

The Company's other purchase obligations consist of noncancelable obligations to acquire capital assets, including product tooling and manufacturing process equipment, and noncancelable obligations related to advertising, licensing, R&D, internet and telecommunications services, content creation and other activities.

Deemed Repatriation Tax Payable

As of September 29, 2018, a significant portion of the other non-current liabilities in the Company's Consolidated Balance Sheet consisted of the deemed repatriation tax payable imposed by the Act. The Company plans to pay the deemed repatriation tax payable in installments in accordance with the Act.

Other Non-Current Liabilities

The Company's remaining other non-current liabilities primarily consist of items for which the Company is unable to make a reasonably reliable estimate of the timing of payments; therefore, such amounts are not included in the above contractual obligation table.

Indemnification

Agreements entered into by the Company may include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party. Except as disclosed in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 9, "Commitments and Contingencies" under the heading "Contingencies," in the opinion of management, there was not at least a reasonable possibility the Company may have incurred material loss, or a material loss in excess of a recorded accrual, with respect to indemnification of third parties.

The Company offers an iPhone Upgrade Program, which is available to customers who purchase a qualifying iPhone in the U.S., the U.K. and mainland China. The iPhone Upgrade Program provides customers the right to trade in that iPhone for a specified amount when purchasing a new iPhone, provided certain conditions are met. The Company accounts for the trade-in right as a guarantee liability and recognizes arrangement revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within revenue.

The Company has entered into indemnification agreements with its directors and executive officers. Under these agreements, the Company has agreed to indemnify such individuals to the fullest extent permitted by law against liabilities that arise by reason of their status as directors or officers of the Company, and to advance expenses incurred by such individuals in connection with related legal proceedings. It is not possible to determine the maximum potential amount of payments the Company could be required to make under these agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each claim. While the Company maintains directors and officers liability insurance coverage, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with U.S. generally accepted accounting principles ("GAAP") and the Company's discussion and analysis of its financial condition and operating results require the Company's management to make judgments, assumptions and estimates that affect the amounts reported in its consolidated financial statements and accompanying notes. Note 1, "Summary of Significant Accounting Policies," of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K describes the significant accounting policies and methods used in the preparation of the Company's consolidated financial statements. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates, and such differences may be material.

Management believes the Company's critical accounting policies and estimates are those related to revenue recognition, valuation and impairment of marketable securities, inventory valuation, valuation of manufacturing-related assets and estimation of purchase commitment cancellation fees, warranty costs, income taxes, and legal and other contingencies. Management considers these policies critical because they are both important to the portrayal of the Company's financial condition and operating results, and they require management to make judgments and estimates about inherently uncertain matters. The Company's senior management has reviewed these critical accounting policies and related disclosures with the Audit and Finance Committee of the Company's Board of Directors.

Revenue Recognition

Net sales consist primarily of revenue from the sale of hardware, software, digital content and applications, accessories, and service and support contracts. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collection is probable. Product is considered delivered to the customer once it has been shipped and title, risk of loss and rewards of ownership have been transferred. For most of the Company's product sales, these criteria are met at the time the product is shipped. For online sales to individuals, for some sales to education customers in the U.S., and for certain other sales, the Company defers revenue until the customer receives the product because the Company retains a portion of the risk of loss on these sales during transit. For payment terms in excess of the Company's standard payment terms, revenue is recognized as payments become due unless the Company has positive evidence that the sales price is fixed or determinable, such as a successful history of collection, without concession, on comparable arrangements. The Company recognizes revenue from the sale of hardware products, software bundled with hardware that is essential to the functionality of the hardware and third-party digital content sold on the iTunes Store in accordance with general revenue recognition accounting guidance. The Company recognizes revenue in accordance with industry-specific software accounting guidance for the following types of sales transactions: (i) standalone sales of software products, (ii) sales of software upgrades and (iii) sales of software bundled with hardware not essential to the functionality of the hardware.

For multi-element arrangements that include hardware products containing software essential to the hardware product's functionality, undelivered software elements that relate to the hardware product's essential software and/or undelivered non-software services, the Company allocates revenue to all deliverables based on their relative selling prices. In such circumstances, the Company uses a hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence of fair value (VSOE), (ii) third-party evidence of selling price (TPE) and (iii) best estimate of selling price (ESP). VSOE generally exists only the Company sells the deliverable separately and is the price actually charged by the Company for that deliverable. ESPs reflect the Company's best estimates of what the selling prices of elements would be if they were sold regularly on a stand-alone basis.

For sales of iPhone, iPad, Mac and certain other products, the Company has indicated it may from time to time provide future unspecified software upgrades to the device's essential software and/or non-software services free of charge. Because the Company has neither VSOE nor TPE for the unspecified software upgrade rights or the non-software services, revenue is allocated to these rights and services based on the Company's ESPs. Revenue allocated to the unspecified software upgrade rights and non-software services based on the Company's ESPs is deferred and recognized on a straight-line basis over the estimated period the software upgrades and non-software services are expected to be provided.

The Company's process for determining ESPs involves management's judgment and considers multiple factors that may vary over time depending upon the unique fact and circumstances related to each deliverable. Should future facts and circumstances change, the Company's ESPs and the future rate of related amortization for unspecified software upgrades and non-software services related to future sales of these devices could change. Factors subject to change include the unspecified software upgrade rights and non-software services offered, the estimated value of unspecified software upgrade rights and non-software services and the estimated period unspecified software upgrades and non-software services are expected to be provided.

The Company records reductions to revenue for estimated commitments related to price protection and other customer incentive programs. For transactions involving price protection, the Company recognizes revenue net of the estimated amount to be refunded, provided the refund amount can be reasonably and reliably estimated and the other conditions for revenue recognition have been met. The Company's policy requires that, if refunds cannot be reliably estimated, revenue is not recognized until reliable estimates can be made or the price protection lapses. For the Company's other customer incentive programs, the estimated cost is recognized at the later of the date at which the Company has sold the product or the date at which the program is offered. The Company also records reductions to revenue for expected future product returns based on the Company's historical experience. Future market conditions and product transitions may require the Company to increase customer incentive programs that could result in reductions to future revenue. Additionally, certain customer incentive programs require management to estimate the number of customers who will actually redeem the incentive. Management's estimates are based on historical experience and the specific terms and conditions of particular incentive programs. If a greater than estimated proportion of customers redeems such incentives, the Company would be required to record additional reductions to revenue, which would have an adverse impact on the Company's operating results.

Valuation and Impairment of Marketable Securities

The Company's investments in available-for-sale securities are reported at fair value. Unrealized gains and losses related to changes in the fair value of securities are generally recognized in accumulated other comprehensive income, net of tax, in the Company's Consolidated Balance Sheets. Changes in the fair value of available-for-sale securities impact the Company's net income only when such securities are sold or an other-than-temporary impairment is recognized. Realized gains and losses on the sale of securities are determined by specific identification of each security's cost basis. The Company regularly reviews its investment portfolio to determine if any security is other-than-temporarily impaired, which would require the Company to record an impairment charge in the period any such determination is made. In making this determination, the Company evaluates, among other things, the duration and extent to which the fair value of a security is less than its cost; the financial condition of the issuer and any changes thereto; and the Company's intent to sell, or whether it will more likely than not be required to sell, the security before recovery of its amortized cost basis. The Company's assessment of whether a security is other-than-temporarily impaired could change in the future due to new developments or changes in assumptions related to any particular security, which would have an adverse impact on the Company's financial condition and operating results.

Inventory Valuation, Valuation of Manufacturing-Related Assets and Estimation of Purchase Commitment Cancellation Fees

The Company purchases components and builds inventory in advance of product shipments and invests in manufacturing-related assets, including capital assets held at its suppliers' facilities. In addition, the Company makes prepayments to certain of its suppliers associated with long-term supply agreements to secure supply of inventory. The Company performs a regular review of inventory that considers multiple factors including demand forecasts, product life cycle status, product development plans, current sales levels and component cost trends. If the Company determines inventories of components and products, including third-party products held for resale, have become obsolete or are in excess of anticipated demand or net realizable value, it records a write-down of the inventories. The Company also reviews its manufacturing-related capital assets and inventory prepayments for impairment whenever events or circumstances indicate the carrying amount of such assets may not be recoverable. If the Company determines that an asset is not recoverable, it records an impairment loss equal to the amount by which the carrying value of such an asset exceeds its fair value. Any write-downs and/or impairments the Company may be required to record would adversely affect the Company's financial condition and operating results.

The Company accrues for estimated purchase commitment cancellation fees related to inventory orders that have been canceled or are expected to be canceled. Manufacturing purchase obligations cover the Company's forecasted component and manufacturing requirements, typically for periods up to 150 days. If there is an abrupt and substantial decline in demand for one or more of the Company's products, a change in the Company's product development plans, or an unanticipated change in technological requirements for any of the Company's products, the Company may be required to record accruals for cancellation fees that would adversely affect its operating results.

Warranty Costs

The Company accrues the estimated cost of warranties in the period the related revenue is recognized based on historical and projected warranty claim rates, historical and projected cost per claim and knowledge of specific product failures outside of the Company's typical experience. The Company regularly reviews these estimates and adjusts the amounts as necessary. If actual product failure rates or repair costs differ from estimates, revisions to the estimated warranty liabilities would be required and could materially affect the Company's financial condition and operating results.

Income Taxes

The Company records a tax provision for the anticipated tax consequences of its reported operating results. The provision for income taxes is computed using the asset and liability method, under which deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the financial reporting and tax bases of assets and liabilities, and for operating losses and tax credit carryforwards. Deferred tax assets and liabilities are measured using the currently enacted tax rates that will be in effect for the years in which those tax assets and liabilities are expected to be realized or settled. The Company records a valuation allowance to reduce deferred tax assets to the amount that is believed more likely than not to be realized.

The Company recognizes tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement.

Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, together with future reversals of existing taxable temporary differences, will be sufficient to recover the Company's deferred tax assets. In the event that the Company determines all or part of its net deferred tax assets are not realizable in the future, the Company will record an adjustment to the valuation allowance and a corresponding charge to earnings in the period such determination is made. In addition, the calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of GAAP and complex tax laws. Resolution of these uncertainties in a manner inconsistent with management's expectations could have a material impact on the Company's financial condition and operating results.

On December 22, 2017, the U.S. enacted the Act, which significantly changed U.S. tax law. The Act lowered the Company's U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018, while also imposing a deemed repatriation tax on previously deferred foreign income. The Act also created a new minimum tax on certain future foreign earnings. The impact of the Act increased the Company's provision for income taxes by \$1.5 billion during 2018. This increase was composed of \$2.0 billion related to the remeasurement of net deferred tax assets and liabilities and \$1.2 billion associated with the deemed repatriation tax, partially offset by a \$1.7 billion impact the deemed repatriation tax had on the Company's unrecognized tax benefits. Certain amounts reported by the Company related to the Act are provisional estimates in accordance with the SEC Staff Accounting Bulletin No. 118. Resolution of the Act's effects different from the assumptions made by the Company could have a material impact on the Company's financial condition and operating results.

Legal and Other Contingencies

As discussed in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings" and in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 9, "Commitments and Contingencies," the Company is subject to various legal proceedings and claims that arise in the ordinary course of business. The Company records a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 9, "Commitments and Contingencies" under the heading "Contingencies," in the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Interest Rate and Foreign Currency Risk Management

The Company regularly reviews its foreign exchange forward and option positions and interest rate swaps, both on a stand-alone basis and in conjunction with its underlying foreign currency and interest rate exposures. Given the effective horizons of the Company's risk management activities and the anticipatory nature of the exposures, there can be no assurance these positions will offset more than a portion of the financial impact resulting from movements in either foreign exchange or interest rates. Further, the recognition of the gains and losses related to these instruments may not coincide with the timing of gains and losses related to the underlying economic exposures and, therefore, may adversely affect the Company's financial condition and operating results.

Interest Rate Risk

The Company's exposure to changes in interest rates relates primarily to the Company's investment portfolio and outstanding debt. While the Company is exposed to global interest rate fluctuations, the Company's interest income and expense are most sensitive to fluctuations in U.S. interest rates. Changes in U.S. interest rates affect the interest earned on the Company's cash, cash equivalents and marketable securities and the fair value of those securities, as well as costs associated with hedging and interest paid on the Company's debt.

The Company's investment policy and strategy are focused on preservation of capital and supporting the Company's liquidity requirements. The Company uses a combination of internal and external management to execute its investment strategy and achieve its investment objectives. The Company typically invests in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer. To provide a meaningful assessment of the interest rate risk associated with the Company's investment portfolio, the Company performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investment portfolio assuming a 100 basis point parallel shift in the yield curve. Based on investment positions as of September 29, 2018 and September 30, 2017, a hypothetical 100 basis point increase in interest rates across all maturities would result in a \$4.9 billion and \$6.0 billion incremental decline in the fair market value of the portfolio, respectively. Such losses would only be realized if the Company sold the investments prior to maturity.

As of September 29, 2018 and September 30, 2017, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate carrying amount of \$102.5 billion and \$103.7 billion, respectively. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on its outstanding term debt. Interest rate swaps allow the Company to effectively convert fixed-rate payments into floating-rate payments or floating-rate payments into fixed-rate payments. Gains and losses on term debt are generally offset by the corresponding losses and gains on the related hedging instrument. A 100 basis point increase in market interest rates would cause interest expense on the Company's debt as of September 29, 2018 and September 30, 2017 to increase by \$399 million and \$376 million on an annualized basis, respectively.

Further details regarding the Company's debt is provided in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 5, "Debt."

Foreign Currency Risk

In general, the Company is a net receiver of currencies other than the U.S. dollar. Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, will negatively affect the Company's net sales and gross margins as expressed in U.S. dollars. There is a risk that the Company will have to adjust local currency product pricing due to competitive pressures when there has been significant volatility in foreign currency exchange rates.

The Company may enter into foreign currency forward and option contracts with financial institutions to protect against foreign exchange risks associated with certain existing assets and liabilities, certain firmly committed transactions, forecasted future cash flows and net investments in foreign subsidiaries. In addition, the Company has entered, and in the future may enter, into foreign currency contracts to partially offset the foreign currency exchange gains and losses on its foreign currency-denominated debt issuances. The Company generally hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months. However, the Company may choose not to hedge certain foreign exchange exposures for a variety of reasons including, but not limited to, accounting considerations or the prohibitive economic cost of hedging particular exposures.

To provide a meaningful assessment of the foreign currency risk associated with certain of the Company's foreign currency derivative positions, the Company performed a sensitivity analysis using a value-at-risk ("VAR") model to assess the potential impact of fluctuations in exchange rates. The VAR model consisted of using a Monte Carlo simulation to generate thousands of random market price paths assuming normal market conditions. The VAR is the maximum expected loss in fair value, for a given confidence interval, to the Company's foreign currency derivative positions due to adverse movements in rates. The VAR model is not intended to represent actual losses but is used as a risk estimation and management tool. Forecasted transactions, firm commitments and assets and liabilities denominated in foreign currencies were excluded from the model. Based on the results of the model, the Company estimates with 95% confidence, a maximum one-day loss in fair value of \$592 million as of September 29, 2018 compared to a maximum one-day loss in fair value of \$485 million as of September 30, 2017. Because the Company uses foreign currency instruments for hedging purposes, the losses in fair value incurred on those instruments are generally offset by increases in the fair value of the underlying exposures.

Actual future gains and losses associated with the Company's investment portfolio, debt and derivative positions may differ materially from the sensitivity analyses performed as of September 29, 2018 due to the inherent limitations associated with predicting the timing and amount of changes in interest rates, foreign currency exchange rates and the Company's actual exposures and positions.

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	38
Consolidated Statements of Comprehensive Income for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	39
Consolidated Balance Sheets as of September 29, 2018 and September 30, 2017	40
Consolidated Statements of Shareholders' Equity for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	41
Consolidated Statements of Cash Flows for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	42
Notes to Consolidated Financial Statements	43
Selected Quarterly Financial Information (Unaudited)	64
Reports of Independent Registered Public Accounting Firm	65

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto.

Apple Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Net sales	\$ 265,595	\$ 229,234	\$ 215,639
Cost of sales	163,756	141,048	131,376
Gross margin	101,839	88,186	84,263
Operating expenses:			
Research and development	14,236	11,581	10,045
Selling, general and administrative	16,705	15,261	14,194
Total operating expenses	30,941	26,842	24,239
Operating income	70,898	61,344	60,024
Other income/(expense), net	2,005	2,745	1,348
Income before provision for income taxes	72,903	64,089	61,372
Provision for income taxes	13,372	15,738	15,685
Net income	\$ 59,531	\$ 48,351	\$ 45,687
Earnings per share:			
Basic	\$ 12.01	\$ 9.27	\$ 8.35
Diluted	\$ 11.91	\$ 9.21	\$ 8.31
Shares used in computing earnings per share:			
Basic	4,955,377	5,217,242	5,470,820
Diluted	5,000,109	5,251,692	5,500,281

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2018 Form 10-K | 38

Apple Inc.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Net income	\$ 59,531	\$ 48,351	\$ 45,687
Other comprehensive income/(loss):			
Change in foreign currency translation, net of tax effects of \$(1), \$(77) and \$8, respectively	(525)	224	75
Change in unrealized gains/losses on derivative instruments:			
Change in fair value of derivatives, net of tax benefit/(expense) of \$(149), \$(478) and \$(7), respectively	523	1,315	7
Adjustment for net (gains)/losses realized and included in net income, net of tax expense/(benefit) of \$(104), \$475 and \$131, respectively	382	(1,477)	(741)
Total change in unrealized gains/losses on derivative instruments, net of tax	905	(162)	(734)
Change in unrealized gains/losses on marketable securities:			
Change in fair value of marketable securities, net of tax benefit/(expense) of \$1,156, \$425 and \$(863), respectively	(3,407)	(782)	1,582
Adjustment for net (gains)/losses realized and included in net income, net of tax expense/(benefit) of \$21, \$35 and \$(31), respectively	1	(64)	56
Total change in unrealized gains/losses on marketable securities, net of tax	(3,406)	(846)	1,638
Total other comprehensive income/(loss)	(3,026)	(784)	979
Total comprehensive income	<u>\$ 56,505</u>	<u>\$ 47,567</u>	<u>\$ 46,666</u>

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2018 Form 10-K | 39

Apple Inc.

CONSOLIDATED BALANCE SHEETS

(In millions, except number of shares which are reflected in thousands and par value)

	September 29, 2018	September 30, 2017
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 25,913	\$ 20,289
Marketable securities	40,388	53,892
Accounts receivable, net	23,186	17,874
Inventories	3,956	4,855
Vendor non-trade receivables	25,809	17,799
Other current assets	12,087	13,936
Total current assets	131,339	128,645
Non-current assets:		
Marketable securities	170,799	194,714
Property, plant and equipment, net	41,304	33,783
Other non-current assets	22,283	18,177
Total non-current assets	234,386	246,674
Total assets	\$ 365,725	\$ 375,319
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	\$ 55,888	\$ 44,242
Other current liabilities	32,687	30,551
Deferred revenue	7,543	7,548
Commercial paper	11,964	11,977
Term debt	8,784	6,496
Total current liabilities	116,866	100,814
Non-current liabilities:		
Deferred revenue	2,797	2,836
Term debt	93,735	97,207
Other non-current liabilities	45,180	40,415
Total non-current liabilities	141,712	140,458
Total liabilities	258,578	241,272
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 4,754,986 and 5,126,201 shares issued and outstanding, respectively	40,201	35,867
Retained earnings	70,400	98,330
Accumulated other comprehensive income/(loss)	(3,454)	(150)
Total shareholders' equity	107,147	134,047
Total liabilities and shareholders' equity	\$ 365,725	\$ 375,319

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2018 Form 10-K | 40

Apple Inc.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY

(In millions, except number of shares which are reflected in thousands and per share amounts)

	Common Stock and Additional Paid-In Capital		Retained Earnings	Accumulated Other Comprehensive Income/(Loss)	Total Shareholders' Equity
	Shares	Amount			
Balances as of September 26, 2015	5,578,753	\$ 27,416	\$ 92,284	\$ (345)	\$ 119,355
Net income	□	□	45,687	□	45,687
Other comprehensive income/(loss)	□	□	□	979	979
Dividends and dividend equivalents declared at \$2.18 per share or RSU	□	□	(12,188)	□	(12,188)
Repurchase of common stock	(279,609)	□	(29,000)	□	(29,000)
Share-based compensation	□	4,262	□	□	4,262
Common stock issued, net of shares withheld for employee taxes	37,022	(806)	(419)	□	(1,225)
Tax benefit from equity awards, including transfer pricing adjustments	□	379	□	□	379
Balances as of September 24, 2016	5,336,166	31,251	96,364	634	128,249
Net income	□	□	48,351	□	48,351
Other comprehensive income/(loss)	□	□	□	(784)	(784)
Dividends and dividend equivalents declared at \$2.40 per share or RSU	□	□	(12,803)	□	(12,803)
Repurchase of common stock	(246,496)	□	(33,001)	□	(33,001)
Share-based compensation	□	4,909	□	□	4,909
Common stock issued, net of shares withheld for employee taxes	36,531	(913)	(581)	□	(1,494)
Tax benefit from equity awards, including transfer pricing adjustments	□	620	□	□	620
Balances as of September 30, 2017	5,126,201	35,867	98,330	(150)	134,047
Cumulative effect of change in accounting principle	□	□	278	(278)	□
Net income	□	□	59,531	□	59,531
Other comprehensive income/(loss)	□	□	□	(3,026)	(3,026)
Dividends and dividend equivalents declared at \$2.72 per share or RSU	□	□	(13,735)	□	(13,735)
Repurchase of common stock	(405,549)	□	(73,056)	□	(73,056)
Share-based compensation	□	5,443	□	□	5,443
Common stock issued, net of shares withheld for employee taxes	34,334	(1,109)	(948)	□	(2,057)
Balances as of September 29, 2018	4,754,986	\$ 40,201	\$ 70,400	\$ (3,454)	\$ 107,147

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In millions)

	Years ended		
	September 29, 2018	September 30, 2017	September 24, 2016
Cash and cash equivalents, beginning of the year	\$ 20,289	\$ 20,484	\$ 21,120
Operating activities:			
Net income	59,531	48,351	45,687
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	10,903	10,157	10,505
Share-based compensation expense	5,340	4,840	4,210
Deferred income tax expense/(benefit)	(32,590)	5,966	4,938
Other	(444)	(166)	486
Changes in operating assets and liabilities:			
Accounts receivable, net	(5,322)	(2,093)	527
Inventories	828	(2,723)	217
Vendor non-trade receivables	(8,010)	(4,254)	(51)
Other current and non-current assets	(423)	(5,318)	1,055
Accounts payable	9,175	8,966	2,117
Deferred revenue	(44)	(626)	(1,554)
Other current and non-current liabilities	38,490	1,125	(1,906)
Cash generated by operating activities	77,434	64,225	66,231
Investing activities:			
Purchases of marketable securities	(71,356)	(159,486)	(142,428)
Proceeds from maturities of marketable securities	55,881	31,775	21,258
Proceeds from sales of marketable securities	47,838	94,564	90,536
Payments for acquisition of property, plant and equipment	(13,313)	(12,451)	(12,734)
Payments made in connection with business acquisitions, net	(721)	(329)	(297)
Purchases of non-marketable securities	(1,871)	(521)	(1,388)
Proceeds from non-marketable securities	353	126	□
Other	(745)	(124)	(924)
Cash generated by/(used in) investing activities	16,066	(46,446)	(45,977)
Financing activities:			
Proceeds from issuance of common stock	669	555	495
Payments for taxes related to net share settlement of equity awards	(2,527)	(1,874)	(1,570)
Payments for dividends and dividend equivalents	(13,712)	(12,769)	(12,150)
Repurchases of common stock	(72,738)	(32,900)	(29,722)
Proceeds from issuance of term debt, net	6,969	28,662	24,954
Repayments of term debt	(6,500)	(3,500)	(2,500)
Change in commercial paper, net	(37)	3,852	(397)
Cash used in financing activities	(87,876)	(17,974)	(20,890)
Increase/(Decrease) in cash and cash equivalents	5,624	(195)	(636)
Cash and cash equivalents, end of the year	\$ 25,913	\$ 20,289	\$ 20,484
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	\$ 10,417	\$ 11,591	\$ 10,444
Cash paid for interest	\$ 3,022	\$ 2,092	\$ 1,316

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

Notes to Consolidated Financial Statements

Note 1 – Summary of Significant Accounting Policies

Apple Inc. and its wholly-owned subsidiaries (collectively "Apple" or the "Company") designs, manufactures and markets mobile communication and media devices ; personal computers, and sells a variety of related software, services, accessories and third-party digital content and applications. The Company's products and services include iPhone, iPad, Mac, Apple Watch, AirPods, Apple TV, HomePod, a portfolio of consumer and professional software applications, iOS, macOS, watchOS and tvOS operating systems, iCloud, Apple Pay and a variety of other accessory, service and support offerings. The Company sells and delivers digital content and applications through the iTunes Store, App Store, Mac App Store, TV App Store, Book Store and Apple Music (collectively "Digital Content and Services"). The Company sells its products worldwide through its retail stores, online stores and direct sales force, as well as through third-party cellular network carriers, wholesalers, retailers and resellers. In addition, the Company sells a variety of third-party Apple-compatible products, including application software and various accessories, through its retail and online stores. The Company sells to consumers, small and mid-sized businesses and education, enterprise and government customers.

Basis of Presentation and Preparation

The accompanying consolidated financial statements include the accounts of the Company. Intercompany accounts and transactions have been eliminated. In the opinion of the Company's management, the consolidated financial statements reflect all adjustments, which are normal and recurring in nature, necessary for fair financial statement presentation. The preparation of these consolidated financial statements and accompanying notes in conformity with U.S. generally accepted accounting principles ("GAAP") requires management to make estimates and assumptions that affect the amounts reported. Actual results could differ materially from those estimates. Certain prior period amounts in the consolidated financial statements and accompanying notes have been reclassified to conform to the current period's presentation.

The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company's fiscal years 2018 and 2016 spanned 52 weeks each whereas fiscal year 2017 included 53 weeks. A 14th week was included in the first fiscal quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters. Unless otherwise stated, references to particular years, quarters, months and periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years.

Revenue Recognition

Net sales consist primarily of revenue from the sale of hardware, software, digital content and applications, accessories, and service and support contracts. The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the sales price is fixed or determinable and collection is probable. Product is considered delivered to the customer once it has been shipped and title, risk of loss and rewards of ownership have been transferred. For most of the Company's product sales, these criteria are met at the time the product is shipped. For online sales to individuals, for some sales to education customers in the U.S., and for certain other sales, the Company defers revenue until the customer receives the product because the Company retains a portion of the risk of loss on these sales during transit. For payment terms in excess of the Company's standard payment terms, revenue is recognized as payments become due unless the Company has positive evidence that the sales price is fixed or determinable, such as a successful history of collection, without concession, on comparable arrangements. The Company recognizes revenue from the sale of hardware products, software bundled with hardware that is essential to the functionality of the hardware and third-party digital content sold on the iTunes Store in accordance with general revenue recognition accounting guidance. The Company recognizes revenue in accordance with industry-specific software accounting guidance for the following types of sales transactions: (i) standalone sales of software products, (ii) sales of software upgrades and (iii) sales of software bundled with hardware not essential to the functionality of the hardware.

For the sale of most third-party products, the Company recognizes revenue based on the gross amount billed to customers because the Company establishes its own pricing for such products, retains related inventory risk for physical products, is the primary obligor to the customer and assumes the credit risk for amounts billed to its customers. For third-party applications sold through the App Store and Mac App Store and certain digital content sold through the iTunes Store, the Company does not determine the selling price of the products and is not the primary obligor to the customer. Therefore, the Company accounts for such sales on a net basis by recognizing in net sales only the commission it retains from each sale. The portion of the gross amount billed to customers that is remitted by the Company to third-party app developers and certain digital content owners is not reflected in the Company's Consolidated Statements of Operations.

The Company records deferred revenue when it receives payments in advance of the delivery of products or the performance of services. This includes amounts that have been deferred for unspecified and specified software upgrade rights and non-software services that are attached to hardware and software products. The Company sells gift cards redeemable at its retail and online stores, and also sells gift cards redeemable on iTunes Store, App Store, Mac App Store, TV App Store and Book Store for the purchase of digital content and software. The Company records deferred revenue upon the sale of the card, which is relieved upon redemption of the card by the customer. Revenue from AppleCare service and support contracts is deferred and recognized over the service coverage periods. AppleCare service and support contracts typically include extended phone support, repair services, web-based support resources and diagnostic tools offered under the Company's standard limited warranty.

The Company records reductions to revenue for estimated commitments related to price protection and other customer incentive programs. For transactions involving price protection, the Company recognizes revenue net of the estimated amount to be refunded. For the Company's other customer incentive programs, the estimated cost of these programs is recognized at the later of the date at which the Company has sold the product or the date at which the program is offered. The Company also records reductions to revenue for expected future product returns based on the Company's historical experience. Revenue is recorded net of taxes collected from customers that are remitted to governmental authorities, with the collected taxes recorded as current liabilities until remitted to the relevant government authority.

Revenue Recognition for Arrangements with Multiple Deliverables

For multi-element arrangements that include hardware products containing software essential to the hardware product's functionality, undelivered software elements that relate to the hardware product's essential software, and undelivered non-software services, the Company allocates revenue to all deliverables based on their relative selling prices. In such circumstances, the Company uses a hierarchy to determine the selling price to be used for allocating revenue to deliverables: (i) vendor-specific objective evidence of fair value ("VSOE"), (ii) third-party evidence of selling price ("TPE") and (iii) best estimate of selling price ("ESP"). VSOE generally exists only if the Company sells the deliverable separately and is the price actually charged by the Company for that deliverable. ESPs reflect the Company's best estimates of what the selling prices of elements would be if they were sold regularly on a stand-alone basis. For multi-element arrangements accounted for in accordance with industry-specific software accounting guidance, the Company allocates revenue to all deliverables based on the VSOE of each element, and if VSOE does not exist revenue is recognized when elements lacking VSOE are delivered.

For sales of iPhone, iPad, Mac and certain other products, the Company has indicated it may from time to time provide future unspecified software upgrades to the device's essential software and/or non-software services free of charge. The Company has identified up to three deliverables regularly included in arrangements involving the sale of these devices. The first deliverable, which represents the substantial portion of the allocated sales price, is the hardware and software essential to the functionality of the hardware device delivered at the time of sale. The second deliverable is the embedded right included with qualifying devices to receive, on a when-and-if-available basis, future unspecified software upgrades relating to the product's essential software. The third deliverable is the non-software services to be provided to qualifying devices. The Company allocates revenue between these deliverables using the relative selling price method. Because the Company has neither VSOE nor TPE for these deliverables, the allocation of revenue is based on the Company's ESPs. Revenue allocated to the delivered hardware and the related essential software is recognized at the time of sale, provided the other conditions for revenue recognition have been met. Revenue allocated to the embedded unspecified software upgrade rights and the non-software services is deferred and recognized on a straight-line basis over the estimated period the software upgrades and non-software services are expected to be provided. Cost of sales related to delivered hardware and related essential software, including estimated warranty costs, are recognized at the time of sale. Costs incurred to provide non-software services are recognized as cost of sales as incurred, and engineering and sales and marketing costs are recognized as operating expenses as incurred.

The Company's process for determining its ESP for deliverables without VSOE or TPE considers multiple factors that may vary depending upon the unique facts and circumstances related to each deliverable including, where applicable, prices charged by the Company and market trends in the pricing for similar offerings, product-specific business objectives, estimated cost to provide the non-software services and the relative ESP of the upgrade rights and non-software services as compared to the total selling price of the product.

Shipping Costs

Amounts billed to customers related to shipping and handling are classified as revenue, and the Company's shipping and handling costs are classified as cost of sales.

Advertising Costs

Advertising costs are expensed as incurred and included in selling, general and administrative expenses.

Share-Based Compensation

The Company generally measures share-based compensation based on the closing price of the Company's common stock on the date of grant, and recognizes expense on a straight-line basis for its estimate of equity awards that will ultimately vest. Further information regarding share-based compensation can be found in Note 8, "Benefit Plans."

During the first quarter of 2018, the Company adopted the Financial Accounting Standards Board's (the "FASB") Accounting Standards Update ("ASU") No. 2016-09, *Compensation – Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* (ASU 2016-09), which modified certain aspects of the accounting for share-based payment transactions, including income taxes, classification of awards and classification in the statement of cash flows. Historically, excess tax benefits or deficiencies from the Company's equity awards were recorded as additional paid-in capital in its Consolidated Balance Sheets and were classified as a financing activity in its Consolidated Statements of Cash Flows. Beginning in 2018, the Company records any excess tax benefits or deficiencies from its equity awards as part of the provision for income taxes in its Consolidated Statements of Operations in the reporting periods in which equity vesting occurs. The Company elected to apply the cash flow classification requirements related to excess tax benefits retrospectively to all periods presented, which resulted in an increase to cash generated by operating activities in the Consolidated Statements of Cash Flows of \$627 million and \$407 million for 2017 and 2016, respectively.

Earnings Per Share

The following table shows the computation of basic and diluted earnings per share for 2018, 2017 and 2016 (net income in millions and shares in thousands):

	2018	2017	2016
Numerator:			
Net income	\$ 59,531	\$ 48,351	\$ 45,687
Denominator:			
Weighted-average basic shares outstanding	4,955,377	5,217,242	5,470,820
Effect of dilutive securities	44,732	34,450	29,461
Weighted-average diluted shares	5,000,109	5,251,692	5,500,281
Basic earnings per share	\$ 12.01	\$ 9.27	\$ 8.35
Diluted earnings per share	\$ 11.91	\$ 9.21	\$ 8.31

Cash Equivalents and Marketable Securities

All highly liquid investments with maturities of three months or less at the date of purchase are classified as cash equivalents. The Company's marketable debt and equity securities have been classified and accounted for as available-for-sale. The Company classifies its marketable debt securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Marketable equity securities, including mutual funds, are classified as short-term based on the nature of the securities and their availability for use in current operations. The cost of securities sold is determined using the specific identification method.

Inventories

Inventories are computed using the first-in, first-out method.

Property, Plant and Equipment

Depreciation on property, plant and equipment is recognized on a straight-line basis over the estimated useful lives of the assets, which for buildings is the lesser of 30 years or the remaining life of the underlying building; between one and five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease term or useful life for leasehold improvements. Capitalized costs related to internal-use software are amortized on a straight-line basis over the estimated useful lives of the assets, which range from three to five years. Depreciation and amortization expense on property and equipment was \$9.3 billion, \$8.2 billion and \$8.3 billion during 2018, 2017 and 2016, respectively.

During 2018, non-cash investing activities involving property, plant and equipment resulted in a net increase to accounts payable and other current liabilities of \$3.4 billion.

Fair Value Measurements

The Company's valuation techniques used to measure the fair value of money market funds and certain marketable equity securities are derived from quoted prices in active markets for identical assets or liabilities. The valuation techniques used to measure the fair value of the Company's debt instruments and all other financial instruments, which generally have counterparties with high credit ratings, are based on quoted market prices or model-driven valuations using significant inputs derived from or corroborated by observable market data.

Note 2 – Financial Instruments

Cash, Cash Equivalents and Marketable Securities

The following tables show the Company's cash and available-for-sale securities by significant investment category as of September 29, 2018 and September 30, 2017 (in millions):

	2018						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 11,575	\$ □	\$ □	\$ 11,575	\$ 11,575	\$ □	\$ □
Level 1 (1):							
Money market funds	8,083	□	□	8,083	8,083	□	□
Mutual funds	799	□	(116)	683	□	683	□
Subtotal	8,882	□	(116)	8,766	8,083	683	□
Level 2 (2):							
U.S. Treasury securities	47,296	□	(1,202)	46,094	1,613	7,606	36,875
U.S. agency securities	4,127	□	(48)	4,079	1,732	360	1,987
Non-U.S. government securities	21,601	49	(250)	21,400	□	3,355	18,045
Certificates of deposit and time deposits	3,074	□	□	3,074	1,247	1,330	497
Commercial paper	2,573	□	□	2,573	1,663	910	□
Corporate securities	123,001	152	(2,038)	121,115	□	25,162	95,953
Municipal securities	946	□	(12)	934	□	178	756
Mortgage- and asset-backed securities	18,105	8	(623)	17,490	□	804	16,686
Subtotal	220,723	209	(4,173)	216,759	6,255	39,705	170,799
Total (3)	\$ 241,180	\$ 209	\$ (4,289)	\$ 237,100	\$ 25,913	\$ 40,388	\$ 170,799

Apple Inc. | 2018 Form 10-K | 46

	2017						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 7,982	\$ □	\$ □	\$ 7,982	\$ 7,982	\$ □	\$ □
Level 1 (1):							
Money market funds	6,534	□	□	6,534	6,534	□	□
Mutual funds	799	□	(88)	711	□	711	□
Subtotal	7,333	□	(88)	7,245	6,534	711	□
Level 2 (2):							
U.S. Treasury securities	55,254	58	(230)	55,082	865	17,228	36,989
U.S. agency securities	5,162	2	(9)	5,155	1,439	2,057	1,659
Non-U.S. government securities	7,827	210	(37)	8,000	9	123	7,868
Certificates of deposit and time deposits	5,832	□	□	5,832	1,142	3,918	772
Commercial paper	3,640	□	□	3,640	2,146	1,494	□
Corporate securities	152,724	969	(242)	153,451	172	27,591	125,688
Municipal securities	961	4	(1)	964	□	114	850
Mortgage- and asset-backed securities	21,684	35	(175)	21,544	□	656	20,888
Subtotal	253,084	1,278	(694)	253,668	5,773	53,181	194,714
Total	\$ 268,399	\$ 1,278	\$ (782)	\$ 268,895	\$ 20,289	\$ 53,892	\$ 194,714

(1) Level 1 fair value estimates are based on quoted prices in active markets for identical assets or liabilities.

(2) Level 2 fair value estimates are based on observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

(3) As of September 29, 2018, total cash, cash equivalents and marketable securities included \$20.3 billion that was restricted from general use, related to the State Aid Decision (refer to Note 4, □ Income Taxes□) and other agreements.

The Company may sell certain of its marketable securities prior to their stated maturities for reasons including, but not limited to, managing liquidity, credit risk, duration and asset allocation. The maturities of the Company's long-term marketable securities generally range from one to five years.

The following tables show information about the Company's marketable securities that had been in a continuous unrealized loss position for less than 12 months and for 12 months or greater as of September 29, 2018 and September 30, 2017 (in millions):

	2018		
	Continuous Unrealized Losses		
	Less than 12 Months	12 Months or Greater	Total
Fair value of marketable securities	\$ 126,238	\$ 60,599	\$ 186,837
Unrealized losses	\$ (2,400)	\$ (1,889)	\$ (4,289)
	2017		
	Continuous Unrealized Losses		
	Less than 12 Months	12 Months or Greater	Total
Fair value of marketable securities	\$ 101,986	\$ 8,290	\$ 110,276
Unrealized losses	\$ (596)	\$ (186)	\$ (782)

The Company typically invests in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer. Fair values were determined for each individual security in the investment portfolio. When evaluating an investment for other-than-temporary impairment, the Company reviews factors such as the length of time and extent to which fair value has been below its cost basis, the financial condition of the issuer and any changes thereto, changes in market interest rates and the Company's intent to sell, or whether it is more likely than not it will be required to sell the investment before recovery of the investment's cost basis. As of September 29, 2018, the Company does not consider any of its investments to be other-than-temporarily impaired.

Derivative Financial Instruments

The Company may use derivatives to partially offset its business exposure to foreign currency and interest rate risk on expected future cash flows, net investments in certain foreign subsidiaries, and certain existing assets and liabilities. However, the Company may choose not to hedge certain exposures for a variety of reasons including, but not limited to, accounting considerations or the prohibitive economic cost of hedging particular exposures. There can be no assurance the hedges will offset more than a portion of the financial impact resulting from movements in foreign currency exchange or interest rates.

To protect gross margins from fluctuations in foreign currency exchange rates, certain of the Company's subsidiaries whose functional currency is the U.S. dollar may hedge a portion of forecasted foreign currency revenue, and subsidiaries whose functional currency is not the U.S. dollar may hedge a portion of forecasted inventory purchases not denominated in the subsidiaries' functional currencies. The Company may enter into forward contracts, option contracts or other instruments to manage this risk and may designate these instruments as cash flow hedges. The Company generally hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months.

To protect the net investment in a foreign operation from fluctuations in foreign currency exchange rates, the Company may enter into foreign currency forward and option contracts to offset a portion of the changes in the carrying amounts of these investments due to fluctuations in foreign currency exchange rates. In addition, the Company may use non-derivative financial instruments, such as its foreign currency-denominated debt, as hedges of its net investments in certain foreign subsidiaries. In both of these cases, the Company designates these instruments as net investment hedges.

To protect the Company's foreign currency-denominated term debt or marketable securities from fluctuations in foreign currency exchange rates, the Company may enter into forward contracts, cross-currency swaps or other instruments. These instruments may offset a portion of the foreign currency remeasurement gains or losses, or changes in fair value. The Company may designate these instruments as either cash flow or fair value hedges. As of September 29, 2018, the Company's hedged term debt and marketable securities-related foreign currency transactions are expected to be recognized within 24 years.

The Company may also enter into non-designated foreign currency contracts to offset a portion of the foreign currency exchange gains and losses generated by the remeasurement of certain assets and liabilities denominated in non-functional currencies.

To protect the Company's foreign currency-denominated term debt or marketable securities from fluctuations in interest rates, the Company may enter into interest rate swaps, options or other instruments. These instruments may offset a portion of the changes in interest income or expense, or changes in fair value. The Company designates these instruments as either cash flow or fair value hedges. As of September 29, 2018, the Company's hedged interest rate transactions are expected to be recognized within 9 years.

Cash Flow Hedges

The effective portions of cash flow hedges are recorded in accumulated other comprehensive income/(loss) ("AOCI") until the hedged item is recognized in earnings. Deferred gains and losses associated with cash flow hedges of foreign currency revenue are recognized as a component of net sales in the same period as the related revenue is recognized, and deferred gains and losses related to cash flow hedges of inventory purchases are recognized as a component of cost of sales in the same period as the related costs are recognized. Deferred gains and losses associated with cash flow hedges of interest income or expense are recognized in other income/(expense), net in the same period as the related income or expense is recognized. For options designated as cash flow hedges, changes in the time value are excluded from the assessment of hedge effectiveness. The ineffective portions and amounts excluded from the effectiveness testing of cash flow hedges are recognized in other income/(expense), net.

Derivative instruments designated as cash flow hedges must be de-designated as hedges when it is probable the forecasted hedged transaction will not occur in the initially identified time period or within a subsequent two-month time period. Deferred gains and losses in AOCI associated with such derivative instruments are reclassified into other income/(expense), net in the period of de-designation. Any subsequent changes in fair value of such derivative instruments are reflected in other income/(expense), net unless they are re-designated as hedges of other transactions.

Net Investment Hedges

The effective portions of net investment hedges are recorded in other comprehensive income/(loss) (OCI) as a part of the cumulative translation adjustment. The ineffective portions and amounts excluded from the effectiveness testing of net investment hedges are recognized in other income/(expense), net. For forward exchange contracts designated as net investment hedges, the Company excludes changes in fair value relating to changes in the forward carry component from its definition of effectiveness. Accordingly, any gains or losses related to this forward carry component are recognized in earnings in the current period.

Fair Value Hedges

Gains and losses related to changes in fair value hedges are recognized in earnings along with a corresponding loss or gain related to the change in value of the underlying hedged item in the same line in the Consolidated Statements of Operations.

Non-Designated Derivatives

Derivatives that are not designated as hedging instruments are adjusted to fair value through earnings in the financial statement line item to which the derivative relates. As a result, during 2018, the Company recognized a gain of \$20 million in net sales, a gain of \$85 million in cost of sales and a loss of \$198 million in other income/(expense), net. During 2017, the Company recognized a gain of \$20 million in net sales, a loss of \$40 million in cost of sales and a gain of \$606 million in other income/(expense), net.

The Company records all derivatives in the Consolidated Balance Sheets at fair value. The Company's accounting treatment for these derivative instruments is based on its hedge designation. The following tables show the Company's derivative instruments at gross fair value as of September 29, 2018 and September 30, 2017 (in millions):

	2018		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 1,015	\$ 259	\$ 1,274
Derivative liabilities (2):			
Foreign exchange contracts	\$ 543	\$ 137	\$ 680
Interest rate contracts	\$ 1,456	\$ □	\$ 1,456
	2017		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 1,049	\$ 363	\$ 1,412
Interest rate contracts	\$ 218	\$ □	\$ 218
Derivative liabilities (2):			
Foreign exchange contracts	\$ 759	\$ 501	\$ 1,260
Interest rate contracts	\$ 303	\$ □	\$ 303

(1) The fair value of derivative assets is measured using Level 2 fair value inputs and is recorded as other current assets and other non-current assets in the Consolidated Balance Sheets.

(2) The fair value of derivative liabilities is measured using Level 2 fair value inputs and is recorded as other current liabilities and other non-current liabilities in the Consolidated Balance Sheets.

The Company classifies cash flows related to derivative financial instruments as operating activities in its Consolidated Statements of Cash Flows.

The following table shows the pre-tax gains and losses of the Company's derivative and non-derivative instruments designated as cash flow, net investment and fair value hedges in OCI and the Consolidated Statements of Operations for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Gains/(Losses) recognized in OCI — effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ 682	\$ 1,797	\$ 109
Interest rate contracts	1	7	(57)
Total	<u>\$ 683</u>	<u>\$ 1,804</u>	<u>\$ 52</u>
Net investment hedges:			
Foreign currency debt	<u>\$ 4</u>	<u>\$ 67</u>	<u>\$ (258)</u>
Gains/(Losses) reclassified from AOCI into net income — effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ (482)	\$ 1,958	\$ 885
Interest rate contracts	1	(2)	(11)
Total	<u>\$ (481)</u>	<u>\$ 1,956</u>	<u>\$ 874</u>
Gains/(Losses) on derivative instruments:			
Fair value hedges:			
Foreign exchange contracts	\$ (168)	\$ □	\$ □
Interest rate contracts	(1,363)	(810)	341
Total	<u>\$ (1,531)</u>	<u>\$ (810)</u>	<u>\$ 341</u>
Gains/(Losses) related to hedged items:			
Fair value hedges:			
Marketable securities	\$ 167	\$ □	\$ □
Fixed-rate debt	1,363	810	(341)
Total	<u>\$ 1,530</u>	<u>\$ 810</u>	<u>\$ (341)</u>

The following table shows the notional amounts of the Company's outstanding derivative instruments and credit risk amounts associated with outstanding or unsettled derivative instruments as of September 29, 2018 and September 30, 2017 (in millions):

	2018		2017	
	Notional Amount	Credit Risk Amount	Notional Amount	Credit Risk Amount
Instruments designated as accounting hedges:				
Foreign exchange contracts	\$ 65,368	\$ 1,015	\$ 56,156	\$ 1,049
Interest rate contracts	\$ 33,250	\$ □	\$ 33,000	\$ 218
Instruments not designated as accounting hedges:				
Foreign exchange contracts	\$ 63,062	\$ 259	\$ 69,774	\$ 363

The notional amounts for outstanding derivative instruments provide one measure of the transaction volume outstanding and do not represent the amount of the Company's exposure to credit or market loss. The credit risk amounts represent the Company's gross exposure to potential accounting loss on derivative instruments that are outstanding or unsettled if all counterparties failed to perform according to the terms of the contract, based on then-current currency or interest rates at each respective date. The Company's exposure to credit loss and market risk will vary over time as currency and interest rates change. Although the table above reflects the notional and credit risk amounts of the Company's derivative instruments, it does not reflect the gains or losses associated with the exposures and transactions that the instruments are intended to hedge. The amounts ultimately realized upon settlement of these financial instruments, together with the gains and losses on the underlying exposures, will depend on actual market conditions during the remaining life of the instruments.

The Company generally enters into master netting arrangements, which are designed to reduce credit risk by permitting net settlement of transactions with the same counterparty. To further limit credit risk, the Company generally enters into collateral security arrangements that provide for collateral to be received or posted when the net fair value of certain financial instruments fluctuates from contractually established thresholds. The Company presents its derivative assets and derivative liabilities at their gross fair values in its Consolidated Balance Sheets. As of September 29, 2018, the net cash collateral posted by the Company related to derivative instruments under its collateral security arrangements was \$1.0 billion, which was recorded as other current assets in the Condensed Consolidated Balance Sheet. As of September 30, 2017, the net cash collateral received by the Company related to derivative instruments under its collateral security arrangements was \$35 million, which was recorded as other current liabilities in the Consolidated Balance Sheet.

Under master netting arrangements with the respective counterparties to the Company's derivative contracts, the Company is allowed to net settle transactions with a single net amount payable by one party to the other. As of September 29, 2018 and September 30, 2017, the potential effects of these rights of set-off associated with the Company's derivative contracts, including the effects of collateral, would be a reduction to both derivative assets and derivative liabilities of \$2.1 billion and \$1.4 billion, respectively, resulting in net derivative assets of \$138 million and \$32 million, respectively.

Accounts Receivable

Trade Receivables

The Company has considerable trade receivables outstanding with its third-party cellular network carriers, wholesalers, retailers, resellers, small and mid-sized businesses and education, enterprise and government customers. The Company generally does not require collateral from its customers; however, the Company will require collateral or third-party credit support in certain instances to limit credit risk. In addition, when possible, the Company attempts to limit credit risk on trade receivables with credit insurance for certain customers or by requiring third-party financing, loans or leases to support credit exposure. These credit-financing arrangements are directly between the third-party financing company and the end customer. As such, the Company generally does not assume any recourse or credit risk sharing related to any of these arrangements.

As of September 29, 2018, the Company had one customer that represented 10% or more of total trade receivables, which accounted for 10%. As of September 30, 2017, the Company had two customers that individually represented 10% or more of total trade receivables, each of which accounted for 10%. The Company's cellular network carriers accounted for 59% of total trade receivables as of both September 29, 2018 and September 30, 2017.

Vendor Non-Trade Receivables

The Company has non-trade receivables from certain of its manufacturing vendors resulting from the sale of components to these vendors who manufacture sub-assemblies or assemble final products for the Company. The Company purchases these components directly from suppliers. As of September 29, 2018, the Company had two vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 62% and 12%. As of September 30, 2017, the Company had three vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 42%, 19% and 10%.

Note 3 – Consolidated Financial Statement Details

The following tables show the Company's consolidated financial statement details as of September 29, 2018 and September 30, 2017 (in millions):

Property, Plant and Equipment, Net

	2018	2017
Land and buildings	\$ 16,216	\$ 13,587
Machinery, equipment and internal-use software	65,982	54,210
Leasehold improvements	8,205	7,279
Gross property, plant and equipment	90,403	75,076
Accumulated depreciation and amortization	(49,099)	(41,293)
Total property, plant and equipment, net	<u>\$ 41,304</u>	<u>\$ 33,783</u>

Apple Inc. | 2018 Form 10-K | 51

Other Non-Current Liabilities

	2018	2017
Long-term taxes payable	\$ 33,589	\$ 257
Deferred tax liabilities	426	31,504
Other non-current liabilities	11,165	8,654
Total other non-current liabilities	\$ 45,180	\$ 40,415

Other Income/(Expense), Net

The following table shows the detail of other income/(expense), net for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Interest and dividend income	\$ 5,686	\$ 5,201	\$ 3,999
Interest expense	(3,240)	(2,323)	(1,456)
Other expense, net	(441)	(133)	(1,195)
Total other income/(expense), net	\$ 2,005	\$ 2,745	\$ 1,348

Note 4 – Income Taxes**U.S. Tax Cuts and Jobs Act**

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the "Act"), which significantly changed U.S. tax law. The Act lowered the Company's U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018, while also imposing a deemed repatriation tax on previously deferred foreign income. The Act also created a new minimum tax on certain future foreign earnings. The impact of the Act increased the Company's provision for income taxes by \$1.5 billion during 2018. This increase was composed of \$2.0 billion related to the remeasurement of net deferred tax assets and liabilities and \$1.2 billion associated with the deemed repatriation tax, partially offset by a \$1.7 billion impact the deemed repatriation tax had on the Company's unrecognized tax benefits.

Deferred Tax Balances

As a result of the Act, the Company remeasured certain deferred tax assets and liabilities based on the revised rates at which they are expected to reverse, including items for which the related income tax effects were originally recognized in OCI. In addition, the Company elected to record certain deferred tax assets and liabilities related to the new minimum tax on certain future foreign earnings. Of the \$2.0 billion recognized related to the remeasurement of net deferred tax assets and liabilities, \$1.2 billion is a provisional estimate that incorporates assumptions based upon the most recent interpretations of the Act and may change as the Company continues to analyze the impact of additional implementation guidance. The Company's provisional estimates are in accordance with the U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 118.

Deemed Repatriation Tax

As of September 30, 2017, the Company had a U.S. deferred tax liability of \$36.4 billion for deferred foreign income. During 2018, the Company replaced \$36.1 billion of its U.S. deferred tax liability with a deemed repatriation tax payable of \$37.3 billion, which was based on the Company's cumulative post-1986 deferred foreign income. The deemed repatriation tax payable is a provisional estimate that may change as the Company continues to analyze the impact of additional implementation guidance. The Company plans to pay the tax in installments in accordance with the Act.

Adoption of ASU No. 2018-02

During the second quarter of 2018, the FASB issued ASU No. 2018-02, *Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income* ("ASU 2018-02"). ASU 2018-02 allows an entity to elect to reclassify the income tax effects of the Act on items within AOCI to retained earnings. The Company elected to apply the provision of ASU 2018-02 in 2018 with a reclassification of net tax benefits related to cumulative foreign currency translation and unrealized gains/losses on derivative instruments and marketable securities, resulting in a \$278 million decrease in AOCI and a corresponding increase in retained earnings in the Consolidated Balance Sheet and Consolidated Statement of Shareholders' Equity.

Provision for Income Taxes and Effective Tax Rate

The provision for income taxes for 2018, 2017 and 2016, consisted of the following (in millions):

	2018	2017	2016
Federal:			
Current	\$ 41,425	\$ 7,842	\$ 7,652
Deferred	(33,819)	5,980	5,043
Total	7,606	13,822	12,695
State:			
Current	551	259	990
Deferred	48	2	(138)
Total	599	261	852
Foreign:			
Current	3,986	1,671	2,105
Deferred	1,181	(16)	33
Total	5,167	1,655	2,138
Provision for income taxes	\$ 13,372	\$ 15,738	\$ 15,685

The foreign provision for income taxes is based on foreign pre-tax earnings of \$48.0 billion, \$44.7 billion and \$41.1 billion in 2018, 2017 and 2016, respectively.

A reconciliation of the provision for income taxes, with the amount computed by applying the statutory federal income tax rate (24.5% in 2018; 35% in 2017 and 2016) to income before provision for income taxes for 2018, 2017 and 2016, is as follows (dollars in millions):

	2018	2017	2016
Computed expected tax	\$ 17,890	\$ 22,431	\$ 21,480
State taxes, net of federal effect	271	185	553
Impacts of the Act	1,515	□	□
Earnings of foreign subsidiaries	(5,606)	(6,135)	(5,582)
Domestic production activities deduction	(195)	(209)	(382)
Research and development credit, net	(560)	(678)	(371)
Other	57	144	(13)
Provision for income taxes	\$ 13,372	\$ 15,738	\$ 15,685
Effective tax rate	18.3%	24.6%	25.6%

The Company's income taxes payable have been reduced by the tax benefits from employee stock plan awards. For restricted stock units (RSUs), the Company receives an income tax benefit upon the award's vesting equal to the tax effect of the underlying stock's fair market value. Prior to adopting ASU 2016-09 in the first quarter of 2018 the Company reflected net excess tax benefits from equity awards as increases to additional paid-in capital, which amounted to \$620 million and \$379 million in 2017 and 2016, respectively. Refer to Note 1, "Summary of Significant Accounting Policies" for more information.

Deferred Tax Assets and Liabilities

As of September 29, 2018 and September 30, 2017, the significant components of the Company's deferred tax assets and liabilities were (in millions):

	2018	2017
Deferred tax assets:		
Accrued liabilities and other reserves	\$ 3,151	\$ 4,019
Basis of capital assets	137	1,230
Deferred revenue	1,141	1,521
Deferred cost sharing	□	667
Share-based compensation	513	703
Unrealized losses	871	□
Other	797	834
Total deferred tax assets	6,610	8,974
Deferred tax liabilities:		
Earnings of foreign subsidiaries	275	36,355
Other	501	207
Total deferred tax liabilities	776	36,562
Net deferred tax assets/(liabilities)	\$ 5,834	\$ (27,588)

Deferred tax assets and liabilities reflect the effects of tax losses, credits and the future income tax effects of temporary differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases and are measured using enacted tax rates that apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Uncertain Tax Positions

As of September 29, 2018, the total amount of gross unrecognized tax benefits was \$9.7 billion, of which \$7.4 billion, if recognized, would impact the Company's effective tax rate. As of September 30, 2017, the total amount of gross unrecognized tax benefits was \$8.4 billion, of which \$2.5 billion, if recognized, would have impacted the Company's effective tax rate.

The aggregate changes in the balance of gross unrecognized tax benefits, which excludes interest and penalties, for 2018, 2017 and 2016, is as follows (in millions):

	2018	2017	2016
Beginning balances	\$ 8,407	\$ 7,724	\$ 6,900
Increases related to tax positions taken during a prior year	2,431	333	1,121
Decreases related to tax positions taken during a prior year	(2,212)	(952)	(257)
Increases related to tax positions taken during the current year	1,824	1,880	1,578
Decreases related to settlements with taxing authorities	(756)	(539)	(1,618)
Decreases related to expiration of statute of limitations	□	(39)	□
Ending balances	\$ 9,694	\$ 8,407	\$ 7,724

The Company includes interest and penalties related to unrecognized tax benefits within the provision for income taxes. As of September 29, 2018 and September 30, 2017, the total amount of gross interest and penalties accrued was \$1.4 billion and \$1.2 billion, respectively. Both the unrecognized tax benefits and the associated interest and penalties that are not expected to result in payment or receipt of cash within one year are classified as other non-current liabilities in the Consolidated Balance Sheets. In connection with tax matters, the Company recognized interest and penalty expense in 2018, 2017 and 2016 of \$236 million, \$165 million and \$295 million, respectively.

The Company is subject to taxation and files income tax returns in the U.S. federal jurisdiction and in many state and foreign jurisdictions. The U.S. Internal Revenue Service (the "IRS") concluded its review of the years 2013 through 2015 in 2018, and all years prior to 2016 are closed. Tax years subsequent to 2006 in certain major U.S. states and subsequent to 2007 in certain major foreign jurisdictions remain open, and could be subject to examination by the taxing authorities. The Company believes that an adequate provision has been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner inconsistent with its expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs. Although timing of resolution and/or closure of audits is not certain, the Company believes it is reasonably possible that its gross unrecognized tax benefits could decrease (either by payment, release or a combination of both) in the next 12 months by as much as \$800 million.

European Commission State Aid Decision

On August 30, 2016, the European Commission announced its decision that Ireland granted state aid to the Company by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of the Company (the "State Aid Decision"). The State Aid Decision ordered Ireland to calculate and recover additional taxes from the Company for the period June 2003 through December 2014. The recovery amount was calculated to be \$13.1 billion, plus interest of \$1.2 billion. Irish legislative changes, effective as of January 2015, eliminated the application of the tax opinions from that date forward. The Company believes the State Aid Decision to be without merit and appealed to the General Court of the Court of Justice of the European Union. Ireland has also appealed the State Aid Decision. The Company believes that any incremental Irish corporate income taxes potentially due related to the State Aid Decision would be creditable against U.S. taxes, subject to any foreign tax credit limitations in the Act. As of September 29, 2018, the entire recovery amount plus interest was funded into escrow, where it will remain restricted from general use pending conclusion of all appeals. Refer to Note 2, "Financial Instruments" for more information.

Note 5 – Debt

Commercial Paper

The Company issues unsecured short-term promissory notes ("Commercial Paper") pursuant to a commercial paper program. The Company uses net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of both September 29, 2018 and September 30, 2017, the Company had \$12.0 billion of Commercial Paper outstanding with maturities generally less than nine months. The weighted-average interest rate of the Company's Commercial Paper was 2.18% as of September 29, 2018 and 1.20% as of September 30, 2017. The following table provides a summary of cash flows associated with the issuance and maturities of Commercial Paper for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Maturities 90 days or less:			
Proceeds from/(Repayments of) commercial paper, net	\$ 1,044	\$ (1,782)	\$ (869)
Maturities greater than 90 days:			
Proceeds from commercial paper	14,555	17,932	3,632
Repayments of commercial paper	(15,636)	(12,298)	(3,160)
Proceeds from/(Repayments of) commercial paper, net	(1,081)	5,634	472
Total change in commercial paper, net	\$ (37)	\$ 3,852	\$ (397)

Apple Inc. | 2018 Form 10-K | 55

Term Debt

As of September 29, 2018, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$104.2 billion (collectively the "Notes"). The Notes are senior unsecured obligations, and interest is payable in arrears, quarterly for the U.S. dollar-denominated and Australian dollar-denominated floating-rate notes, semi-annually for the U.S. dollar-denominated, Australian dollar-denominated, British pound-denominated, Japanese yen-denominated and Canadian dollar-denominated fixed-rate notes and annually for the euro-denominated and Swiss franc-denominated fixed-rate notes. The following table provides a summary of the Company's term debt as of September 29, 2018 and September 30, 2017:

	Maturities (calendar year)	2018		2017	
		Amount (in millions)	Effective Interest Rate	Amount (in millions)	Effective Interest Rate
2013 debt issuance of \$17.0 billion:					
Floating-rate notes		\$		\$	1.10%
Fixed-rate 2.400% - 3.850% notes	2023 - 2043	8,500	2.44% - 3.91%	12,500	1.08% - 3.91%
2014 debt issuance of \$12.0 billion:					
Floating-rate notes	2019	1,000	2.64%	1,000	1.61%
Fixed-rate 2.100% - 4.450% notes	2019 - 2044	8,500	2.64% - 4.48%	8,500	1.61% - 4.48%
2015 debt issuances of \$27.3 billion:					
Floating-rate notes	2019 - 2020	1,507	1.87% - 2.64%	1,549	1.56% - 1.87%
Fixed-rate 0.350% - 4.375% notes	2019 - 2045	24,410	0.28% - 4.51%	24,522	0.28% - 4.51%
2016 debt issuances of \$24.9 billion:					
Floating-rate notes	2019 - 2021	1,350	2.48% - 3.44%	1,350	1.45% - 2.44%
Fixed-rate 1.100% - 4.650% notes	2019 - 2046	23,059	1.13% - 4.78%	23,645	1.13% - 4.78%
2017 debt issuances of \$28.7 billion:					
Floating-rate notes	2019 - 2022	3,250	2.41% - 2.84%	3,250	1.38% - 1.81%
Fixed-rate 0.875% - 4.300% notes	2019 - 2047	25,617	1.54% - 4.30%	25,705	1.51% - 4.30%
First quarter 2018 debt issuance of \$7.0 billion:					
Fixed-rate 1.800% notes	2019	1,000	1.83%		
Fixed-rate 2.000% notes	2020	1,000	2.03%		
Fixed-rate 2.400% notes	2023	750	2.66%		
Fixed-rate 2.750% notes	2025	1,500	2.77%		
Fixed-rate 3.000% notes	2027	1,500	3.05%		
Fixed-rate 3.750% notes	2047	1,250	3.80%		
Total term debt		104,193		104,021	
Unamortized premium/(discount) and issuance costs, net		(218)		(225)	
Hedge accounting fair value adjustments		(1,456)		(93)	
Less: Current portion of term debt		(8,784)		(6,496)	
Total non-current portion of term debt		\$ 93,735		\$ 97,207	

To manage interest rate risk on certain of its U.S. dollar-denominated fixed- or floating-rate notes, the Company has entered into interest rate swaps to effectively convert the fixed interest rates to floating interest rates or the floating interest rates to fixed interest rates on a portion of these notes. Additionally, to manage foreign currency risk on certain of its foreign currency-denominated notes, the Company has entered into foreign currency swaps to effectively convert these notes to U.S. dollar-denominated notes.

A portion of the Company's Japanese yen-denominated notes is designated as a hedge of the foreign currency exposure of the Company's net investment in a foreign operation. As of September 29, 2018 and September 30, 2017, the carrying value of the debt designated as a net investment hedge was \$811 million and \$1.6 billion, respectively. For further discussion regarding the Company's use of derivative instruments, refer to the Derivative Financial Instruments section of Note 2, "Financial Instruments."

The effective interest rates for the Notes include the interest on the Notes, amortization of the discount or premium and, if applicable, adjustments related to hedging. The Company recognized \$3.0 billion, \$2.2 billion and \$1.4 billion of interest expense on its term debt for 2018, 2017 and 2016, respectively.

The future principal payments for the Company's Notes as of September 29, 2018 are as follows (in millions):

2019	\$	8,797
2020		10,183
2021		8,750
2022		8,583
2023		9,395
Thereafter		58,485
Total term debt	\$	<u>104,193</u>

As of September 29, 2018 and September 30, 2017, the fair value of the Company's Notes, based on Level 2 inputs, was \$103.2 billion and \$106.1 billion, respectively.

Note 6 – Shareholders' Equity

Share Repurchase Program

During 2018, the Company repurchased 405.5 million shares of its common stock for \$73.1 billion in connection with two separate share repurchase programs. Of the \$73.1 billion, \$44.0 billion was repurchased under the Company's previous share repurchase program of up to \$210 billion, thereby completing that program. On May 1, 2018, the Company announced the Board of Directors had authorized a new program to repurchase up to \$100 billion of the Company's common stock. The remaining \$29.0 billion repurchased during 2018 was in connection with the new share repurchase program. The Company's new share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Note 7 – Comprehensive Income

The Company's OCI consists of foreign currency translation adjustments from those subsidiaries not using the U.S. dollar as their functional currency, net deferred gains and losses on certain derivative instruments accounted for as cash flow hedges and unrealized gains and losses on marketable securities classified as available-for-sale.

The following table shows the pre-tax amounts reclassified from AOCI into the Consolidated Statements of Operations, and the associated financial statement line item, for 2018 and 2017 (in millions):

Comprehensive Income Components	Financial Statement Line Item	2018	2017
Unrealized (gains)/losses on derivative instruments:			
Foreign exchange contracts	Net sales	\$ 214	\$ (662)
	Cost of sales	(70)	(654)
	Other income/(expense), net	344	(638)
Interest rate contracts	Other income/(expense), net	(2)	2
		486	(1,952)
Unrealized (gains)/losses on marketable securities			
	Other income/(expense), net	(20)	(99)
Total amounts reclassified from AOCI		<u>\$ 466</u>	<u>\$ (2,051)</u>

The following table shows the changes in AOCI by component for 2018 and 2017 (in millions):

	Cumulative Foreign Currency Translation	Unrealized Gains/Losses on Derivative Instruments	Unrealized Gains/Losses on Marketable Securities	Total
Balances as of September 24, 2016	\$ (578)	\$ 38	\$ 1,174	\$ 634
Other comprehensive income/(loss) before reclassifications	301	1,793	(1,207)	887
Amounts reclassified from AOCI	□	(1,952)	(99)	(2,051)
Tax effect	(77)	(3)	460	380
Other comprehensive income/(loss)	224	(162)	(846)	(784)
Balances as of September 30, 2017	(354)	(124)	328	(150)
Other comprehensive income/(loss) before reclassifications	(524)	672	(4,563)	(4,415)
Amounts reclassified from AOCI	□	486	(20)	466
Tax effect	(1)	(253)	1,177	923
Other comprehensive income/(loss)	(525)	905	(3,406)	(3,026)
Cumulative effect of change in accounting principle (1)	(176)	29	(131)	(278)
Balances as of September 29, 2018	\$ (1,055)	\$ 810	\$ (3,209)	\$ (3,454)

(1) Refer to Note 4, □ Income Taxes □ for more information on the Company's adoption of ASU 2018-02 in 2018.

Note 8 – Benefit Plans

2014 Employee Stock Plan

In the second quarter of 2014, shareholders approved the 2014 Employee Stock Plan (the "2014 Plan") and terminated the Company's authority to grant new awards under the 2003 Employee Stock Plan (the "2003 Plan"). The 2014 Plan provides for broad-based equity grants to employees, including executive officers, and permits the granting of RSUs, stock grants, performance-based awards, stock options and stock appreciation rights, as well as cash bonus awards. RSUs granted under the 2014 Plan generally vest over four years, based on continued employment, and are settled upon vesting in shares of the Company's common stock on a one-for-one basis. Each share issued with respect to RSUs granted under the 2014 Plan reduces the number of shares available for grant under the plan by two shares. RSUs canceled and shares withheld to satisfy tax withholding obligations increase the number of shares available for grant under the 2014 Plan utilizing a factor of two times the number of RSUs canceled or shares withheld. Currently, all RSUs granted under the 2014 Plan have dividend equivalent rights ("DERs"), which entitle holders of RSUs to the same dividend value per share as holders of common stock. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. Upon approval of the 2014 Plan, the Company reserved 385 million shares plus the number of shares remaining that were reserved but not issued under the 2003 Plan. Shares subject to outstanding awards under the 2003 Plan that expire, are canceled or otherwise terminate, or are withheld to satisfy tax withholding obligations with respect to RSUs, will also be available for awards under the 2014 Plan. As of September 29, 2018, approximately 280.2 million shares were reserved for future issuance under the 2014 Plan.

Apple Inc. Non-Employee Director Stock Plan

The Apple Inc. Non-Employee Director Stock Plan (the "Director Plan") is a shareholder-approved plan that (i) permits the Company to grant awards of RSUs or stock options to the Company's non-employee directors, (ii) provides for automatic initial grants of RSUs upon a non-employee director joining the Board of Directors and automatic annual grants of RSUs at each annual meeting of shareholders, and (iii) permits the Board of Directors to prospectively change the value and relative mixture of stock options and RSUs for the initial and annual award grants and the methodology for determining the number of shares of the Company's common stock subject to these grants, in each case within the limits set forth in the Director Plan and without further shareholder approval. Each share issued with respect to RSUs granted under the Director Plan reduces the number of shares available for grant under the plan by two shares. The Director Plan expires November 12, 2027. All RSUs granted under the Director Plan are entitled to DERs. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. As of September 29, 2018, approximately 1.1 million shares were reserved for future issuance under the Director Plan.

Rule 10b5-1 Trading Plans

During the three months ended September 29, 2018, Section 16 officers Angela Ahrendts, Timothy D. Cook, Chris Kondo, Luca Maestri, Daniel Riccio, Philip Schiller and Jeffrey Williams had equity trading plans in place in accordance with Rule 10b5-1(c)(1) under the Exchange Act. An equity trading plan is a written document that pre-establishes the amounts, prices and dates (or formula for determining the amounts, prices and dates) of future purchases or sales of the Company's stock, including shares acquired pursuant to the Company's employee and director equity plans.

Employee Stock Purchase Plan

The Employee Stock Purchase Plan (the "Purchase Plan") is a shareholder-approved plan under which substantially all employees may purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of six-month offering periods. An employee's payroll deductions under the Purchase Plan are limited to 10% of the employee's compensation and employees may not purchase more than \$25,000 of stock during any calendar year. As of September 29, 2018, approximately 36.5 million shares were reserved for future issuance under the Purchase Plan.

401(k) Plan

The Company's 401(k) Plan is a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, participating U.S. employees may defer a portion of their pre-tax earnings, up to the IRS annual contribution limit (\$18,500 for calendar year 2018). The Company matches 50% to 100% of each employee's contributions, depending on length of service, up to a maximum 6% of the employee's eligible earnings.

Restricted Stock Units

A summary of the Company's RSU activity and related information for 2018, 2017 and 2016, is as follows:

	Number of RSUs (in thousands)	Weighted-Average Grant Date Fair Value Per RSU	Aggregate Fair Value (in millions)
Balance as of September 26, 2015	101,467	\$ 85.77	
RSUs granted	49,468	\$ 109.28	
RSUs vested	(46,313)	\$ 84.44	
RSUs canceled	(5,533)	\$ 96.48	
Balance as of September 24, 2016	99,089	\$ 97.54	
RSUs granted	50,112	\$ 121.65	
RSUs vested	(45,735)	\$ 95.48	
RSUs canceled	(5,895)	\$ 106.87	
Balance as of September 30, 2017	97,571	\$ 110.33	
RSUs granted	45,351	\$ 162.86	
RSUs vested	(44,718)	\$ 111.24	
RSUs canceled	(6,049)	\$ 127.82	
Balance as of September 29, 2018	92,155	\$ 134.60	\$ 20,803

The fair value as of the respective vesting dates of RSUs was \$7.6 billion, \$6.1 billion and \$5.1 billion for 2018, 2017 and 2016, respectively. The majority of RSUs that vested in 2018, 2017 and 2016 were net share settled such that the Company withheld shares with value equivalent to the employees' obligation for the applicable income and other employment taxes, and remitted the cash to the appropriate taxing authorities. The total shares withheld were approximately 16.0 million, 15.4 million and 15.9 million for 2018, 2017 and 2016, respectively, and were based on the value of the RSUs on their respective vesting dates as determined by the Company's closing stock price. Total payments for the employees' tax obligations to taxing authorities were \$2.7 billion, \$2.0 billion and \$1.7 billion in 2018, 2017 and 2016, respectively, and are reflected as a financing activity within the Consolidated Statements of Cash Flows. These net share settlements had the effect of share repurchases by the Company as they reduced the number of shares that would have otherwise been issued as a result of the vesting and did not represent an expense to the Company.

Share-Based Compensation

The following table shows a summary of the share-based compensation expense included in the Consolidated Statements of Operations for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Cost of sales	\$ 1,010	\$ 877	\$ 769
Research and development	2,668	2,299	1,889
Selling, general and administrative	1,662	1,664	1,552
Total share-based compensation expense	<u>\$ 5,340</u>	<u>\$ 4,840</u>	<u>\$ 4,210</u>

The income tax benefit related to share-based compensation expense was \$1.9 billion, \$1.6 billion and \$1.4 billion for 2018, 2017 and 2016, respectively. As of September 29, 2018, the total unrecognized compensation cost related to outstanding RSUs and stock options was \$9.4 billion, which the Company expects to recognize over a weighted-average period of 2.5 years.

Note 9 – Commitments and Contingencies

Accrued Warranty and Indemnification

The following table shows changes in the Company's accrued warranties and related costs for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Beginning accrued warranty and related costs	\$ 3,834	\$ 3,702	\$ 4,780
Cost of warranty claims	(4,115)	(4,322)	(4,663)
Accruals for product warranty	3,973	4,454	3,585
Ending accrued warranty and related costs	<u>\$ 3,692</u>	<u>\$ 3,834</u>	<u>\$ 3,702</u>

Agreements entered into by the Company may include indemnification provisions which may subject the Company to costs and damages in the event of a claim against an indemnified third party. Except as disclosed under the heading "Contingencies" below, in the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to indemnification of third parties.

The Company offers an iPhone Upgrade Program, which is available to customers who purchase a qualifying iPhone in the U.S., the U.K. and mainland China. The iPhone Upgrade Program provides customers the right to trade in that iPhone for a specified amount when purchasing a new iPhone, provided certain conditions are met. The Company accounts for the trade-in right as a guarantee liability and recognizes arrangement revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within revenue.

The Company has entered into indemnification agreements with its directors and executive officers. Under these agreements, the Company has agreed to indemnify such individuals to the fullest extent permitted by law against liabilities that arise by reason of their status as directors or officers of the Company, and to advance expenses incurred by such individuals in connection with related legal proceedings. It is not possible to determine the maximum potential amount of payments the Company could be required to make under these agreements due to the limited history of prior indemnification claims and the unique facts and circumstances involved in each claim. While the Company maintains directors and officers liability insurance coverage, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

Concentrations in the Available Sources of Supply of Materials and Product

Although most components essential to the Company's business are generally available from multiple sources, certain components are currently obtained from single or limited sources. In addition, the Company competes for various components with other participants in the markets for mobile communication and media devices and personal computers. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortage and significant commodity pricing fluctuations that could materially adversely affect the Company's financial condition and operating results.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or manufacturing capacity has increased. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the original source, or to identify and obtain sufficient quantities from an alternative source. Continued availability of these components at acceptable prices, or at all, may be affected if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

Substantially all of the Company's hardware products are manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. Certain of these outsourcing partners are single-sourced suppliers of components and manufacturers for many of the Company's products. Although the Company works closely with its outsourcing partners on manufacturing schedules, the Company's financial condition and operating results could be materially adversely affected if its outsourcing partners were unable to meet their production commitments. The Company's manufacturing purchase obligations typically cover its requirements for periods up to 150 days.

Other Off-Balance Sheet Commitments

Operating Leases

The Company leases various equipment and facilities, including retail space, under noncancelable operating lease arrangements. The Company does not currently utilize any other off-balance sheet financing arrangements. As of September 29, 2018, the Company's total future minimum lease payments under noncancelable operating leases were \$9.6 billion. The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Rent expense under all operating leases, including both cancelable and noncancelable leases, was \$1.2 billion, \$1.1 billion and \$939 million in 2018, 2017 and 2016, respectively. Future minimum lease payments under noncancelable operating leases having initial or remaining terms in excess of one year as of September 29, 2018, are as follows (in millions):

2019	\$	1,298
2020		1,289
2021		1,218
2022		1,038
2023		800
Thereafter		3,984
Total	\$	<u>9,627</u>

Unconditional Purchase Obligations

The Company has entered into certain off-balance sheet arrangements which require the future purchase of goods or services (unconditional purchase obligations). The Company's unconditional purchase obligations primarily consist of payments for supplier arrangements, internet and telecommunication services and intellectual property licenses. Future payments under noncancelable unconditional purchase obligations having a remaining term in excess of one year as of September 29, 2018, are as follows (in millions):

2019	\$	2,447
2020		3,202
2021		1,749
2022		1,596
2023		268
Thereafter		66
Total	\$	<u>9,328</u>

Contingencies

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and that have not been fully adjudicated, as further discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors" and in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings." The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts in excess of management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss in excess of a recorded accrual, with respect to loss contingencies for asserted legal and other claims, except for the following matters:

VirnetX

VirnetX, Inc. filed two lawsuits in the U.S. District Court for the Eastern District of Texas (the "Eastern Texas District Court") against the Company alleging that certain Company products infringe four patents (the "VirnetX Patents") relating to network communications technology ("VirnetX I" and "VirnetX II"). On September 30, 2016, the court returned a verdict in VirnetX I against the Company and awarded damages of \$302 million, which later increased to \$440 million in post-trial proceedings. VirnetX I is currently on appeal at the U.S. Court of Appeals for the Federal Circuit (the "Federal Circuit"). On April 11, 2018, a jury returned a verdict in VirnetX II against the Company and awarded damages of \$503 million. VirnetX II is currently on appeal. The Company has challenged the validity of the VirnetX Patents at the U.S. Patent and Trademark Office (the "PTO"). In response, the PTO has declared the VirnetX Patents invalid. VirnetX has appealed, and those appeals are currently pending at the Federal Circuit. The Federal Circuit has consolidated the Company's appeal of the Eastern Texas District Court VirnetX I verdict and VirnetX's appeals from the PTO invalidity proceedings. The Company believes it will prevail on the merits.

Qualcomm

On January 20, 2017, the Company filed a lawsuit against Qualcomm Incorporated and affiliated parties ("Qualcomm") in the U.S. District Court for the Southern District of California seeking, among other things, to enjoin Qualcomm from requiring the Company to pay royalties at the rate demanded by Qualcomm. As the Company does not believe the demanded royalty it has historically paid contract manufacturers for each applicable device is fair, reasonable and non-discriminatory, and believes it to be invalid and/or overstated in other respects as well, no Qualcomm-related royalty payments have been remitted by the Company to its contract manufacturers since the beginning of the second quarter of 2017. The Company believes it will prevail on the merits of the case and has accrued its best estimate for the ultimate resolution of this matter.

Note 10 – Segment Information and Geographic Data

The Company reports segment information based on the "management" approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of the Company's reportable segments.

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. The accounting policies of the various segments are the same as those described in Note 1, "Summary of Significant Accounting Policies."

The Company evaluates the performance of its reportable segments based on net sales and operating income. Net sales for geographic segments are generally based on the location of customers and sales through the Company's retail stores located in those geographic locations. Operating income for each segment includes net sales to third parties, related cost of sales and operating expenses directly attributable to the segment. Advertising expenses are generally included in the geographic segment in which the expenditures are incurred. Operating income for each segment excludes other income and expense and certain expenses managed outside the reportable segments. Costs excluded from segment operating income include various corporate expenses such as research and development, corporate marketing expenses, certain share-based compensation expenses, income taxes, various nonrecurring charges and other separately managed general and administrative costs. The Company does not include intercompany transfers between segments for management reporting purposes.

The following table shows information by reportable segment for 2018, 2017 and 2016 (in millions):

	2018	2017	2016
Americas:			
Net sales	\$ 112,093	\$ 96,600	\$ 86,613
Operating income	\$ 34,864	\$ 30,684	\$ 28,172
Europe:			
Net sales	\$ 62,420	\$ 54,938	\$ 49,952
Operating income	\$ 19,955	\$ 16,514	\$ 15,348
Greater China:			
Net sales	\$ 51,942	\$ 44,764	\$ 48,492
Operating income	\$ 19,742	\$ 17,032	\$ 18,835
Japan:			
Net sales	\$ 21,733	\$ 17,733	\$ 16,928
Operating income	\$ 9,500	\$ 8,097	\$ 7,165
Rest of Asia Pacific:			
Net sales	\$ 17,407	\$ 15,199	\$ 13,654
Operating income	\$ 6,181	\$ 5,304	\$ 4,781

A reconciliation of the Company's segment operating income to the Consolidated Statements of Operations for 2018, 2017 and 2016 is as follows (in millions):

	2018	2017	2016
Segment operating income	\$ 90,242	\$ 77,631	\$ 74,301
Research and development expense	(14,236)	(11,581)	(10,045)
Other corporate expenses, net	(5,108)	(4,706)	(4,232)
Total operating income	<u>\$ 70,898</u>	<u>\$ 61,344</u>	<u>\$ 60,024</u>

The U.S. and China were the only countries that accounted for more than 10% of the Company's net sales in 2018, 2017 and 2016. There was no single customer that accounted for more than 10% of net sales in 2018, 2017 and 2016. Net sales for 2018, 2017 and 2016 and long-lived assets as of September 29, 2018 and September 30, 2017 were as follows (in millions):

	2018	2017	2016
Net sales:			
U.S.	\$ 98,061	\$ 84,339	\$ 75,667
China (1)	51,942	44,764	48,492
Other countries	115,592	100,131	91,480
Total net sales	<u>\$ 265,595</u>	<u>\$ 229,234</u>	<u>\$ 215,639</u>

	2018	2017
Long-lived assets:		
U.S.	\$ 23,963	\$ 20,637
China (1)	13,268	10,211
Other countries	4,073	2,935
Total long-lived assets	<u>\$ 41,304</u>	<u>\$ 33,783</u>

(1) China includes Hong Kong and Taiwan. Long-lived assets located in China consist primarily of product tooling and manufacturing process equipment and assets related to retail stores and related infrastructure.

Net sales by product for 2018, 2017 and 2016 were as follows (in millions):

	2018	2017	2016
iPhone (1)	\$ 166,699	\$ 141,319	\$ 136,700
iPad (1)	18,805	19,222	20,628
Mac (1)	25,484	25,850	22,831
Services (2)	37,190	29,980	24,348
Other Products (1)(3)	17,417	12,863	11,132
Total net sales	\$ 265,595	\$ 229,234	\$ 215,639

(1) Includes deferrals and amortization of related software upgrade rights and non-software services.

(2) Includes revenue from Digital Content and Services, AppleCare, Apple Pay, licensing and other services. Services net sales in 2018 included a favorable one-time item of \$236 million in connection with the final resolution of various lawsuits. Services net sales in 2017 included a favorable one-time adjustment of \$640 million due to a change in estimate based on the availability of additional supporting information.

(3) Includes sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and other Apple-branded and third-party accessories.

Note 11 – Selected Quarterly Financial Information (Unaudited)

The following tables show a summary of the Company's quarterly financial information for each of the four quarters of 2018 and 2017 (in millions, except per share amounts):

	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
2018:				
Net sales	\$ 62,900	\$ 53,265	\$ 61,137	\$ 88,293
Gross margin	\$ 24,084	\$ 20,421	\$ 23,422	\$ 33,912
Net income	\$ 14,125	\$ 11,519	\$ 13,822	\$ 20,065

Earnings per share (1):

Basic	\$ 2.94	\$ 2.36	\$ 2.75	\$ 3.92
Diluted	\$ 2.91	\$ 2.34	\$ 2.73	\$ 3.89

	Fourth Quarter	Third Quarter	Second Quarter	First Quarter
2017:				
Net sales	\$ 52,579	\$ 45,408	\$ 52,896	\$ 78,351
Gross margin	\$ 19,931	\$ 17,488	\$ 20,591	\$ 30,176
Net income	\$ 10,714	\$ 8,717	\$ 11,029	\$ 17,891

Earnings per share (1):

Basic	\$ 2.08	\$ 1.68	\$ 2.11	\$ 3.38
Diluted	\$ 2.07	\$ 1.67	\$ 2.10	\$ 3.36

(1) Basic and diluted earnings per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted earnings per share.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Apple Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Apple Inc. as of September 29, 2018 and September 30, 2017, and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 29, 2018, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of Apple Inc at September 29, 2018 and September 30, 2017, and the results of its operations and its cash flows for each of the three years in the period ended September 29, 2018, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), Apple Inc.'s internal control over financial reporting as of September 29, 2018, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated November 5, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of Apple Inc.'s management. Our responsibility is to express an opinion on Apple Inc.'s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as Apple Inc.'s auditor since 2009.

San Jose, California
November 5, 2018

Apple Inc. | 2018 Form 10-K | 65

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Apple Inc.

Opinion on Internal Control over Financial Reporting

We have audited Apple Inc.'s internal control over financial reporting as of September 29, 2018, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the "COSO criteria"). In our opinion, Apple Inc. maintained, in all material respects, effective internal control over financial reporting as of September 29, 2018, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), the consolidated balance sheets of Apple Inc. as of September 29, 2018 and September 30, 2017, and the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 29, 2018, and the related notes and our report dated November 5, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

Apple Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on Apple Inc.'s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Jose, California
November 5, 2018

Apple Inc. | 2018 Form 10-K | 66

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures**Evaluation of Disclosure Controls and Procedures**

Based on an evaluation under the supervision and with the participation of the Company's management, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act were effective as of September 29, 2018 to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Inherent Limitations Over Internal Controls

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles (GAAP). The Company's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that the Company's receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's Annual Report on Internal Control Over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of the Company's internal control over financial reporting based on the criteria set forth in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the Company's assessment, management has concluded that its internal control over financial reporting was effective as of September 29, 2018 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. The Company's independent registered public accounting firm, Ernst & Young LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control Over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the fourth quarter of 2018, which were identified in connection with management's evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

PART III**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item is set forth under the headings "Corporate Governance," "Directors," "Executive Officers" and "Other Information" Security Ownership of Certain Beneficial Owners and Management" in the Company's 2019 Proxy Statement to be filed with the SEC within 120 days after September 29, 2018 in connection with the solicitation of proxies for the Company's 2019 annual meeting of shareholders and is incorporated herein by reference.

The Company has a code of ethics, "Business Conduct: The way we do business worldwide," that applies to all employees, including the Company's principal executive officer, principal financial officer, and principal accounting officer, as well as to the members of the Board of Directors of the Company. The code is available at investor.apple.com/investor-relations/leadership-and-governance/. The Company intends to disclose any changes in, or waivers from, this code by posting such information on the same website or by filing a Form 8-K, in each case to the extent such disclosure is required by rules of the SEC or Nasdaq.

Item 11. Executive Compensation

The information required by this Item is set forth under the heading "Executive Compensation," under the subheadings "Board Oversight of Risk Management" ; "Compensation Committee Interlocks and Insider Participation" under the heading "Corporate Governance" and under the subheadings "Compensation of Directors" "Director Compensation" 2018" under the heading "Directors" in the Company's 2019 Proxy Statement to be filed with the SEC within 120 days after September 29, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is set forth under the headings "Other Information" Security Ownership of Certain Beneficial Owners and Management" and "Other Information" Equity Compensation Plan Information" in the Company's 2019 Proxy Statement to be filed with the SEC within 120 days after September 29, 2018 and incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is set forth under the subheadings "Board Committees," "Review, Approval, or Ratification of Transactions with Related Persons" ; "Transactions with Related Persons" under the heading "Corporate Governance" in the Company's 2019 Proxy Statement to be filed with the SEC within 120 days September 29, 2018 and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item is set forth under the subheadings "Fees Paid to Auditors" and "Policy on Audit Committee Pre-Approval of Audit and Non-Audit Services Performed by the Independent Registered Public Accounting Firm" under the proposal "Ratification of Appointment of Independent Registered Public Accounting Firm" in the Company's 2019 Proxy Statement to be filed with the SEC within 120 days after September 29, 2018 and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report

(1) All financial statements

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	38
Consolidated Statements of Comprehensive Income for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	39
Consolidated Balance Sheets as of September 29, 2018 and September 30, 2017	40
Consolidated Statements of Shareholders' Equity for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	41
Consolidated Statements of Cash Flows for the years ended September 29, 2018, September 30, 2017 and September 24, 2016	42
Notes to Consolidated Financial Statements	43
Selected Quarterly Financial Information (Unaudited)	64
Reports of Independent Registered Public Accounting Firm	65

(2) Financial Statement Schedules

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and notes thereto included in this Form 10-K.

(3) Exhibits required by Item 601 of Regulation S-K (1)

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
3.1	Restated Articles of Incorporation of the Registrant effective as of June 6, 2014.	8-K	3.1	6/6/14
3.2	Amended and Restated Bylaws of the Registrant effective as of December 13, 2016.	8-K	3.2	12/15/16
4.1	Form of Common Stock Certificate of the Registrant.	10-Q	4.1	12/30/06
4.2	Indenture, dated as of April 29, 2013, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as Trustee.	S-3	4.1	4/29/13
4.3	Officer's Certificate of the Registrant, dated as of May 3, 2013, including forms of global notes representing the Floating Rate Notes due 2016, Floating Rate Notes due 2018, 0.45% Notes due 2016, 1.00% Notes due 2018, 2.40% Notes due 2023 and 3.85% Notes due 2043.	8-K	4.1	5/3/13
4.4	Officer's Certificate of the Registrant, dated as of May 6, 2014, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2019, 1.05% Notes due 2017, 2.10% Notes due 2019, 2.85% Notes due 2021, 3.45% Notes due 2024 and 4.45% Notes due 2044.	8-K	4.1	5/6/14
4.5	Officer's Certificate of the Registrant, dated as of November 10, 2014, including forms of global notes representing the 1.000% Notes due 2022 and 1.625% Notes due 2026.	8-K	4.1	11/10/14
4.6	Officer's Certificate of the Registrant, dated as of February 9, 2015, including forms of global notes representing the Floating Rate Notes due 2020, 1.55% Notes due 2020, 2.15% Notes due 2022, 2.50% Notes due 2025 and 3.45% Notes due 2045.	8-K	4.1	2/9/15
4.7	Officer's Certificate of the Registrant, dated as of May 13, 2015, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2020, 0.900% Notes due 2017, 2.000% Notes due 2020, 2.700% Notes due 2022, 3.200% Notes due 2025, and 4.375% Notes due 2045.	8-K	4.1	5/13/15
4.8	Officer's Certificate of the Registrant, dated as of June 10, 2015, including forms of global notes representing the 0.350% Notes due 2020.	8-K	4.1	6/10/15

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
4.9	Officer's Certificate of the Registrant, dated as of July 31, 2015, including forms of global notes representing the 3.05% Notes due 2029 and 3.60% Notes due 2042.	8-K	4.1	7/31/15
4.10	Officer's Certificate of the Registrant, dated as of September 17, 2015, including forms of global notes representing the 1.375% Notes due 2024 and 2.000% Notes due 2027.	8-K	4.1	9/17/15
4.11	Officer's Certificate of the Registrant, dated as of February 23, 2016, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2021, 1.300% Notes due 2018, 1.700% Notes due 2019, 2.250% Notes due 2021, 2.850% Notes due 2023, 3.250% Notes due 2026, 4.500% Notes due 2036 and 4.650% Notes due 2046.	8-K	4.1	2/23/16
4.12	Supplement No. 1 to the Officer's Certificate of the Registrant, dated as of March 24, 2016.	8-K	4.1	3/24/16
4.13	Officer's Certificate of the Registrant, dated as of June 22, 2016, including form of global note representing 4.15% Notes due 2046.	8-K	4.1	6/22/16
4.14	Officer's Certificate of the Registrant, dated as of August 4, 2016, including forms of global notes representing the Floating Rate Notes due 2019, 1.100% Notes due 2019, 1.550% Notes due 2021, 2.450% Notes due 2026 and 3.850% Notes due 2046.	8-K	4.1	8/4/16
4.15	Officer's Certificate of the Registrant, dated as of February 9, 2017, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.550% Notes due 2019, 1.900% Notes due 2020, 2.500% Notes due 2022, 3.000% Notes due 2024, 3.350% Notes due 2027 and 4.250% Notes due 2047.	8-K	4.1	2/9/17
4.16	Officer's Certificate of the Registrant, dated as of March 3, 2017, including form of global note representing 4.300% Notes due 2047.	8-K	4.1	3/3/17
4.17	Officer's Certificate of the Registrant, dated as of May 11, 2017, including forms of global notes representing the Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.800% Notes due 2020, 2.300% Notes due 2022, 2.850% Notes due 2024 and 3.200% Notes due 2027.	8-K	4.1	5/11/17
4.18	Officer's Certificate of the Registrant, dated as of May 24, 2017, including forms of global notes representing the 0.875% Notes due 2025 and 1.375% Notes due 2029.	8-K	4.1	5/24/17
4.19	Officer's Certificate of the Registrant, dated as of June 20, 2017, including form of global note representing the 3.000% Notes due 2027.	8-K	4.1	6/20/17
4.20	Officer's Certificate of the Registrant, dated as of August 18, 2017, including form of global note representing the 2.513% Notes due 2024.	8-K	4.1	8/18/17
4.21	Officer's Certificate of the Registrant, dated as of September 12, 2017, including forms of global notes representing the 1.500% Notes due 2019, 2.100% Notes due 2022, 2.900% Notes due 2027 and 3.750% Notes due 2047.	8-K	4.1	9/12/17
4.22	Officer's Certificate of the Registrant, dated as of November 13, 2017, including forms of global notes representing the 1.800% Notes due 2019, 2.000% Notes due 2020, 2.400% Notes due 2023, 2.750% Notes due 2025, 3.000% Notes due 2027 and 3.750% Notes due 2047.	8-K	4.1	11/13/17
4.23*	Apple Inc. Deferred Compensation Plan.	S-8	4.1	8/23/18
10.1*	Employee Stock Purchase Plan, as amended and restated as of March 10, 2015.	8-K	10.1	3/13/15
10.2*	Form of Indemnification Agreement between the Registrant and each director and executive officer of the Registrant.	10-Q	10.2	6/27/09
10.3*	Apple Inc. Non-Employee Director Stock Plan, as amended and restated as of February 13, 2018.	8-K	10.1	2/14/18
10.4*	2003 Employee Stock Plan, as amended through February 25, 2010.	8-K	10.1	3/1/10
10.5*	Form of Restricted Stock Unit Award Agreement under 2003 Employee Stock Plan effective as of November 16, 2010.	10-Q	10.10	12/25/10
10.6*	2014 Employee Stock Plan, as amended and restated as of October 1, 2017.	10-K	10.8	9/30/17
10.7*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of August 26, 2014.	10-K	10.11	9/27/14
10.8*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of August 26, 2014.	10-K	10.12	9/27/14

Apple Inc. | 2018 Form 10-K | 70

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
10.9*	Form of Amendment, effective as of August 26, 2014, to Restricted Stock Unit Award Agreements and Performance Award Agreements outstanding as of August 26, 2014.	10-K	10.13	9/27/14
10.10*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 5, 2015.	10-Q	10.16	3/26/16
10.11*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of October 5, 2015.	10-Q	10.17	3/26/16
10.12*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 14, 2016.	10-K	10.18	9/24/16
10.13*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of October 14, 2016.	10-K	10.19	9/24/16
10.14*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.	10-K	10.20	9/30/17
10.15*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.	10-K	10.21	9/30/17
10.16*	Form of Restricted Stock Unit Award Agreement under Non-Employee Director Stock Plan effective as of February 13, 2018.	10-Q	10.2	3/31/18
10.17*, **	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of August 21, 2018.			
10.18*, **	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of August 21, 2018.			
21.1**	Subsidiaries of the Registrant.			
23.1**	Consent of Independent Registered Public Accounting Firm.			
24.1**	Power of Attorney (included on the Signatures page of this Annual Report on Form 10-K).			
31.1**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer.			
31.2**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer.			
32.1***	Section 1350 Certifications of Chief Executive Officer and Chief Financial Officer.			
101.INS**	XBRL Instance Document.			
101.SCH**	XBRL Taxonomy Extension Schema Document.			
101.CAL**	XBRL Taxonomy Extension Calculation Linkbase Document.			
101.DEF**	XBRL Taxonomy Extension Definition Linkbase Document.			
101.LAB**	XBRL Taxonomy Extension Label Linkbase Document.			
101.PRE**	XBRL Taxonomy Extension Presentation Linkbase Document.			

* Indicates management contract or compensatory plan or arrangement.

** Filed herewith.

*** Furnished herewith.

(1) Certain instruments defining the rights of holders of long-term debt securities of the Registrant are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: November 5, 2018

Apple Inc.

By: /s/ Luca Maestri

Luca Maestri
Senior Vice President,
Chief Financial Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy D. Cook and Luca Maestri, jointly and severally, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Name	Title	Date
<u> /s/ Timothy D. Cook </u> TIMOTHY D. COOK	Chief Executive Officer and Director (Principal Executive Officer)	November 5, 2018
<u> /s/ Luca Maestri </u> LUCA MAESTRI	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	November 5, 2018
<u> /s/ Chris Kondo </u> CHRIS KONDO	Senior Director of Corporate Accounting (Principal Accounting Officer)	November 5, 2018
<u> /s/ James A. Bell </u> JAMES A. BELL	Director	November 5, 2018
<u> /s/ Al Gore </u> AL GORE	Director	November 5, 2018
<u> /s/ Robert A. Iger </u> ROBERT A. IGER	Director	November 5, 2018
<u> /s/ Andrea Jung </u> ANDREA JUNG	Director	November 5, 2018
<u> /s/ Arthur D. Levinson </u> ARTHUR D. LEVINSON	Director	November 5, 2018
<u> /s/ Ronald D. Sugar </u> RONALD D. SUGAR	Director	November 5, 2018
<u> /s/ Susan L. Wagner </u> SUSAN L. WAGNER	Director	November 5, 2018

Apple Inc. | 2018 Form 10-K | 72

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Cao v. Apple
Apple Trial Exhibit
59

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended September 28, 2019

or

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission File Number: **001-36743**



(Exact name of Registrant as specified in its charter)

California

(State or other jurisdiction of incorporation or organization)

94-2404110

(I.R.S. Employer Identification No.)

One Apple Park Way

Cupertino California

(Address of principal executive offices)

95014

(Zip Code)

(408) 996-1010

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading symbol(s)	Name of each exchange on which registered
Common Stock, \$0.00001 par value per share	AAPL	The Nasdaq Stock Market LLC
1.000% Notes due 2022	—	The Nasdaq Stock Market LLC
1.375% Notes due 2024	—	The Nasdaq Stock Market LLC
0.875% Notes due 2025	—	The Nasdaq Stock Market LLC
1.625% Notes due 2026	—	The Nasdaq Stock Market LLC
2.000% Notes due 2027	—	The Nasdaq Stock Market LLC
1.375% Notes due 2029	—	The Nasdaq Stock Market LLC
3.050% Notes due 2029	—	The Nasdaq Stock Market LLC
3.600% Notes due 2042	—	The Nasdaq Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes No

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files).

Yes No

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of large accelerated filer, accelerated filer, smaller reporting company, and emerging growth company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
 Non-accelerated filer Smaller reporting company
 Emerging growth company

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Act).

Yes No

The aggregate market value of the voting and non-voting stock held by non-affiliates of the Registrant, as of March 29, 2019, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately \$874,698,000,000. Solely for purposes of this disclosure, shares of common stock held by executive officers and directors of the Registrant as of such date have been excluded because such persons may be deemed to be affiliates. This determination of executive officers and directors as affiliates is not necessarily a conclusive determination for any other purposes.

4,443,265,000 shares of common stock were issued and outstanding as of October 18, 2019.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's definitive proxy statement relating to its 2020 annual meeting of shareholders (the "2020 Proxy Statement") are incorporated by reference into Part III of this Annual Report on Form 10-K where indicated. The 2020 Proxy Statement will be filed with the U.S. Securities and Exchange Commission within 120 days after the end of the fiscal year to which this report relates.

Apple Inc.
Form 10-K
For the Fiscal Year Ended September 28, 2019
TABLE OF CONTENTS

		<u>Page</u>
Part I		
Item 1.	Business	1
Item 1A.	Risk Factors	5
Item 1B.	Unresolved Staff Comments	14
Item 2.	Properties	14
Item 3.	Legal Proceedings	14
Item 4.	Mine Safety Disclosures	14
Part II		
Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	15
Item 6.	Selected Financial Data	17
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	18
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	26
Item 8.	Financial Statements and Supplementary Data	28
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	59
Item 9A.	Controls and Procedures	59
Item 9B.	Other Information	59
Part III		
Item 10.	Directors, Executive Officers and Corporate Governance	60
Item 11.	Executive Compensation	60
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	60
Item 13.	Certain Relationships and Related Transactions, and Director Independence	60
Item 14.	Principal Accounting Fees and Services	60
Part IV		
Item 15.	Exhibits, Financial Statement Schedules	61
Item 16.	Form 10-K Summary	63

This Annual Report on Form 10-K ("Form 10-K") contains forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Many of the forward-looking statements are located in Part II, Item 7 of this Form 10-K under the heading "Management's Discussion and Analysis of Financial Condition and Results of Operations." Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. Unless otherwise stated, all information presented herein is based on the Company's fiscal calendar, and references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

PART I

Item 1. Business

Company Background

The Company designs, manufactures and markets smartphones, personal computers, tablets, wearables and accessories, and sells a variety of related services. The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company is a California corporation established in 1977.

Products

iPhone

iPhone is the Company's line of smartphones based on its iOS operating system. In September 2019, the Company introduced three new iPhones: iPhone 11, iPhone 11 Pro and iPhone 11 Pro Max.

Mac

Mac is the Company's line of personal computers based on its macOS operating system. During 2019, the Company released a new version of MacBook Air and a new Mac mini, and introduced an updated Mac Pro, which is expected to be available in the fall of 2019.

iPad

iPad is the Company's line of multi-purpose tablets. iPad is based on the Company's iPadOS operating system, which was introduced during 2019. Also during 2019 the Company released two new versions of iPad Pro, an iPad Air, an updated iPad mini and a new 10.2-inch iPad.

Wearables, Home and Accessories

Wearables, Home and Accessories includes AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and other Apple-branded and third-party accessories. AirPods are the Company's wireless headphones that interact with Siri. In October 2019, the Company introduced AirPods Pro. Apple Watch is a personal electronic device that combines the watchOS user interface and other technologies created specifically for a smaller device. In September 2019, the Company introduced Apple Watch Series 5.

Services

Digital Content Stores and Streaming Services

The Company operates various platforms that allow customers to discover and download applications and digital content, such as books, music, video, games and podcasts. These platforms include the App Store, available for iPhone and iPad, the Mac App Store, the TV App Store and the Watch App Store.

The Company also offers subscription-based digital content streaming services, including Apple Music, which offers users a curated listening experience with on-demand radio stations, and Apple TV+, which offers exclusive original content, and is expected to be available in November 2019.

AppleCare

AppleCare[®] includes AppleCare+ (AC+) and the AppleCare Protection Plan, which are fee-based services that extend the coverage of phone support eligibility and hardware repairs. AC+ offers additional coverage for instances of accidental damage and is available in certain countries for certain products. Additionally, AC+ with theft and loss protection is available for iPhone in the U.S.

iCloud

iCloud[®] is the Company's cloud service, which stores music, photos, contacts, calendars, mail, documents and more, keeping them up-to-date and available across multiple Apple devices and Windows personal computers.

Licensing

The Company licenses the use of certain of its intellectual property, and provides other related services.

Other Services

The Company delivers a variety of other services available in certain countries, including Apple Arcade[®], a game subscription service; Apple Card[®], a co-branded credit card; Apple News+, a subscription news and magazine service; and Apple Pay, a cashless payment service.

Markets and Distribution

The Company's customers are primarily in the consumer, small and mid-sized business, education, enterprise and government markets. The Company sells its products and resells third-party products in most of its major markets directly to consumers, small and mid-sized businesses, and education, enterprise and government customers through its retail and online stores and its direct sales force. The Company also employs a variety of indirect distribution channels, such as third-party cellular network carriers, wholesalers, retailers and resellers. During 2019, the Company's net sales through its direct and indirect distribution channels accounted for 31% and 69%, respectively, of total net sales.

No single customer accounted for more than 10% of net sales in 2019, 2018 and 2017.

Competition

The markets for the Company's products and services are highly competitive and the Company is confronted by aggressive competition in all areas of its business. These markets are characterized by frequent product introductions and rapid technological advances that have substantially increased the capabilities and use of smartphones, personal computers, tablets and other electronic devices. Many of the Company's competitors that sell mobile devices and personal computers based on other operating systems seek to compete primarily through aggressive pricing and very low cost structures. Principal competitive factors important to the Company include price, product and service features (including security features), relative price and performance, product and service quality and reliability, design innovation, a strong third-party software and accessories ecosystem, marketing and distribution capability, service and support, and corporate reputation.

The Company is focused on expanding its market opportunities related to smartphones, personal computers, tablets and other electronic devices. These markets are highly competitive and include many large, well-funded and experienced participants. The Company expects competition in these markets to intensify significantly as competitors imitate features of the Company's products and applications within their products, or collaborate to offer solutions that are more competitive than those they currently offer. These markets are characterized by aggressive price competition, frequent product introductions, evolving design approaches and technologies, rapid adoption of technological advancements by competitors, and price sensitivity on the part of consumers and businesses.

The Company's services also face substantial competition, including from companies that have significant resources and experience and have established service offerings with large customer bases. The Company competes with business models that provide content to users for free. The Company also competes with illegitimate means to obtain third-party digital content and applications.

The Company believes it offers superior innovation and integration of the entire solution, including hardware, software and services. Some of the Company's current and potential competitors have substantial resources and may be able to provide such products and services at little or no profit, or even at a loss, to compete with the Company's offerings.

Supply of Components

Although most components essential to the Company's business are generally available from multiple sources, certain components are currently obtained from single or limited sources. The Company also competes for various components with other participants in the markets for smartphones, personal computers, tablets and other electronic devices. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortage and significant commodity pricing fluctuations.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or their manufacturing capacities have increased. The continued availability of these components at acceptable prices, or at all, may be affected if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all.

Substantially all of the Company's hardware products are manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland.

Research and Development

Because the industries in which the Company competes are characterized by rapid technological advances, the Company's ability to compete successfully depends heavily upon its ability to ensure a continual and timely flow of competitive products, services and technologies to the marketplace. The Company continues to develop new technologies to enhance existing products and services, and to expand the range of its offerings through research and development ("R&D"), licensing of intellectual property and acquisition of third-party businesses and technology.

Intellectual Property

The Company currently holds a broad collection of intellectual property rights relating to certain aspects of its hardware devices, accessories, software and services. This includes patents, copyrights, trademarks, service marks, trade dress and other forms of intellectual property rights in the U.S. and various foreign countries. Although the Company believes the ownership of such intellectual property rights is an important factor in its business and that its success does depend in part on such ownership, the Company relies primarily on the innovative skills, technical competence and marketing abilities of its personnel.

The Company regularly files patent applications to protect innovations arising from its research, development and design, and is currently pursuing thousands of patent applications around the world. Over time, the Company has accumulated a large portfolio of issued patents, including utility patents, design patents and others. The Company also holds copyrights relating to certain aspects of its products and services. No single intellectual property right is solely responsible for protecting the Company's products. The Company believes the duration of its intellectual property rights is adequate relative to the expected lives of its products.

In addition to Company-owned intellectual property, many of the Company's products and services are designed to include intellectual property owned by third parties. It may be necessary in the future to seek or renew licenses relating to various aspects of the Company's products, processes and services. While the Company has generally been able to obtain such licenses on commercially reasonable terms in the past, there is no guarantee that such licenses could be obtained in the future on reasonable terms or at all.

Business Seasonality and Product Introductions

The Company has historically experienced higher net sales in its first quarter compared to other quarters in its fiscal year due in part to seasonal holiday demand. Additionally, new product and service introductions can significantly impact net sales, cost of sales and operating expenses. The timing of product introductions can also impact the Company's net sales to its indirect distribution channels as these channels are filled with new inventory following a product launch, and channel inventory of an older product often declines as the launch of a newer product approaches. Net sales can also be affected when consumers and distributors anticipate a product introduction.

Employees

As of September 28, 2019, the Company had approximately 137,000 full-time equivalent employees.

Available Information

The Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), are filed with the Securities and Exchange Commission (the "SEC"). Company is subject to the informational requirements of the Exchange Act and files or furnishes reports, proxy statements and other information with the SEC. Such reports and other information filed by the Company with the SEC are available free of charge at investor.apple.com/investor-relations/sec-filings/default.aspx when such reports are available on the SEC's website. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at www.sec.gov. The Company periodically provides other information for investors on its corporate website, www.apple.com, and its investor relations website, investor.apple.com. This includes press releases and other information about financial performance, information on corporate governance and details related to the Company's annual meeting of shareholders. The information contained on the websites referenced in this Form 10-K is not incorporated by reference into this filing. Further, the Company's references to website URLs are intended to be inactive textual references only.

Apple Inc. | 2019 Form 10-K | 4

Item 1A. Risk Factors

The following discussion of risk factors contains forward-looking statements. These risk factors may be important to understanding other statements in this Form 10-K. The following information should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and accompanying notes in Part II, Item 8, "Financial Statements and Supplementary Data" of this Form 10-K.

The business, financial condition and operating results of the Company can be affected by a number of factors, whether currently known or unknown, including but not limited to those described below, any one or more of which could, directly or indirectly, cause the Company's actual financial condition and operating results to vary materially from past, or from anticipated future, financial condition and operating results. Any of these factors, in whole or in part, could materially and adversely affect the Company's business, financial condition, operating results and stock price.

Because of the following factors, as well as other factors affecting the Company's financial condition and operating results, past financial performance should not be considered to be a reliable indicator of future performance, and investors should not use historical trends to anticipate results or trends in future periods.

Global and regional economic conditions could materially adversely affect the Company's business, results of operations, financial condition and growth.

The Company has international operations with sales outside the U.S. representing a majority of the Company's total net sales. In addition, a majority of the Company's supply chain, and its manufacturing and assembly activities, are located outside the U.S. As a result, the Company's operations and performance depend significantly on global and regional economic conditions.

Adverse macroeconomic conditions, including inflation, slower growth or recession, new or increased tariffs, changes to fiscal and monetary policy, tighter credit, higher interest rates, high unemployment and currency fluctuations could materially adversely affect demand for the Company's products and services. In addition, consumer confidence and spending could be adversely affected in response to financial market volatility, negative financial news, conditions in the real estate and mortgage markets, declines in income or asset values, changes to fuel and other energy costs, labor and healthcare costs and other economic factors.

In addition to an adverse impact on demand for the Company's products, uncertainty about, or a decline in, global or regional economic conditions could have a significant impact on the Company's suppliers, contract manufacturers, logistics providers, distributors, cellular network carriers and other channel partners. Potential effects include financial instability; inability to obtain credit to finance operations and purchases of the Company's products; and insolvency.

A downturn in the economic environment could also lead to increased credit and collectibility risk on the Company's trade receivables; the failure of derivative counterparties and other financial institutions; limitations on the Company's ability to issue new debt; reduced liquidity; and declines in the fair value of the Company's financial instruments. These and other economic factors could materially adversely affect the Company's business, results of operations, financial condition and growth.

Global markets for the Company's products and services are highly competitive and subject to rapid technological change, and the Company may be unable to compete effectively in these markets.

The Company's products and services are offered in highly competitive global markets characterized by aggressive price competition and resulting downward pressure on gross margins, frequent introduction of new products and services, short product life cycles, evolving industry standards, continual improvement in product price/performance characteristics, rapid adoption of technological advancements by competitors, and price sensitivity on the part of consumers and businesses.

The Company's ability to compete successfully depends heavily on its ability to ensure a continuing and timely introduction of innovative new products, services and technologies to the marketplace. The Company believes it is unique in that it designs and develops nearly the entire solution for its products, including the hardware, operating system, numerous software applications and related services. As a result, the Company must make significant investments in R&D. There can be no assurance that these investments will achieve expected returns, and the Company may not be able to develop and market new products and services successfully.

The Company currently holds a significant number of patents, trademarks and copyrights and has registered, and applied to register, numerous patents, trademarks and copyrights. In contrast, many of the Company's competitors seek to compete primarily through aggressive pricing and very low cost structures, and emulating the Company's products and infringing on its intellectual property. If the Company is unable to continue to develop and sell innovative new products with attractive margins or if competitors infringe on the Company's intellectual property, the Company's ability to maintain a competitive advantage could be adversely affected.

The Company has a minority market share in the global smartphone, personal computer and tablet markets. The Company faces substantial competition in these markets from companies that have significant technical, marketing, distribution and other resources, as well as established hardware, software and digital content supplier relationships. In addition, some of the Company's competitors have broader product lines, lower-priced products and a larger installed base of active devices. Competition has been particularly intense as competitors have aggressively cut prices and lowered product margins. Certain competitors may have the resources, experience or cost structures to provide products at little or no profit or even at a loss.

Additionally, the Company faces significant competition as competitors imitate the Company's product features and applications within their products or collaborate to offer solutions that are more competitive than those they currently offer. The Company also expects competition to intensify as competitors imitate the Company's approach to providing components seamlessly within their offerings or work collaboratively to offer integrated solutions.

Some of the markets in which the Company competes have from time to time experienced little to no growth or contracted. In addition, an increasing number of Internet-enabled devices that include software applications and are smaller, simpler and cheaper than traditional personal computers compete with some of the Company's existing products.

The Company's services also face substantial competition, including from companies that have significant resources and experience and have established service offerings with large customer bases. The Company competes with business models that provide content to users for free. The Company also competes with illegitimate means to obtain third-party digital content and applications.

The Company's financial condition and operating results depend substantially on the Company's ability to continually improve its products and services to maintain their functional and design advantages. There can be no assurance the Company will be able to continue to provide products and services that compete effectively.

To remain competitive and stimulate customer demand, the Company must successfully manage frequent introductions and transitions of products and services.

Due to the highly volatile and competitive nature of the industries in which the Company competes, the Company must continually introduce new products, services and technologies, enhance existing products and services, effectively stimulate customer demand for new and upgraded products and services, and successfully manage the transition to these new and upgraded products and services. The success of new product and service introductions depends on a number of factors including, but not limited to, timely and successful development, market acceptance, the Company's ability to manage the risks associated with new product production ramp-up issues, the availability of application software for new products, the effective management of purchase commitments and inventory levels in line with anticipated product demand, the availability of products in appropriate quantities and at expected costs to meet anticipated demand, and the risk that new products and services may have quality or other defects or deficiencies. Accordingly, the Company cannot determine in advance the ultimate effect of new product and service introductions and transitions.

The Company depends on the performance of carriers, wholesalers, retailers and other resellers.

The Company distributes its products through cellular network carriers, wholesalers, retailers and resellers, many of whom distribute products from competing manufacturers. The Company also sells its products and resells third-party products in most of its major markets directly to consumers, small and mid-sized businesses, and education, enterprise and government customers through its retail and online stores and its direct sales force.

Some carriers providing cellular network service for iPhone offer financing, installment payment plans or subsidies for users' purchases of the device. There is no assurance that such offers will be continued at all or in the same amounts upon renewal of the Company's agreements with these carriers or in agreements the Company enters into with new carriers.

The Company has invested and will continue to invest in programs to enhance reseller sales, including staffing selected resellers' stores with Company employees and contractors, and improving product placement displays. These programs can require a substantial investment while not assuring return or incremental sales. The financial condition of these resellers could weaken, these resellers could stop distributing the Company's products, or uncertainty regarding demand for some or all of the Company's products could cause resellers to reduce their ordering and marketing of the Company's products.

The Company is exposed to the risk of write-downs on the value of its inventory and other assets, in addition to purchase commitment cancellation risk.

The Company records a write-down for product and component inventories that have become obsolete or exceed anticipated demand, or for which cost exceeds net realizable value. The Company also accrues necessary cancellation fee reserves for orders of excess products and components. The Company reviews long-lived assets, including capital assets held at its suppliers' facilities and inventory prepayments, for impairment whenever events or circumstances indicate the assets may not be recoverable. If the Company determines that an impairment has occurred, it records a write-down equal to the amount by which the carrying value of the asset exceeds its fair value. Although the Company believes its inventory, capital assets, inventory prepayments and other assets and purchase commitments are currently recoverable, no assurance can be given that the Company will not incur write-downs, fees, impairments and other charges given the rapid and unpredictable pace of product obsolescence in the industries in which the Company competes.

The Company orders components for its products and builds inventory in advance of product announcements and shipments. Manufacturing purchase obligations cover the Company's forecasted component and manufacturing requirements, typically for periods up to 150 days. Because the Company's markets are volatile, competitive and subject to rapid technology and price changes, there is a risk the Company will forecast incorrectly and order or produce excess or insufficient amounts of components or products, or not fully utilize firm purchase commitments.

Future operating results depend upon the Company's ability to obtain components in sufficient quantities on commercially reasonable terms.

Because the Company currently obtains certain components from single or limited sources, the Company is subject to significant supply and pricing risks. Many components, including those that are available from multiple sources, are at times subject to industry-wide shortages and significant commodity pricing fluctuations that could materially adversely affect the Company's financial condition and operating results. While the Company has entered into agreements for the supply of many components, there can be no assurance that the Company will be able to extend or renew these agreements on similar terms, or at all. Component suppliers may suffer from poor financial conditions, which can lead to business failure for the supplier or consolidation within a particular industry, further limiting the Company's ability to obtain sufficient quantities of components on commercially reasonable terms. The effects of global or regional economic conditions on the Company's suppliers, described in "Global and regional economic conditions could materially adversely affect the Company's business, results of operations, financial condition and growth," above, also could affect the Company's ability to obtain components. Therefore, the Company remains subject to significant risks of supply shortages and price increases that could materially adversely affect its financial condition and operating results.

The Company's new products often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or their manufacturing capacities have increased. The continued availability of these components at acceptable prices, or at all, can be affected for any number of reasons, including if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements. If the Company's supply of components for a new or existing product were delayed or constrained, or if an outsourcing partner delayed shipments of completed products to the Company, the Company's financial condition and operating results could be materially adversely affected. The Company's business and financial performance could also be materially adversely affected depending on the time required to obtain sufficient quantities from the source, or to identify and obtain sufficient quantities from an alternative source.

The Company depends on component and product manufacturing and logistical services provided by outsourcing partners, many of which are located outside of the U.S.

Substantially all of the Company's manufacturing is performed in whole or in part by outsourcing partners located primarily in Asia. A significant concentration of this manufacturing is currently performed by a small number of outsourcing partners, often in single locations. The Company has also outsourced much of its transportation and logistics management. While these arrangements can lower operating costs, they also reduce the Company's direct control over production and distribution. Such diminished control may have an adverse effect on the quality or quantity of products or services, or the Company's flexibility to respond to changing conditions. Although arrangements with these partners may contain provisions for product defect expense reimbursement, the Company generally remains responsible to the consumer for warranty and out-of-warranty service in the event of product defects and could experience an unanticipated product defect liability. While the Company relies on its partners to adhere to its supplier code of conduct, material violations of the supplier code of conduct could occur.

The Company relies on single-source outsourcing partners in the U.S., Asia and Europe to supply and manufacture many components, and on outsourcing partners primarily located in Asia, for final assembly of substantially all of the Company's hardware products. Any failure of these partners to perform can have a negative impact on the Company's cost or supply of components or finished goods. In addition, manufacturing or logistics in these locations or transit to final destinations can be disrupted for a variety of reasons including, but not limited to, natural and man-made disasters, information technology system failures, commercial disputes, military actions, economic, business, labor, environmental, public health or political issues, or international trade disputes.

The Company has invested in manufacturing process equipment, much of which is held at certain of its outsourcing partners, and has made prepayments to certain of its suppliers associated with long-term supply agreements. While these arrangements help ensure the supply of components and finished goods, if these outsourcing partners or suppliers experience severe financial problems or other disruptions in their business, such continued supply can be reduced or terminated and the recoverability of manufacturing process equipment or prepayments can be negatively impacted.

The Company's products and services may be affected from time to time by design and manufacturing defects that could materially adversely affect the Company's business and result in harm to the Company's reputation.

The Company offers complex hardware and software products and services that can be affected by design and manufacturing defects. Sophisticated operating system software and applications, such as those offered by the Company, often have issues that can unexpectedly interfere with the intended operation of hardware or software products. Defects can also exist in components and products the Company purchases from third parties. Component defects could make the Company's products unsafe and create a risk of environmental or property damage and personal injury. These risks may increase as the Company's products are introduced into specialized applications, including healthcare. In addition, the Company's service offerings may have quality issues and from time to time experience outages, service slowdowns or errors. As a result, the Company's services may not perform as anticipated and may not meet customer expectations. There can be no assurance the Company will be able to detect and fix all issues and defects in the hardware, software and services it offers. Failure to do so could result in widespread technical and performance issues affecting the Company's products and services. In addition, the Company can be exposed to product liability claims, recalls, product replacements or modifications, write-offs of inventory, property, plant and equipment, and/or intangible assets, and significant warranty and other expenses, including litigation costs and regulatory fines. Quality problems can also adversely affect the experience for users of the Company's products and services, and result in harm to the Company's reputation, loss of competitive advantage, poor market acceptance, reduced demand for products and services, delay in new product and service introductions and lost sales.

The Company relies on access to third-party digital content, which may not be available to the Company on commercially reasonable terms or at all.

The Company contracts with numerous third parties to offer their digital content to customers. This includes the right to sell currently available content. The licensing or other distribution arrangements with these third parties are for relatively short terms and do not guarantee the continuation or renewal of these arrangements on commercially reasonable terms, if at all. Some third-party content providers and distributors currently or in the future may offer competing products and services, and can take actions to make it more difficult or impossible for the Company to license or otherwise distribute their content in the future. Other content owners, providers or distributors may seek to limit the Company's access to, or increase the cost of, such content. The Company may be unable to continue to offer a wide variety of content at commercially reasonable prices with acceptable usage rules, or continue to expand its geographic reach. Failure to obtain the right to make third-party digital content available, or to make such content available on commercially reasonable terms, could have a material adverse impact on the Company's financial condition and operating results.

Some third-party digital content providers require the Company to provide digital rights management and other security solutions. If requirements change, the Company may have to develop or license new technology to provide these solutions. There is no assurance the Company will be able to develop or license such solutions at a reasonable cost and in a timely manner. In addition, certain countries have passed or may propose and adopt legislation that would force the Company to license its digital rights management, which could lessen the protection of content and subject it to piracy and also could negatively affect arrangements with the Company's content providers.

The Company's future performance depends in part on support from third-party software developers.

The Company believes decisions by customers to purchase its hardware products depend in part on the availability of third-party software applications and services. There is no assurance that third-party developers will continue to develop and maintain software applications and services for the Company's products. If third-party software applications and services cease to be developed and maintained for the Company's products, customers may choose not to buy the Company's products.

The Company believes the availability of third-party software applications and services for its products depends in part on the developers' perception and analysis of the relative benefits of developing, maintaining and upgrading such software and services for the Company's products compared to competitors' platforms, such as Android for smartphones and tablets and Windows for personal computers. This analysis may be based on factors such as the market position of the Company and its products, the anticipated revenue that may be generated, expected future growth of product sales, and the costs of developing such applications and services.

The Company's minority market share in the global smartphone, personal computer and tablet markets could make developers less inclined to develop or upgrade software for the Company's products and more inclined to devote their resources to developing and upgrading software for competitors' products with larger market share. If developers focus their efforts on these competing platforms, the availability and quality of applications for the Company's devices may suffer.

The Company relies on the continued availability and development of compelling and innovative software applications for its products. The Company's products and operating systems are subject to rapid technological change, and if third-party developers are unable to or choose not to keep up with this pace of change, third-party applications might not take advantage of these changes to deliver improved customer experiences or might not operate correctly and may result in dissatisfied customers.

The Company sells and delivers third-party applications for its products through the App Store, Mac App Store, TV App Store and Watch App Store. The Company retains a commission from sales through these platforms. If developers reduce their use of these platforms to distribute their applications and offer in-app purchases to customers, then the volume of sales, and the commission that the Company earns on those sales, would decrease.

The Company relies on access to third-party intellectual property, which may not be available to the Company on commercially reasonable terms or at all.

Many of the Company's products and services are designed to include intellectual property owned by third parties, which requires licenses from those third parties. In addition, because of technological changes in the industries in which the Company currently competes or in the future may compete, current extensive patent coverage and the rapid rate of issuance of new patents, the Company's products and services may unknowingly infringe existing patents or intellectual property rights of others. From time to time, the Company has been notified that it may be infringing certain patents or other intellectual property rights of third parties. Based on experience and industry practice, the Company believes licenses to such third-party intellectual property can generally be obtained on commercially reasonable terms. There is, however, no assurance that the necessary licenses can be obtained on commercially reasonable terms or at all. Failure to obtain the right to use third-party intellectual property, or to use such intellectual property on commercially reasonable terms, could preclude the Company from selling certain products or services, or otherwise have a material adverse impact on the Company's financial condition and operating results.

The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights.

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and have not yet been fully resolved, and new claims may arise in the future. In addition, agreements entered into by the Company sometimes include indemnification provisions which can subject the Company to costs and damages in the event of a claim against an indemnified third party.

Claims against the Company based on allegations of patent infringement or other violations of intellectual property rights have generally increased over time and may continue to increase. In particular, the Company has historically faced a significant number of patent claims relating to its cellular-enabled products, and new claims may arise in the future. For example, technology and other patent-holding companies frequently assert their patents and seek royalties and often enter into litigation based on allegations of patent infringement or other violations of intellectual property rights. The Company is vigorously defending infringement actions in courts in several U.S. jurisdictions, as well as internationally in various countries. The plaintiffs in these actions frequently seek injunctions and substantial damages.

Regardless of the merit of particular claims, litigation can be expensive, time-consuming, disruptive to the Company's operations and distracting to management. In recognition of these considerations, the Company may enter into licensing agreements or other arrangements to settle litigation and resolve such disputes. No assurance can be given that such agreements can be obtained on acceptable terms or that litigation will not occur. These agreements may also significantly increase the Company's cost of sales and operating expenses.

Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies" under the heading "Contingencies," in the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss greater than a recorded accrual, concerning loss contingencies for asserted legal and other claims, including matters related to infringement of intellectual property rights.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company or an indemnified third party in a reporting period for amounts above management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. Further, such an outcome could result in significant compensatory, punitive or trebled monetary damages, disgorgement of revenue or profits, remedial corporate measures or injunctive relief against the Company that could materially adversely affect its financial condition and operating results.

While the Company maintains insurance coverage for certain types of claims, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company is subject to complex and changing laws and regulations worldwide, which exposes the Company to potential liabilities, increased costs and other adverse effects on the Company's business.

The Company's global operations are subject to complex and changing laws and regulations on subjects including, but not limited to: antitrust; privacy, data security and data localization; consumer protection; advertising, sales, billing and e-commerce; product liability; intellectual property ownership and infringement; digital platforms; Internet, telecommunications, and mobile communications; media, television, film and digital content; availability of third-party software applications and services; labor and employment; anti-corruption; import, export and trade; foreign exchange controls and cash repatriation restrictions; anti-money laundering; foreign ownership and investment; tax; and environmental, health and safety.

Compliance with these laws and regulations may be onerous and expensive, increasing the cost of conducting the Company's global operations. Changes to laws and regulations can adversely affect the Company's business by increasing the Company's costs, limiting the Company's ability to offer a product or service to customer requiring changes to the Company's business practices or otherwise making the Company's products and services less attractive to customers. The Company has implemented policies and procedures designed to ensure compliance with applicable laws and regulations, but there can be no assurance that the Company's employees, contractors or agents will not violate such laws and regulations or the Company's policies and procedures. If the Company is found to have violated laws and regulations, it could materially adversely affect the Company's reputation, financial condition and operating results.

The technology industry, including, in some instances, the Company, is subject to intense media, political and regulatory scrutiny, which exposes the Company to government investigations, legal actions and penalties. For example, the Company is subject to antitrust investigations in various jurisdictions around the world, which can result in legal proceedings and claims against the Company that could, individually or in the aggregate, have a material impact on the Company's financial condition and operating results. There can be no assurance that the Company's business will not be materially adversely affected, individually or in the aggregate, by the outcomes of such investigations or changes to laws and regulations in the future.

The Company's retail stores have required and will continue to require a substantial investment and commitment of resources and are subject to numerous risks and uncertainties.

The Company's retail stores have required substantial investment in equipment and leasehold improvements, information systems, inventory and personnel. The Company also has entered into substantial lease commitments for retail space. Certain stores have been designed and built to serve as high-profile venues to promote brand awareness. Because of their unique design elements, locations and size, these stores require substantially more investment than the Company's more typical retail stores. Due to the high cost structure associated with the Company's retail stores, a decline in sales or the closure or poor performance of an individual store or multiple stores could result in significant lease termination costs, write-offs of equipment and leasehold improvements and severance costs.

The Company's retail operations are subject to many factors that pose risks and uncertainties and could adversely impact the Company's financial condition and operating results, including macro-economic factors that could have an adverse effect on general retail activity. Other factors include, but are not limited to, the Company's ability to: manage costs associated with retail store construction and operation; manage relationships with existing retail partners; manage costs associated with fluctuations in the value of retail inventory; and obtain and renew leases in quality retail locations at a reasonable cost.

Investment in new business strategies and acquisitions could disrupt the Company's ongoing business and present risks not originally contemplated.

The Company has invested, and in the future may invest, in new business strategies or acquisitions. Such endeavors may involve significant risks and uncertainties, including distraction of management from current operations, greater-than-expected liabilities and expenses, inadequate return on capital, and unidentified issues not discovered in the Company's due diligence. These new ventures are inherently risky and may not be successful.

The Company's business and reputation may be impacted by information technology system failures or network disruptions.

The Company is exposed to information technology system failures or network disruptions caused by natural disasters, accidents, power disruptions, telecommunications failures, acts of terrorism or war, computer viruses, physical or electronic break-ins, or other events or disruptions. System redundancy and other continuity measures may be ineffective or inadequate, and the Company's business continuity and disaster recovery planning may not be sufficient for all eventualities. Such failures or disruptions can adversely impact the Company's business by, among other things, preventing access to the Company's online services, interfering with customer transactions or impeding the manufacturing and shipping of the Company's products. These events could materially adversely affect the Company's reputation, financial condition and operating results.

There may be losses or unauthorized access to or releases of confidential information, including personally identifiable information, that could subject the Company to significant reputational, financial, legal and operational consequences.

The Company's business requires it to use and store confidential information including, among other things, personally identifiable information ("PII") with respect to the Company's customers and employees. The Company devotes significant resources to network and data security, including through the use of encryption and other security measures intended to protect its systems and data. But these measures cannot provide absolute security, and losses or unauthorized access to or releases of confidential information occur and could materially adversely affect the Company's reputation, financial condition and operating results.

The Company's business also requires it to share confidential information with suppliers and other third parties. Although the Company takes steps to secure confidential information that is provided to third parties, such measures are not always effective and losses or unauthorized access to or releases of confidential information occur and could materially adversely affect the Company's reputation, financial condition and operating results.

For example, the Company may experience a security breach impacting the Company's information technology systems that compromises the confidentiality, integrity or availability of confidential information. Such an incident could, among other things, impair the Company's ability to attract and retain customers for its products and services, impact the Company's stock price, materially damage supplier relationships, and expose the Company to litigation or government investigations, which could result in penalties, fines or judgments against the Company.

Although malicious attacks perpetrated to gain access to confidential information, including PII, affect many companies across various industries, the Company is at a relatively greater risk of being targeted because of its high profile and the value of the confidential information it creates, owns, manages, stores and processes.

The Company has implemented systems and processes intended to secure its information technology systems and prevent unauthorized access to or loss of sensitive data, including through the use of encryption and authentication technologies. As with all companies, these security measures may not be sufficient for all eventualities and may be vulnerable to hacking, employee error, malfeasance, system error, faulty password management or other irregularities. For example, third parties fraudulently induce employees or customers into disclosing user names, passwords or other sensitive information, which may, in turn, be used to access the Company's information technology systems. To help protect customers and the Company, the Company monitors its services and systems for unusual activity and may freeze accounts under suspicious circumstances, which, among other things, may result in the delay or loss of customer orders or impede customer access to the Company's products and services.

In addition to the risks relating to general confidential information described above, the Company is also subject to specific obligations relating to health data and payment card data. Health data is subject to additional privacy, security and breach notification requirements, and the Company can be subject to audit by governmental authorities regarding the Company's compliance with these obligations. If the Company fails to adequately comply with these rules and requirements, or if health data is handled in a manner not permitted by law or under the Company's agreements with healthcare institutions, the Company could be subject to litigation or government investigations, may be liable for associated investigatory expenses, and could also incur significant fees or fines.

Under payment card rules and obligations, if cardholder information is potentially compromised, the Company could be liable for associated investigatory expenses and could also incur significant fees or fines if the Company fails to follow payment card industry data security standards. The Company could also experience a significant increase in payment card transaction costs or lose the ability to process payment cards if it fails to follow payment card industry data security standards, which would materially adversely affect the Company's reputation, financial condition and operating results.

While the Company maintains insurance coverage that is intended to address certain aspects of data security risks, such insurance coverage may be insufficient to cover all losses or all types of claims that may arise.

The Company's business is subject to a variety of U.S. and international laws, rules, policies and other obligations regarding data protection.

The Company is subject to federal, state and international laws relating to the collection, use, retention, security and transfer of PII. In many cases, these laws apply not only to third-party transactions, but also may restrict transfers of PII among the Company and its international subsidiaries. Several jurisdictions have passed laws in this area, and other jurisdictions are considering imposing additional restrictions. These laws continue to develop and may be inconsistent from jurisdiction to jurisdiction. Complying with emerging and changing international requirements may cause the Company to incur substantial costs or require the Company to change its business practices. Noncompliance could result in significant penalties or legal liability.

The Company makes statements about its use and disclosure of PII through its privacy policy, information provided on its website and press statements. Any failure by the Company to comply with these public statements or with other federal, state or international privacy-related or data protection laws and regulations could result in proceedings against the Company by governmental entities or others. In addition to reputational impacts, penalties could include ongoing audit requirements and significant legal liability.

The Company's success depends largely on the continued service and availability of key personnel.

Much of the Company's future success depends on the continued availability and service of key personnel, including its Chief Executive Officer, executive team and other highly skilled employees. Experienced personnel in the technology industry are in high demand and competition for their talents is intense, especially in Silicon Valley, where most of the Company's key personnel are located.

The Company's business can be impacted by political events, international trade disputes, war, terrorism, natural disasters, public health issues, industrial accidents and other business interruptions.

Political events, international trade disputes, war, terrorism, natural disasters, public health issues, industrial accidents and other business interruptions could harm or disrupt international commerce and the global economy, and could have a material adverse effect on the Company and its customers, suppliers, contract manufacturers, logistics providers, distributors, cellular network carriers and other channel partners.

International trade disputes can result in tariffs and other measures that can adversely affect the Company's business. For example, trade tensions have led to a series of tariffs imposed by the U.S. on imports from China. Tariffs increase the cost of the Company's products and the components and raw materials that go into making them. These increased costs adversely impact the gross margin that the Company earns on its products. Tariffs can also make the Company's products more expensive for customers, which could make the Company's products less competitive and reduce consumer demand. Countries may also adopt other measures that could limit the Company's ability to offer its products and services. Political uncertainty surrounding international trade disputes and measures could also have a negative effect on consumer confidence and spending, which could adversely affect the Company's business.

Many of the Company's operations and facilities, as well as critical business operations of the Company's suppliers and contract manufacturers, are in locations that are prone to earthquakes and other natural disasters. In addition, such operations and facilities are subject to the risk of interruption by fire, power shortages, nuclear power plant accidents and other industrial accidents, terrorist attacks and other hostile acts, labor disputes, public health issues and other events beyond the Company's control. Global climate change could result in certain types of natural disasters occurring more frequently or with more intense effects. Such events could make it difficult or impossible for the Company to manufacture and deliver products to its customers, create delays and inefficiencies in the Company's supply and manufacturing chain, and result in slowdowns and outages to the Company's service offerings. Following an interruption to its business, the Company could require substantial recovery time, experience significant expenditures to resume operations, and lose significant sales. Because the Company relies on single or limited sources for the supply and manufacture of many critical components, a business interruption affecting such sources would exacerbate any negative consequences to the Company.

The Company's operations are also subject to the risks of industrial accidents at its suppliers and contract manufacturers. While the Company's suppliers are required to maintain safe working environments and operations, an industrial accident could occur and could result in disruption to the Company's business and harm to the Company's reputation. Should major public health issues, including pandemics, arise, the Company could be adversely affected by more stringent employee travel restrictions, additional limitations in freight services, governmental actions limiting the movement of products between regions, delays in production ramps of new products, and disruptions in the operations of the Company's suppliers and contract manufacturers.

While the Company maintains insurance coverage for certain types of losses, such insurance coverage may be insufficient to cover all losses that may arise.

The Company expects its quarterly net sales and operating results to fluctuate.

The Company's profit margins vary across its products, services, geographic segments and distribution channels. For example, gross margins on the Company's hardware products vary across product lines and can change over time. The Company's gross margins are subject to volatility and downward pressure due to a variety of factors, including: continued industry-wide global product pricing pressures and product pricing actions that the Company may take in response to such pressures; increased competition; the Company's ability to effectively stimulate demand for certain of its products and services; compressed product life cycles; potential increases in the cost of components, outside manufacturing services, and acquiring and delivering content for the Company's services; the Company's ability to manage product quality and warranty costs effectively; shifts in the mix of products and services, or in the geographic, currency or channel mix; fluctuations in foreign exchange rates; and the introduction of new products or services, including new products or services with higher cost structures. These and other factors could have a materially adverse impact on the Company's financial condition and operating results.

The Company has historically experienced higher net sales in its first quarter compared to other quarters in its fiscal year due in part to seasonal holiday demand. Additionally, new product and service introductions can significantly impact net sales, cost of sales and operating expenses. Further, the Company generates a significant portion of its net sales from a single product and a decline in demand for that product could significantly impact quarterly net sales. The Company could also be subject to unexpected developments, such as lower-than-anticipated demand for the Company's products or services, issues with new product or service introductions, information technology system failures or network disruptions, or failure of one of the Company's logistics, components supply, or manufacturing partners.

The Company's stock price is subject to volatility.

The Company's stock price has experienced substantial price volatility in the past and may continue to do so in the future. Additionally, the Company, the technology industry and the stock market as a whole have experienced extreme stock price and volume fluctuations that have affected stock prices in ways that may have been unrelated to these companies' operating performance. Price volatility over a given period may cause the average price at which the Company repurchases its stock to exceed the stock's price at a given point in time. The Company believes its stock price should reflect expectations of future growth and profitability. The Company also believes its stock price should reflect expectations that its cash dividend will continue at current levels or grow, and that its current share repurchase program will be fully consummated. Future dividends are subject to declaration by the Company's Board of Directors, and the Company's share repurchase program does not obligate it to acquire any specific number of shares. If the Company fails to meet expectations related to future growth, profitability, dividends, share repurchases or other market expectations, its stock price may decline significantly, which could have a material adverse impact on investor confidence and employee retention.

The Company's financial performance is subject to risks associated with changes in the value of the U.S. dollar relative to local currencies.

The Company's primary exposure to movements in foreign currency exchange rates relates to non-U.S. dollar-denominated sales, cost of sales and operating expenses worldwide. Gross margins on the Company's products in foreign countries and on products that include components obtained from foreign suppliers could be materially adversely affected by foreign currency exchange rate fluctuations.

The weakening of foreign currencies relative to the U.S. dollar adversely affects the U.S. dollar value of the Company's foreign currency-denominated sales and earnings and generally leads the Company to raise international pricing, potentially reducing demand for the Company's products. In some circumstances, for competitive or other reasons, the Company may decide not to raise international pricing to offset the U.S. dollar's strengthening, which would adversely affect the U.S. dollar value of the gross margins the Company earns on foreign currency-denominated sales.

Conversely, a strengthening of foreign currencies relative to the U.S. dollar, while generally beneficial to the Company's foreign currency-denominated sales and earnings could cause the Company to reduce international pricing and incur losses on its foreign currency derivative instruments, thereby limiting the benefit. Additionally, strengthening of foreign currencies may increase the Company's cost of product components denominated in those currencies, thus adversely affecting gross margins.

The Company uses derivative instruments, such as foreign currency forward and option contracts, to hedge certain exposures to fluctuations in foreign currency exchange rates. The use of such hedging activities may not be effective to offset any, or more than a portion, of the adverse financial effects of unfavorable movements in foreign exchange rates over the limited time the hedges are in place.

The Company is exposed to credit risk and fluctuations in the values of its investment portfolio.

The Company's investments can be negatively affected by liquidity, credit deterioration, financial results, market and economic conditions, political risk, sovereign risk, interest rate fluctuations or other factors. As a result, the value and liquidity of the Company's cash, cash equivalents, and marketable and non-marketable securities may fluctuate substantially. Therefore, although the Company has not realized any significant losses on its cash, cash equivalents, and marketable and non-marketable securities, future fluctuations in their value could result in significant losses and could have a material adverse impact on the Company's financial condition and operating results.

The Company is exposed to credit risk on its trade accounts receivable, vendor non-trade receivables and prepayments related to long-term supply agreements, and this risk is heightened during periods when economic conditions worsen.

The Company distributes its products through third-party cellular network carriers, wholesalers, retailers and resellers. The Company also sells its products directly to small and mid-sized businesses and education, enterprise and government customers. A substantial majority of the Company's outstanding trade receivables are not covered by collateral, third-party bank support or financing arrangements, or credit insurance. The Company's exposure to credit and collectibility risk on its trade receivables is higher in certain international markets and its ability to mitigate such risks may be limited. The Company also has unsecured vendor non-trade receivables resulting from purchases of components by outsourcing partners and other vendors that manufacture sub-assemblies or assemble final products for the Company. In addition, the Company has made prepayments associated with long-term supply agreements to secure supply of inventory components. As of September 28, 2019, a significant portion of the Company's trade receivables was concentrated within cellular network carriers, and its vendor non-trade receivables and prepayments related to long-term supply agreements were concentrated among a few individual vendors located primarily in Asia. While the Company has procedures to monitor and limit exposure to credit risk on its trade and vendor non-trade receivables, as well as long-term prepayments, there can be no assurance such procedures will effectively limit its credit risk and avoid losses.

The Company could be subject to changes in its tax rates, the adoption of new U.S. or international tax legislation or exposure to additional tax liabilities.

The Company is subject to taxes in the U.S. and numerous foreign jurisdictions, including Ireland, where a number of the Company's subsidiaries are organized. Due to economic and political conditions, tax rates in various jurisdictions may be subject to significant change. The Company's effective tax rates could be affected by changes in the mix of earnings in countries with differing statutory tax rates, changes in the valuation of deferred tax assets and liabilities, or changes in tax laws or their interpretation, including in the U.S. and Ireland.

The Company is also subject to the examination of its tax returns and other tax matters by the U.S. Internal Revenue Service and other tax authorities and governmental bodies. The Company regularly assesses the likelihood of an adverse outcome resulting from these examinations to determine the adequacy of its provision for taxes. There can be no assurance as to the outcome of these examinations. If the Company's effective tax rates were to increase, particularly in the U.S. or Ireland, or if the ultimate determination of the Company's taxes owed is for an amount in excess of amounts previously accrued, the Company's financial condition and operating results could be materially adversely affected.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

The Company's headquarters are located in Cupertino, California. As of September 28, 2019, the Company owned or leased facilities and land for corporate functions, R&D, data centers, retail and other purposes at locations throughout the U.S. and in various places outside the U.S. The Company believes its existing facilities and equipment, which are used by all reportable segments, are in good operating condition and are suitable for the conduct of its business.

Item 3. Legal Proceedings

The Company is subject to legal proceedings and claims that have not been fully resolved and that have arisen in the ordinary course of business. Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies" under the heading "Contingencies," the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss greater than a recorded accrual, concerning loss contingencies for asserted legal and other claims.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts above management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. Refer to the risk factor "*The Company could be impacted by unfavorable results of legal proceedings, such as being found to have infringed on intellectual property rights*" in Part I, Item 1A of this Form 10-K under the heading "Risk Factors." The Company settled certain matters during the fourth quarter of 2019 that did not individually or in the aggregate have a material impact on the Company's financial condition or operating results.

Item 4. Mine Safety Disclosures

Not applicable.

PART II**Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

The Company's common stock is traded on The Nasdaq Stock Market LLC under the symbol AAPL.

Holders

As of October 18, 2019, there were 23,233 shareholders of record.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Share repurchase activity during the three months ended September 28, 2019 was as follows (in millions, except number of shares, which are reflected in thousands, and per share amounts):

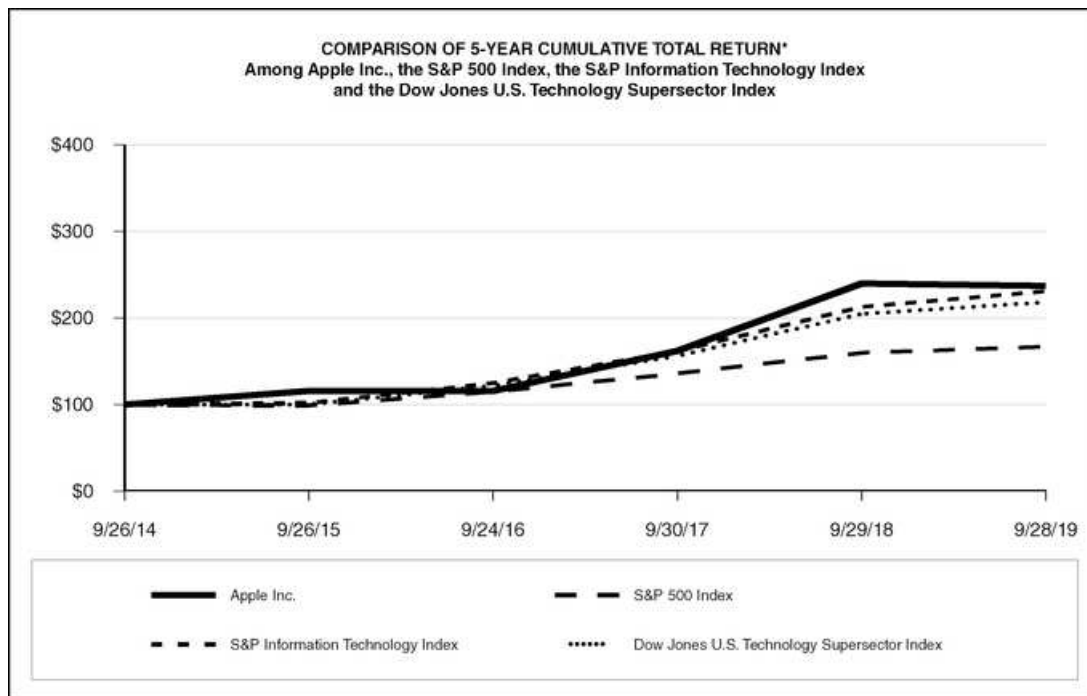
Periods	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Approximate Dollar Value of Shares That May Yet Be Purchased Under the Plans or Programs ⁽¹⁾
June 30, 2019 to August 3, 2019:				
Open market and privately negotiated purchases	23,860	\$ 205.36	23,860	
August 4, 2019 to August 31, 2019:				
February 2019 ASR	6,886	(2)	6,886	
Open market and privately negotiated purchases	34,705	\$ 204.59	34,705	
September 1, 2019 to September 28, 2019:				
Open market and privately negotiated purchases	27,178	\$ 217.17	27,178	
Total	92,629			\$ 78,869

(1) On April 30, 2019, the Company announced the Board of Directors increased the current share repurchase program authorization from \$100 billion to \$175 billion of the Company's common stock, of which \$96.1 billion had been utilized as of September 28, 2019. The remaining \$78.9 billion in the table represents the amount available to repurchase shares under the authorized repurchase program as of September 28, 2019. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

(2) In February 2019, the Company entered into an accelerated share repurchase arrangement (ASR) to purchase up to \$12.0 billion of the Company's common stock. In August 2019, the purchase period for this ASR ended and an additional 6.9 million shares were delivered and retired. In total, 62.0 million shares were delivered under this ASR at an average repurchase price of \$193.69.

Company Stock Performance

The following graph shows a comparison of cumulative total shareholder return, calculated on a dividend-reinvested basis, for the Company, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index for the five years ended September 28, 2019. The graph assumes \$100 was invested in each of the Company's common stock, the S&P 500 Index, the S&P Information Technology Index and the Dow Jones U.S. Technology Supersector Index as of the market close on September 26, 2014. Note that historic stock price performance is not necessarily indicative of future stock price performance.



* \$100 invested on September 26, 2014 in stock or index, including reinvestment of dividends. Data points are the last day of each fiscal year for the Company's common stock and September 30th for indexes.

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	September 2014	September 2015	September 2016	September 2017	September 2018	September 2019
Apple Inc.	\$ 100	\$ 116	\$ 116	\$ 162	\$ 240	\$ 237
S&P 500 Index	\$ 100	\$ 99	\$ 115	\$ 136	\$ 160	\$ 167
S&P Information Technology Index	\$ 100	\$ 102	\$ 125	\$ 162	\$ 213	\$ 231
Dow Jones U.S. Technology Supersector Index	\$ 100	\$ 100	\$ 122	\$ 156	\$ 205	\$ 218

Item 6. Selected Financial Data

The information set forth below for the five years ended September 28, 2019, is not necessarily indicative of results of future operations, and should be read in conjunction with Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and accompanying notes thereto included in Part II, Item 8 of this Form 10-K to fully understand factors that may affect the comparability of the information presented below (in millions, except number of shares, which are reflected in thousands, and per share amounts).

	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>
Total net sales	\$ 260,174	\$ 265,595	\$ 229,234	\$ 215,639	\$ 233,715
Net income	\$ 55,256	\$ 59,531	\$ 48,351	\$ 45,687	\$ 53,394
Earnings per share:					
Basic	\$ 11.97	\$ 12.01	\$ 9.27	\$ 8.35	\$ 9.28
Diluted	\$ 11.89	\$ 11.91	\$ 9.21	\$ 8.31	\$ 9.22
Cash dividends declared per share	\$ 3.00	\$ 2.72	\$ 2.40	\$ 2.18	\$ 1.98
Shares used in computing earnings per share:					
Basic	4,617,834	4,955,377	5,217,242	5,470,820	5,753,421
Diluted	4,648,913	5,000,109	5,251,692	5,500,281	5,793,069
Total cash, cash equivalents and marketable securities	\$ 205,898	\$ 237,100	\$ 268,895	\$ 237,585	\$ 205,666
Total assets	\$ 338,516	\$ 365,725	\$ 375,319	\$ 321,686	\$ 290,345
Non-current portion of term debt	\$ 91,807	\$ 93,735	\$ 97,207	\$ 75,427	\$ 53,329
Other non-current liabilities	\$ 50,503	\$ 48,914	\$ 44,212	\$ 39,986	\$ 38,104

Apple Inc. | 2019 Form 10-K | 17

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This section and other parts of this Annual Report on Form 10-K ("Form 10-K") contain forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995, that involve risks and uncertainties. Forward-looking statements provide current expectations of future events based on certain assumptions and include any statement that does not directly relate to any historical or current fact. Forward-looking statements can also be identified by words such as "future," "anticipates," "believes," "estimates," "expects," "intends," "plans," "predicts," "will," "would," "could," "can," "may," and similar terms. Forward-looking statements are not guarantees of future performance and the Company's actual results may differ significantly from the results discussed in the forward-looking statements. Factors that might cause such differences include, but are not limited to, those discussed in Part I, Item 1A of this Form 10-K under the heading "Risk Factors," which are incorporated herein by reference. The following discussion should be read in conjunction with the consolidated financial statements and accompanying notes included in Part II, Item 8 of this Form 10-K. Unless otherwise stated, all information presented herein is based on the Company's fiscal calendar, and references to particular years, quarters, months or periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years. Each of the terms the "Company" and "Apple" as used herein refers collectively to Apple Inc. and its wholly owned subsidiaries, unless otherwise stated. The Company assumes no obligation to revise or update any forward-looking statements for any reason, except as required by law.

This section of this Form 10-K generally discusses 2019 and 2018 items and year-to-year comparisons between 2019 and 2018. Discussions of 2017 items and year-to-year comparisons between 2018 and 2017 that are not included in this Form 10-K can be found in "Management's Discussion and Analysis of Financial Condition and Results of Operations" in Part II, Item 7 of the Company's Annual Report on Form 10-K for the fiscal year ended September 29, 2018.

Fiscal Period

The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company's fiscal years 2019 and 2018 spanned 52 weeks each whereas fiscal year 2017 included 53 weeks. A 14th week was included in the first quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters.

Fiscal 2019 Highlights

Total net sales decreased 2% or \$5.4 billion during 2019 compared to 2018, driven by lower net sales of iPhone, partially offset by higher net sales of Wearables, Home and Accessories and Services in all geographic operating segments. The weakness in foreign currencies had a significant unfavorable impact on net sales during 2019.

In April 2019, the Company announced an increase to its current share repurchase program authorization from \$100 billion to \$175 billion and raised its quarterly dividend from \$0.73 to \$0.77 per share beginning in May 2019. During 2019, the Company repurchased \$67.1 billion of its common stock and paid dividends and dividend equivalents of \$14.1 billion.

Products and Services Performance

Beginning in the first quarter of 2019, the Company classified the amortization of the deferred value of Maps, Siri and free iCloud services, which are bundled in the sales price of iPhone, Mac, iPad and certain other products, in Services net sales. Historically, the Company classified the amortization of these amounts in Products net sales consistent with its management reporting framework. As a result, Products and Services net sales for 2018 and 2017 were reclassified to conform to the 2019 presentation.

The following table shows net sales by category for 2019, 2018 and 2017 (dollars in millions):

	2019	Change	2018	Change	2017
Net sales by category:					
iPhone (1)	\$ 142,381	(14)%	\$ 164,888	18 %	\$ 139,337
Mac (1)	25,740	2 %	25,198	(1)%	25,569
iPad (1)	21,280	16 %	18,380	(2)%	18,802
Wearables, Home and Accessories (1)(2)	24,482	41 %	17,381	36 %	12,826
Services (3)	46,291	16 %	39,748	22 %	32,700
Total net sales	<u>\$ 260,174</u>	(2)%	<u>\$ 265,595</u>	16 %	<u>\$ 229,234</u>

(1) Products net sales include amortization of the deferred value of unspecified software upgrade rights, which are bundled in the sales price of the respective product.

(2) Wearables, Home and Accessories net sales include sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and Apple-branded and third-party accessories.

(3) Services net sales include sales from the Company's digital content stores and streaming services, AppleCare, licensing and other services. Services net sales also include amortization of the deferred value of Maps, Siri and free iCloud services, which are bundled in the sales price of certain products.

iPhone

iPhone net sales decreased during 2019 compared to 2018 due primarily to lower iPhone unit sales.

Mac

Mac net sales increased during 2019 compared to 2018 due primarily to higher net sales of MacBook Air, partially offset by lower net sales of MacBook and MacBook Pro.

iPad

iPad net sales increased during 2019 compared to 2018 due primarily to higher net sales of iPad Pro.

Wearables, Home and Accessories

Wearables, Home and Accessories net sales increased during 2019 compared to 2018 due primarily to higher net sales of AirPods and Apple Watch.

Services

Services net sales increased during 2019 compared to 2018 due primarily to higher net sales from the App Store, licensing and AppleCare.

Segment Operating Performance

The Company manages its business primarily on a geographic basis. The Company's reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company's other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company's customers and distribution partners and the unique market dynamics of each geographic region. Further information regarding the Company's reportable segments can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 11, "Segment Information and Geographic Data."

The following table shows net sales by reportable segment for 2019, 2018 and 2017 (dollars in millions):

	2019	Change	2018	Change	2017
Net sales by reportable segment:					
Americas	\$ 116,914	4 %	\$ 112,093	16%	\$ 96,600
Europe	60,288	(3)%	62,420	14%	54,938
Greater China	43,678	(16)%	51,942	16%	44,764
Japan	21,506	(1)%	21,733	23%	17,733
Rest of Asia Pacific	17,788	2 %	17,407	15%	15,199
Total net sales	<u>\$ 260,174</u>	<u>(2)%</u>	<u>\$ 265,595</u>	<u>16%</u>	<u>\$ 229,234</u>

Americas

Americas net sales increased during 2019 compared to 2018 due primarily to higher Services and Wearables, Home and Accessories net sales, partially offset by lower iPhone net sales. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Americas net sales during 2019.

Europe

Europe net sales decreased during 2019 compared to 2018 due to lower iPhone net sales, partially offset by higher Wearables, Home and Accessories and Services net sales. The weakness in foreign currencies relative to the U.S. dollar had a significant unfavorable impact on Europe net sales during 2019.

Greater China

Greater China net sales decreased during 2019 compared to 2018 due primarily to lower iPhone net sales, partially offset by higher Wearables, Home and Accessories and Services net sales. The weakness in foreign currencies relative to the U.S. dollar had an unfavorable impact on Greater China net sales during 2019.

Japan

Japan net sales decreased during 2019 compared to 2018 due to lower iPhone net sales, partially offset by higher Services and Wearables, Home and Accessories net sales. The value of the Japanese Yen relative to the U.S. dollar had a favorable impact on Japan net sales during 2019.

Rest of Asia Pacific

Rest of Asia Pacific net sales increased during 2019 compared to 2018 due primarily to higher Wearables, Home and Accessories and Services net sales, partially offset by lower iPhone net sales. The weakness in foreign currencies relative to the U.S. dollar had a significant unfavorable impact on Rest of Asia Pacific net sales during 2019.

Gross Margin

Products and Services gross margin and gross margin percentage for 2019, 2018 and 2017 were as follows (dollars in millions):

	2019	2018	2017
Gross margin:			
Products	\$ 68,887	\$ 77,683	\$ 70,197
Services	29,505	24,156	17,989
Total gross margin	<u>\$ 98,392</u>	<u>\$ 101,839</u>	<u>\$ 88,186</u>
Gross margin percentage:			
Products	32.2%	34.4%	35.7%
Services	63.7%	60.8%	55.0%
Total gross margin percentage	37.8%	38.3%	38.5%

Products Gross Margin

Products gross margin and Products gross margin percentage decreased during 2019 compared to 2018 due primarily to lower iPhone unit sales and the weakness in foreign currencies relative to the U.S. dollar.

Products gross margin increased during 2018 compared to 2017 due primarily to a favorable shift in mix of iPhones and the strength in foreign currencies relative to the U.S. dollar, partially offset by higher product cost structures. Year-over-year Products gross margin percentage decreased during 2018 due primarily to higher product cost structures, partially offset by the strength in foreign currencies relative to the U.S. dollar.

Services Gross Margin

Year-over-year Services gross margin increased during 2019 and 2018 due primarily to higher Services net sales and a different services mix. Year-over-year Services gross margin percentage increased during 2019 and 2018 due primarily to a different services mix and leverage of the Company's services fixed cost structure from higher Services net sales.

The Company's future gross margins can be impacted by a variety of factors, as set forth in Part I, Item 1A of this Form 10-K under the heading "Risk Factors". As a result, the Company believes, in general, gross margins will be subject to volatility and remain under downward pressure.

Operating Expenses

Operating expenses for 2019, 2018 and 2017 were as follows (dollars in millions):

	2019	Change	2018	Change	2017
Research and development	\$ 16,217	14%	\$ 14,236	23%	\$ 11,581
Percentage of total net sales	6%		5%		5%
Selling, general and administrative	\$ 18,245	9%	\$ 16,705	9%	\$ 15,261
Percentage of total net sales	7%		6%		7%
Total operating expenses	\$ 34,462	11%	\$ 30,941	15%	\$ 26,842
Percentage of total net sales	13%		12%		12%

Research and Development

The year-over-year growth in R&D expense in 2019 was driven primarily by increases in headcount-related expenses. The Company continues to believe that focused investments in R&D are critical to its future growth and competitive position in the marketplace, and to the development of new and updated products and services that are central to the Company's core business strategy.

Selling, General and Administrative

The year-over-year growth in selling, general and administrative expense in 2019 was driven primarily by increases in headcount-related expenses and higher spending on marketing and advertising and infrastructure-related costs.

Other Income/(Expense), Net

Other income/(expense), net (OI&E) for 2019, 2018 and 2017 was as follows (dollars in millions):

	2019	Change	2018	Change	2017
Interest and dividend income	\$ 4,961		\$ 5,686		\$ 5,201
Interest expense	(3,576)		(3,240)		(2,323)
Other income/(expense), net	422		(441)		(133)
Total other income/(expense), net	<u>\$ 1,807</u>	<u>(10)%</u>	<u>\$ 2,005</u>	<u>(27)%</u>	<u>\$ 2,745</u>

The year-over-year decrease in OI&E during 2019 was due primarily to lower interest income and higher interest expense, partially offset by the impact of foreign exchange-related items. The weighted-average interest rate earned by the Company on its cash, cash equivalents and marketable securities was 2.19% and 2.16% in 2019 and 2018, respectively.

Provision for Income Taxes

Provision for income taxes, effective tax rate and statutory federal income tax rate for 2019, 2018 and 2017 were as follows (dollars in millions):

	2019	2018	2017
Provision for income taxes	\$ 10,481	\$ 13,372	\$ 15,738
Effective tax rate	15.9%	18.3%	24.6%
Statutory federal income tax rate	21.0%	24.5%	35.0%

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the "Act"), which significantly changed U.S. tax law. The Act lowered the Company's U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018, while also imposing a deemed repatriation tax on previously deferred foreign income. By operation of law, the Company applied a blended U.S. statutory federal income tax rate of 24.5% for 2018 (the "2018 blended U.S. tax rate"). The Act also created a new minimum tax on certain foreign earnings.

The Company's effective tax rate for 2019 was lower than the statutory federal income tax rate due primarily to the lower tax rate on foreign earnings and tax benefits from share-based compensation. The Company's effective tax rate for 2018 was lower than the 2018 blended U.S. tax rate due primarily to the lower tax rate on foreign earnings, partially offset by the remeasurement of deferred tax assets and liabilities as a result of the Act.

The Company's effective tax rate for 2019 was lower compared to 2018 due primarily to a lower statutory federal income tax rate in 2019 and the impact of the Act in 2018, partially offset by higher taxes on foreign earnings in 2019.

As of September 28, 2019, the Company had net deferred tax assets arising from deductible temporary differences and tax credits of \$14.3 billion and deferred tax liabilities of \$6.2 billion. Management believes it is more likely than not that forecasted income, including income that may be generated as a result of certain tax planning strategies, together with future reversals of existing taxable temporary differences, will be sufficient to recover the net deferred tax assets. The Company will continue to evaluate the amount of the valuation allowance, if any, by assessing the realizability of deferred tax assets.

Recent Accounting Pronouncements*Hedging*

In August 2017, the Financial Accounting Standards Board (the "FASB") issued Accounting Standards Update ("ASU") No. 2017-12, *Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"). ASU 2017-12 expands component and fair value hedging, specifies the presentation of the effects of hedging instruments, and eliminates the separate measurement and presentation of hedge ineffectiveness. The Company will adopt ASU 2017-12 in its first quarter of 2020 utilizing the modified retrospective transition method. Based on the Company's derivative portfolio and hedging strategies, the adoption of ASU 2017-12 is not expected to have a material impact on its consolidated financial statements.

Financial Instruments

In June 2016, the FASB issued ASU No. 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which modifies the measurement of expected credit losses on certain financial instruments. The Company will adopt ASU 2016-13 in its first quarter of 2021 utilizing the modified retrospective transition method. Based on the composition of the Company's investment portfolio, current market conditions, and historical credit loss activity, the adoption of ASU 2016-13 is not expected to have a material impact on its consolidated financial statements.

Leases

In February 2016, the FASB issued ASU No. 2016-02, *Leases (Topic 842)* (ASU 2016-02), which modifies lease accounting for lessees to increase transparency and comparability by recording lease assets and liabilities for operating leases and disclosing key information about leasing arrangements. The Company will adopt ASU 2016-02 utilizing the modified retrospective transition method through a cumulative-effect adjustment at the beginning of its first quarter of 2020. Upon adoption, the Company anticipates recording lease-related assets and liabilities of approximately \$8 billion on its Condensed Consolidated Balance Sheet, with no material impact to its Condensed Consolidated Statements of Operations.

Liquidity and Capital Resources

The following table presents selected financial information and statistics as of and for the years ended September 28, 2019, September 29, 2018 and September 30, 2017 (in millions):

	2019	2018	2017
Cash, cash equivalents and marketable securities (1)	\$ 205,898	\$ 237,100	\$ 268,895
Property, plant and equipment, net	\$ 37,378	\$ 41,304	\$ 33,783
Commercial paper	\$ 5,980	\$ 11,964	\$ 11,977
Total term debt	\$ 102,067	\$ 102,519	\$ 103,703
Working capital	\$ 57,101	\$ 15,410	\$ 28,792
Cash generated by operating activities	\$ 69,391	\$ 77,434	\$ 64,225
Cash generated by/(used in) investing activities	\$ 45,896	\$ 16,066	\$ (46,446)
Cash used in financing activities	\$ (90,976)	\$ (87,876)	\$ (17,974)

(1) As of September 28, 2019 and September 29, 2018, total cash, cash equivalents and marketable securities included \$18.9 billion and \$20.3 billion, respectively, that was restricted from general use, related to the State Aid Decision (refer to Note 5, Income Taxes in the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K) and other agreements.

The Company believes its existing balances of cash, cash equivalents and marketable securities, along with commercial paper and other short-term liquidity arrangements, will be sufficient to satisfy its working capital needs, capital asset purchases, dividends, share repurchases, debt repayments and other liquidity requirements associated with its existing operations over the next 12 months.

In connection with the State Aid Decision, as of September 28, 2019, the entire adjusted recovery amount of \$12.9 billion plus interest of \$1.2 billion was funded into escrow, where it will remain restricted from general use pending the conclusion of all appeals. Further information regarding the State Aid Decision can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 5, Income Taxes.

The Company's marketable securities investment portfolio is primarily invested in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer.

During 2019, cash generated by operating activities of \$69.4 billion was a result of \$55.3 billion of net income and non-cash adjustments to net income of \$17.6 billion, partially offset by a decrease in the net change in operating assets and liabilities of \$3.5 billion. Cash generated by investing activities of \$45.9 billion during 2019 consisted primarily of proceeds from sales and maturities of marketable securities, net of purchases, of \$57.5 billion, partially offset by cash used to acquire property, plant and equipment of \$10.5 billion. Cash used in financing activities of \$91.0 billion during 2019 consisted primarily of cash used to repurchase common stock of \$66.9 billion, cash used to pay dividends and dividend equivalents of \$14.1 billion, cash used to repay term debt of \$8.8 billion and net repayments of commercial paper of \$6.0 billion, partially offset by net proceeds from the issuance of term debt of \$7.0 billion.

During 2018, cash generated by operating activities of \$77.4 billion was a result of \$59.5 billion of net income and an increase in the net change in operating assets and liabilities of \$34.7 billion, partially offset by non-cash adjustments to net income of \$16.8 billion. Cash generated by investing activities of \$16.1 billion during 2018 consisted primarily of proceeds from maturities and sales of marketable securities, net of purchases, of \$32.4 billion, partially offset by cash used to acquire property, plant and equipment of \$13.3 billion. Cash used in financing activities of \$87.9 billion during 2018 consisted primarily of cash used to repurchase common stock of \$72.7 billion, cash used to pay dividends and dividend equivalents of \$13.7 billion and cash used to repay term debt of \$6.5 billion, partially offset by net proceeds from the issuance of term debt of \$7.0 billion.

Capital Assets

The Company's capital expenditures were \$7.6 billion during 2019, which included product tooling and manufacturing process equipment; data centers; corporate facilities and infrastructure, including information systems hardware, software and enhancements; and retail store facilities.

Debt

The Company issues unsecured short-term promissory notes (Commercial Paper) pursuant to a commercial paper program. The Company uses the net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of September 28, 2019, the Company had \$6.0 billion of Commercial Paper outstanding, with a weighted-average interest rate of 2.24% and maturities generally less than nine months.

As of September 28, 2019, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$101.7 billion (collectively the Notes). During 2019, the Company issued \$7.0 billion and repaid \$8.8 billion of Notes. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on the Notes. In addition, the Company has entered, and in the future may enter, into foreign currency swaps to manage foreign currency risk on the Notes.

Further information regarding the Company's debt issuances and related hedging activity can be found in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 3, Financial Instruments and Note 6, Debt.

Capital Return Program

On April 30, 2019, the Company announced the Board of Directors increased the current share repurchase program authorization from \$100 billion to \$175 billion of the Company's common stock, of which \$96.1 billion had been utilized as of September 28, 2019. During 2019, the Company repurchased 345.2 million shares of its common stock for \$67.1 billion, including 62.0 million shares delivered under a \$12.0 billion ASR dated February 2019, which settled in August 2019. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Exchange Act.

On April 30, 2019, the Company also announced the Board of Directors raised the Company's quarterly cash dividend from \$0.73 to \$0.77 per share, beginning with the dividend paid during the third quarter of 2019. The Company intends to increase its dividend on an annual basis, subject to declaration by the Board of Directors.

Contractual Obligations

The following table presents certain payments due by the Company as of September 28, 2019, and excludes amounts already recorded on the Consolidated Balance Sheet, except for term debt and the deemed repatriation tax payable (in millions):

	Payments due in 2020	Payments due in 2021–2022	Payments due in 2023–2024	Payments due after 2024	Total
Term debt	\$ 10,270	\$ 18,278	\$ 19,329	\$ 53,802	\$ 101,679
Operating leases	1,306	2,413	1,746	5,373	10,838
Manufacturing purchase obligations (1)	40,076	1,974	808	69	42,927
Other purchase obligations	3,744	2,271	572	41	6,628
Deemed repatriation tax payable	□	4,350	8,501	16,655	29,506
Total	\$ 55,396	\$ 29,286	\$ 30,956	\$ 75,940	\$ 191,578

(1) Represents amount expected to be paid under manufacturing-related supplier arrangements, which are primarily noncancelable.

Operating Leases

The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Manufacturing Purchase Obligations

The Company utilizes several outsourcing partners to manufacture sub-assemblies for the Company's products and to perform final assembly and testing of finished products. These outsourcing partners acquire components and build product based on demand information supplied by the Company, which typically covers periods up to 150 days. The Company also obtains individual components for its products from a wide variety of individual suppliers.

Other Purchase Obligations

The Company's other purchase obligations consist of noncancelable obligations to acquire capital assets, including product tooling and manufacturing process equipment, and noncancelable obligations related to advertising, licensing, R&D, Internet and telecommunications services, content creation and other activities.

Deemed Repatriation Tax Payable

As of September 28, 2019, a significant portion of the other non-current liabilities in the Company's Consolidated Balance Sheet consisted of the deemed repatriation tax payable imposed by the Act. The Company plans to pay the deemed repatriation tax payable in installments in accordance with the Act.

Other Non-Current Liabilities

The Company's remaining other non-current liabilities primarily consist of items for which the Company is unable to make a reasonably reliable estimate of the timing or amount of payments; therefore, such amounts are not included in the above contractual obligation table.

Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with U.S. generally accepted accounting principles ("GAAP") and the Company's discussion and analysis of its financial condition and operating results require the Company's management to make judgments, assumptions and estimates that affect the amounts reported. Note 1, "Summary of Significant Accounting Policies," of the Notes to Consolidated Financial Statements in Part II, Item 8 of this Form 10-K describes the significant accounting policies and methods used in the preparation of the Company's consolidated financial statements. Management bases its estimates on historical experience and on various other assumptions it believes to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates, and such differences may be material.

Management believes the Company's critical accounting policies and estimates are those related to revenue recognition, valuation of manufacturing-related assets and estimation of inventory purchase commitment cancellation fees, warranty costs, income taxes, and legal and other contingencies. Management considers these policies critical because they are both important to the portrayal of the Company's financial condition and operating results, and they require management to make judgments and estimates about inherently uncertain matters. The Company's senior management has reviewed these critical accounting policies and related disclosures with the Audit and Finance Committee of the Company's Board of Directors.

Revenue Recognition

The Company has identified up to three performance obligations regularly included in arrangements involving the sale of iPhone, Mac, iPad and certain other products. The first performance obligation, which represents the substantial portion of the allocated sales price, is the hardware and bundled software delivered at the time of sale. The second performance obligation is the right to receive certain product-related bundled services, which include iCloud, Siri and Maps. The third performance obligation is the right to receive, on a when-and-if-available basis, future unspecified software upgrades relating to the software bundled with each device. The Company allocates revenue and any related discounts to these performance obligations based on their relative stand-alone selling prices ("SSPs"). Because the Company lacks observable prices for the undelivered performance obligations, the allocation of revenue is based on the Company's estimated SSPs. Revenue allocated to the product-related bundled services and unspecified software upgrade rights is deferred and recognized on a straight-line basis over the estimated period they are expected to be provided.

The Company's process for determining estimated SSPs involves management's judgment and considers multiple factors that may vary over time depending upon the unique facts and circumstances related to each deliverable. Should future facts and circumstances change, the Company's SSPs and the future rate of related amortization for product-related bundled services and unspecified software upgrade rights related to future sales of these devices could change. Factors subject to change include the nature of the product-related bundled services and unspecified software upgrade rights offered, their estimated value and the estimated period they are expected to be provided.

Valuation of Manufacturing-Related Assets and Estimation of Inventory Purchase Commitment Cancellation Fees

The Company invests in manufacturing-related assets, including capital assets held at its suppliers' facilities and prepayments provided to certain of its suppliers associated with long-term agreements to secure the supply of inventory. The Company also accrues estimated purchase commitment cancellation fees related to inventory orders that have been canceled or are expected to be canceled. The Company's estimates of future product development plans and demand for its products are the key inputs in the determination of the recoverability of manufacturing-related assets and the assessment of the adequacy of any purchase commitment cancellation fee accruals. If there is an abrupt and substantial decline in estimated demand for one or more of the Company's products, a change in the Company's product development plans, or an unanticipated change in technological requirements for any of the Company's products, the Company may be required to record write-downs or impairments of manufacturing-related assets or accrue purchase commitment cancellation fees.

Warranty Costs

The Company offers limited warranties on its new hardware products and on parts used to repair its hardware products, and customers may purchase extended service coverage, where available, on many of the Company's hardware products. The Company accrues the estimated cost of warranties in the period the related revenue is recognized based on historical and projected warranty claim rates, historical and projected cost per claim and knowledge of specific product failures outside the Company's typical experience. The Company regularly reviews these estimates and adjusts the amounts as necessary. If actual product failure rates or repair costs differ from estimates, revisions to the estimated warranty liabilities would be required.

Income Taxes

The Company recognizes tax benefits from uncertain tax positions only if it is more likely than not that the tax position will be sustained on examination by the taxing authorities, based on the technical merits of the position. The tax benefits recognized in the financial statements from such positions are then measured based on the largest benefit that has a greater-than-50% likelihood of being realized upon ultimate settlement. The calculation of tax liabilities involves significant judgment in estimating the impact of uncertainties in the application of GAAP and complex tax laws. Resolution of these uncertainties in a manner inconsistent with management's expectations could have a material impact on the Company's financial condition and operating results.

Legal and Other Contingencies

As discussed in Part I, Item 3 of this Form 10-K under the heading "Legal Proceedings" and in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies," the Company is subject to various legal proceedings and claims that arise in the ordinary course of business. The Company records a liability when it is probable that a loss has been incurred and the amount is reasonably estimable, the determination of which requires significant judgment. Except as described in Part II, Item 8 of this Form 10-K in the Notes to Consolidated Financial Statements in Note 10, "Commitments and Contingencies" under the heading "Contingencies," in the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss greater than a recorded accrual, concerning loss contingencies for asserted legal and other claims.

The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts above management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk**Interest Rate and Foreign Currency Risk Management**

The Company regularly reviews its foreign exchange forward and option positions and interest rate swaps, both on a stand-alone basis and in conjunction with its underlying foreign currency and interest rate exposures. Given the effective horizons of the Company's risk management activities and the anticipatory nature of the exposures, there can be no assurance these positions will offset more than a portion of the financial impact resulting from movements in either foreign exchange or interest rates. Further, the recognition of the gains and losses related to these instruments may not coincide with the timing of gains and losses related to the underlying economic exposures and, therefore, may adversely affect the Company's financial condition and operating results.

Interest Rate Risk

The Company's exposure to changes in interest rates relates primarily to the Company's investment portfolio and outstanding debt. While the Company is exposed to global interest rate fluctuations, the Company's interest income and expense are most sensitive to fluctuations in U.S. interest rates. Changes in U.S. interest rates affect the interest earned on the Company's cash, cash equivalents and marketable securities and the fair value of those securities, as well as costs associated with hedging and interest paid on the Company's debt.

The Company's investment policy and strategy are focused on the preservation of capital and supporting the Company's liquidity requirements. The Company uses a combination of internal and external management to execute its investment strategy and achieve its investment objectives. The Company typically invests in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer. To provide a meaningful assessment of the interest rate risk associated with the Company's investment portfolio, the Company performed a sensitivity analysis to determine the impact a change in interest rates would have on the value of the investment portfolio assuming a 100 basis point parallel shift in the yield curve. Based on investment positions as of September 28, 2019 and September 29, 2018, a hypothetical 100 basis point increase in interest rates across all maturities would result in a \$2.8 billion and \$4.9 billion incremental decline in the fair market value of the portfolio, respectively. Such losses would only be realized if the Company sold the investments prior to maturity.

As of September 28, 2019 and September 29, 2018, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate carrying amount of \$102.1 billion and \$102.5 billion, respectively. The Company has entered, and in the future may enter, into interest rate swaps to manage interest rate risk on its outstanding term debt. Interest rate swaps allow the Company to effectively convert fixed-rate payments into floating-rate payments or floating-rate payments into fixed-rate payments. Gains and losses on term debt are generally offset by the corresponding losses and gains on the related hedging instrument. A 100 basis point increase in market interest rates would cause interest expense on the Company's debt as of September 28, 2019 and September 29, 2018 to increase by \$325 million and \$399 million on an annualized basis, respectively.

Foreign Currency Risk

In general, the Company is a net receiver of currencies other than the U.S. dollar. Accordingly, changes in exchange rates, and in particular a strengthening of the U.S. dollar, will negatively affect the Company's net sales and gross margins as expressed in U.S. dollars. There is a risk that the Company will have to adjust local currency pricing due to competitive pressures when there has been significant volatility in foreign currency exchange rates.

The Company may enter into foreign currency forward and option contracts with financial institutions to protect against foreign exchange risks associated with certain existing assets and liabilities, certain firmly committed transactions, forecasted future cash flows and net investments in foreign subsidiaries. In addition, the Company has entered, and in the future may enter, into foreign currency contracts to partially offset the foreign currency exchange gains and losses on its foreign currency-denominated debt issuances. The Company generally hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months. However, the Company may choose not to hedge certain foreign currency exchange exposures for a variety of reasons including, but not limited to, accounting considerations or the prohibitive economic cost of hedging particular exposures.

To provide an assessment of the foreign currency risk associated with certain of the Company's foreign currency derivative positions, the Company performed a sensitivity analysis using a value-at-risk (VAR) model to assess the potential impact of fluctuations in exchange rates. The VAR model consisted of using a Monte Carlo simulation to generate thousands of random market price paths assuming normal market conditions. The VAR is the maximum expected loss in fair value, for a given confidence interval, to the Company's foreign currency derivative positions due to adverse movements in rates. The VAR model is not intended to represent actual losses but is used as a risk estimation and management tool. Forecasted transactions, firm commitments and assets and liabilities denominated in foreign currencies were excluded from the model. Based on the results of the model, the Company estimates with 95% confidence, a maximum one-day loss in fair value of \$452 million as of September 28, 2019, compared to a maximum one-day loss in fair value of \$592 million as of September 29, 2018. Because the Company uses foreign currency instruments for hedging purposes, the losses in fair value incurred on those instruments are generally offset by increases in the fair value of the underlying exposures.

Actual future gains and losses associated with the Company's investment portfolio, debt and derivative positions may differ materially from the sensitivity analyses performed as of September 28, 2019 due to the inherent limitations associated with predicting the timing and amount of changes in interest rates, foreign currency exchange rates and the Company's actual exposures and positions.

Item 8. Financial Statements and Supplementary Data

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	29
Consolidated Statements of Comprehensive Income for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	30
Consolidated Balance Sheets as of September 28, 2019 and September 29, 2018	31
Consolidated Statements of Shareholders' Equity for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	32
Consolidated Statements of Cash Flows for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	33
Notes to Consolidated Financial Statements	34
Selected Quarterly Financial Information (Unaudited)	55
Reports of Independent Registered Public Accounting Firm	56

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and accompanying notes.

Apple Inc.

CONSOLIDATED STATEMENTS OF OPERATIONS

(In millions, except number of shares which are reflected in thousands and per share amounts)

	Years ended		
	September 28, 2019	September 29, 2018	September 30, 2017
Net sales:			
Products	\$ 213,883	\$ 225,847	\$ 196,534
Services	46,291	39,748	32,700
Total net sales	260,174	265,595	229,234
Cost of sales:			
Products	144,996	148,164	126,337
Services	16,786	15,592	14,711
Total cost of sales	161,782	163,756	141,048
Gross margin	98,392	101,839	88,186
Operating expenses:			
Research and development	16,217	14,236	11,581
Selling, general and administrative	18,245	16,705	15,261
Total operating expenses	34,462	30,941	26,842
Operating income	63,930	70,898	61,344
Other income/(expense), net	1,807	2,005	2,745
Income before provision for income taxes	65,737	72,903	64,089
Provision for income taxes	10,481	13,372	15,738
Net income	\$ 55,256	\$ 59,531	\$ 48,351
Earnings per share:			
Basic	\$ 11.97	\$ 12.01	\$ 9.27
Diluted	\$ 11.89	\$ 11.91	\$ 9.21
Shares used in computing earnings per share:			
Basic	4,617,834	4,955,377	5,217,242
Diluted	4,648,913	5,000,109	5,251,692

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(In millions)

	Years ended		
	September 28, 2019	September 29, 2018	September 30, 2017
Net income	\$ 55,256	\$ 59,531	\$ 48,351
Other comprehensive income/(loss):			
Change in foreign currency translation, net of tax	(408)	(525)	224
Change in unrealized gains/losses on derivative instruments, net of tax:			
Change in fair value of derivatives	(661)	523	1,315
Adjustment for net (gains)/losses realized and included in net income	23	382	(1,477)
Total change in unrealized gains/losses on derivative instruments	(638)	905	(162)
Change in unrealized gains/losses on marketable securities, net of tax:			
Change in fair value of marketable securities	3,802	(3,407)	(782)
Adjustment for net (gains)/losses realized and included in net income	25	1	(64)
Total change in unrealized gains/losses on marketable securities	3,827	(3,406)	(846)
Total other comprehensive income/(loss)	2,781	(3,026)	(784)
Total comprehensive income	\$ 58,037	\$ 56,505	\$ 47,567

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2019 Form 10-K | 30

Apple Inc.

CONSOLIDATED BALANCE SHEETS

(In millions, except number of shares which are reflected in thousands and par value)

	September 28, 2019	September 29, 2018
ASSETS:		
Current assets:		
Cash and cash equivalents	\$ 48,844	\$ 25,913
Marketable securities	51,713	40,388
Accounts receivable, net	22,926	23,186
Inventories	4,106	3,956
Vendor non-trade receivables	22,878	25,809
Other current assets	12,352	12,087
Total current assets	162,819	131,339
Non-current assets:		
Marketable securities	105,341	170,799
Property, plant and equipment, net	37,378	41,304
Other non-current assets	32,978	22,283
Total non-current assets	175,697	234,386
Total assets	\$ 338,516	\$ 365,725
LIABILITIES AND SHAREHOLDERS' EQUITY:		
Current liabilities:		
Accounts payable	\$ 46,236	\$ 55,888
Other current liabilities	37,720	33,327
Deferred revenue	5,522	5,966
Commercial paper	5,980	11,964
Term debt	10,260	8,784
Total current liabilities	105,718	115,929
Non-current liabilities:		
Term debt	91,807	93,735
Other non-current liabilities	50,503	48,914
Total non-current liabilities	142,310	142,649
Total liabilities	248,028	258,578
Commitments and contingencies		
Shareholders' equity:		
Common stock and additional paid-in capital, \$0.00001 par value: 12,600,000 shares authorized; 4,443,236 and 4,754,986 shares issued and outstanding, respectively	45,174	40,201
Retained earnings	45,898	70,400
Accumulated other comprehensive income/(loss)	(584)	(3,454)
Total shareholders' equity	90,488	107,147
Total liabilities and shareholders' equity	\$ 338,516	\$ 365,725

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY
(In millions, except per share amounts)

	Years ended		
	September 28, 2019	September 29, 2018	September 30, 2017
Total shareholders' equity, beginning balances	\$ 107,147	\$ 134,047	\$ 128,249
Common stock and additional paid-in capital:			
Beginning balances	40,201	35,867	31,251
Common stock issued	781	669	555
Common stock withheld related to net share settlement of equity awards	(2,002)	(1,778)	(1,468)
Share-based compensation	6,194	5,443	4,909
Tax benefit from equity awards, including transfer pricing adjustments	□	□	620
Ending balances	45,174	40,201	35,867
Retained earnings:			
Beginning balances	70,400	98,330	96,364
Net income	55,256	59,531	48,351
Dividends and dividend equivalents declared	(14,129)	(13,735)	(12,803)
Common stock withheld related to net share settlement of equity awards	(1,029)	(948)	(581)
Common stock repurchased	(67,101)	(73,056)	(33,001)
Cumulative effects of changes in accounting principles	2,501	278	□
Ending balances	45,898	70,400	98,330
Accumulated other comprehensive income/(loss):			
Beginning balances	(3,454)	(150)	634
Other comprehensive income/(loss)	2,781	(3,026)	(784)
Cumulative effects of changes in accounting principles	89	(278)	□
Ending balances	(584)	(3,454)	(150)
Total shareholders' equity, ending balances	\$ 90,488	\$ 107,147	\$ 134,047
Dividends and dividend equivalents declared per share or RSU	\$ 3.00	\$ 2.72	\$ 2.40

See accompanying Notes to Consolidated Financial Statements.

Apple Inc. | 2019 Form 10-K | 32

Apple Inc.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In millions)

	Years ended		
	September 28, 2019	September 29, 2018	September 30, 2017
Cash, cash equivalents and restricted cash, beginning balances	\$ 25,913	\$ 20,289	\$ 20,484
Operating activities:			
Net income	55,256	59,531	48,351
Adjustments to reconcile net income to cash generated by operating activities:			
Depreciation and amortization	12,547	10,903	10,157
Share-based compensation expense	6,068	5,340	4,840
Deferred income tax expense/(benefit)	(340)	(32,590)	5,966
Other	(652)	(444)	(166)
Changes in operating assets and liabilities:			
Accounts receivable, net	245	(5,322)	(2,093)
Inventories	(289)	828	(2,723)
Vendor non-trade receivables	2,931	(8,010)	(4,254)
Other current and non-current assets	873	(423)	(5,318)
Accounts payable	(1,923)	9,175	8,966
Deferred revenue	(625)	(3)	(593)
Other current and non-current liabilities	(4,700)	38,449	1,092
Cash generated by operating activities	69,391	77,434	64,225
Investing activities:			
Purchases of marketable securities	(39,630)	(71,356)	(159,486)
Proceeds from maturities of marketable securities	40,102	55,881	31,775
Proceeds from sales of marketable securities	56,988	47,838	94,564
Payments for acquisition of property, plant and equipment	(10,495)	(13,313)	(12,451)
Payments made in connection with business acquisitions, net	(624)	(721)	(329)
Purchases of non-marketable securities	(1,001)	(1,871)	(521)
Proceeds from non-marketable securities	1,634	353	126
Other	(1,078)	(745)	(124)
Cash generated by/(used in) investing activities	45,896	16,066	(46,446)
Financing activities:			
Proceeds from issuance of common stock	781	669	555
Payments for taxes related to net share settlement of equity awards	(2,817)	(2,527)	(1,874)
Payments for dividends and dividend equivalents	(14,119)	(13,712)	(12,769)
Repurchases of common stock	(66,897)	(72,738)	(32,900)
Proceeds from issuance of term debt, net	6,963	6,969	28,662
Repayments of term debt	(8,805)	(6,500)	(3,500)
Proceeds from/(Repayments of) commercial paper, net	(5,977)	(37)	3,852
Other	(105)	□	□
Cash used in financing activities	(90,976)	(87,876)	(17,974)
Increase/(Decrease) in cash, cash equivalents and restricted cash	24,311	5,624	(195)
Cash, cash equivalents and restricted cash, ending balances	\$ 50,224	\$ 25,913	\$ 20,289
Supplemental cash flow disclosure:			
Cash paid for income taxes, net	\$ 15,263	\$ 10,417	\$ 11,591
Cash paid for interest	\$ 3,423	\$ 3,022	\$ 2,092

See accompanying Notes to Consolidated Financial Statements.

Apple Inc.

Notes to Consolidated Financial Statements

Note 1 – Summary of Significant Accounting Policies**Basis of Presentation and Preparation**

The accompanying consolidated financial statements include the accounts of Apple Inc. and its wholly owned subsidiaries (collectively "Apple" or the "Company"). Intercompany accounts and transactions have been eliminated. In the opinion of the Company's management, the consolidated financial statements reflect all adjustments, which are normal and recurring in nature, necessary for fair financial statement presentation. The preparation of these consolidated financial statements and accompanying notes in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported. Actual results could differ materially from those estimates. Certain prior period amounts in the consolidated financial statements and accompanying notes have been reclassified to conform to the current period's presentation.

The Company's fiscal year is the 52- or 53-week period that ends on the last Saturday of September. The Company's fiscal years 2019 and 2018 spanned 52 weeks each whereas fiscal year 2017 included 53 weeks. A 14th week was included in the first fiscal quarter of 2017, as is done every five or six years, to realign the Company's fiscal quarters with calendar quarters. Unless otherwise stated, references to particular years, quarters, months and periods refer to the Company's fiscal years ended in September and the associated quarters, months and periods of those fiscal years.

Recently Adopted Accounting Pronouncements*Revenue Recognition*

In the first quarter of 2019, the Company adopted the Financial Accounting Standards Board's (the "FASB") Accounting Standards Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2014-09"), and additional ASUs issued to clarify the guidance in ASU 2014-09 (collectively the "new revenue standard" which amends the existing accounting standards for revenue recognition). The Company adopted the new revenue standard utilizing the full retrospective transition method. The Company did not restate total net sales in the prior periods presented, as the adoption of the new revenue standard did not have a material impact on previously reported amounts.

Additionally, beginning in the first quarter of 2019, the Company classified the amortization of the deferred value of Maps, Siri and free iCloud services, which are bundled in the sales price of iPhone, Mac, iPad and certain other products, in Services net sales. Historically, the Company classified the amortization of these amounts in Products net sales consistent with its management reporting framework. As a result, Products and Services net sales for 2018 and 2017 were reclassified to conform to the 2019 presentation.

Financial Instruments

In the first quarter of 2019, the Company adopted FASB ASU No. 2016-01, *Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"), which updates certain aspects of the recognition, measurement, presentation and disclosure of financial instruments. The adoption of ASU 2016-01 did not have a material impact on the Company's consolidated financial statements.

Income Taxes

In the first quarter of 2019, the Company adopted FASB ASU No. 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory* ("ASU 2016-16"), which requires the recognition of the income tax consequences of an intra-entity transfer of an asset, other than inventory, when the transfer occurs. The Company adopted ASU 2016-16 utilizing the modified retrospective transition method. Upon adoption, the Company recorded \$2.7 billion of net deferred tax assets, reduced other non-current assets by \$128 million, and increased retained earnings by \$2.6 billion on its Consolidated Balance Sheet. The Company will recognize incremental deferred income tax expense as these net deferred tax assets are utilized.

Restricted Cash

In the first quarter of 2019, the Company adopted FASB ASU No. 2016-18, *Statement of Cash Flows (Topic 230): Restricted Cash* ("ASU 2016-18"), which enhances and clarifies the guidance on the classification and presentation of restricted cash in the statement of cash flows and requires additional disclosures about restricted cash balances.

Advertising Costs

Advertising costs are expensed as incurred and included in selling, general and administrative expenses.

Share-Based Compensation

The Company generally measures share-based compensation based on the closing price of the Company's common stock on the date of grant, and recognizes expense on a straight-line basis for its estimate of equity awards that will ultimately vest. Further information regarding share-based compensation can be found in Note 9, "Benefit Plans."

Earnings Per Share

The following table shows the computation of basic and diluted earnings per share for 2019, 2018 and 2017 (net income in millions and shares in thousands):

	2019	2018	2017
Numerator:			
Net income	\$ 55,256	\$ 59,531	\$ 48,351
Denominator:			
Weighted-average basic shares outstanding	4,617,834	4,955,377	5,217,242
Effect of dilutive securities	31,079	44,732	34,450
Weighted-average diluted shares	4,648,913	5,000,109	5,251,692
Basic earnings per share	\$ 11.97	\$ 12.01	\$ 9.27
Diluted earnings per share	\$ 11.89	\$ 11.91	\$ 9.21

The Company applies the treasury stock method to determine the dilutive effect of potentially dilutive securities. Potentially dilutive securities representing 15.5 million shares of common stock were excluded from the computation of diluted earnings per share for 2019 because their effect would have been antidilutive.

Cash Equivalents and Marketable Securities

All highly liquid investments with maturities of three months or less at the date of purchase are classified as cash equivalents.

The Company's investments in marketable debt securities have been classified and accounted for as available-for-sale. The Company classifies its marketable debt securities as either short-term or long-term based on each instrument's underlying contractual maturity date. Unrealized gains and losses on marketable debt securities classified as available-for-sale are recognized in other comprehensive income/(loss) ("OCI").

The Company's investments in marketable equity securities are classified based on the nature of the securities and their availability for use in current operations. The Company's marketable equity securities are measured at fair value with gains and losses recognized in other income/(expense), net ("OI&E").

The cost of securities sold is determined using the specific identification method.

Inventories

Inventories are measured using the first-in, first-out method.

Property, Plant and Equipment

Depreciation on property, plant and equipment is recognized on a straight-line basis over the estimated useful lives of the assets, which for buildings is the lesser of 30 years or the remaining life of the underlying building; between one and five years for machinery and equipment, including product tooling and manufacturing process equipment; and the shorter of lease term or useful life for leasehold improvements. Capitalized costs related to internal-use software are amortized on a straight-line basis over the estimated useful lives of the assets, which range from three to five years. Depreciation and amortization expense on property and equipment was \$11.3 billion, \$9.3 billion and \$8.2 billion during 2019, 2018 and 2017, respectively.

Non-cash investing activities involving property, plant and equipment resulted in a net increase/(decrease) to accounts payable and other current liabilities of \$(2.9) billion and \$3.4 billion during 2019 and 2018, respectively.

Non-Marketable Securities

The Company has elected to apply the measurement alternative to equity securities without readily determinable fair values. As such, the Company's non-marketable equity securities are measured at cost, less any impairment, and are adjusted for changes in fair value resulting from observable transactions for identical or similar investments of the same issuer. Gains and losses on non-marketable equity securities are recognized in OI&E.

Restricted Cash and Restricted Marketable Securities

The Company considers cash and marketable securities to be restricted when withdrawal or general use is legally restricted. The Company records restricted cash as other assets in the Consolidated Balance Sheets, and determines current or non-current classification based on the expected duration of the restriction. The Company records restricted marketable securities as current or non-current marketable securities in the Consolidated Balance Sheets based on the classification of the underlying securities.

Fair Value Measurements

The fair values of the Company's money market funds and certain marketable equity securities are based on quoted prices in active markets for identical assets. The valuation techniques used to measure the fair value of the Company's debt instruments and all other financial instruments, which generally have counterparties with high credit ratings, are based on quoted market prices or model-driven valuations using significant inputs derived from or corroborated by observable market data.

Note 2 – Revenue Recognition

Net sales consist of revenue from the sale of iPhone, Mac, iPad, Services and other products. The Company recognizes revenue at the amount to which it expects to be entitled when control of the products or services is transferred to its customers. Control is generally transferred when the Company has a present right to payment and title and the significant risks and rewards of ownership of products or services are transferred to its customers. For most of the Company's Products net sales, control transfers when products are shipped. For the Company's Services net sales, control transfers over time as services are delivered. Payment for Products and Services net sales is collected within a short period following transfer of control or commencement of delivery of services, as applicable.

The Company records reductions to Products net sales related to future product returns, price protection and other customer incentive programs based on the Company's expectations and historical experience.

For arrangements with multiple performance obligations, which represent promises within an arrangement that are capable of being distinct, the Company allocates revenue to all distinct performance obligations based on their relative stand-alone selling prices ("SSPs"). When available, the Company uses observable prices to determine SSPs. When observable prices are not available, SSPs are established that reflect the Company's best estimates of what the selling prices of the performance obligations would be if they were sold regularly on a stand-alone basis. The Company's process for estimating SSPs without observable prices considers multiple factors that may vary depending upon the unique facts and circumstances related to each performance obligation including, where applicable, prices charged by the Company for similar offerings, market trends in the pricing for similar offerings, product-specific business objectives and the estimated cost to provide the performance obligation.

The Company has identified up to three performance obligations regularly included in arrangements involving the sale of iPhone, Mac, iPad and certain other products. The first performance obligation, which represents the substantial portion of the allocated sales price, is the hardware and bundled software delivered at the time of sale. The second performance obligation is the right to receive certain product-related bundled services, which include iCloud, Siri and Maps. The third performance obligation is the right to receive, on a when-and-if-available basis, future unspecified software upgrades relating to the software bundled with each device. The Company allocates revenue and any related discounts to these performance obligations based on their relative SSPs. Because the Company lacks observable prices for the undelivered performance obligations, the allocation of revenue is based on the Company's estimated SSPs. Revenue allocated to the delivered hardware and bundled software is recognized when control has transferred to the customer, which generally occurs when the product is shipped. Revenue allocated to the product-related bundled services and unspecified software upgrade rights is deferred and recognized on a straight-line basis over the estimated period they are expected to be provided. Cost of sales related to delivered hardware and bundled software, including estimated warranty costs, are recognized at the time of sale. Costs incurred to provide product-related bundled services and unspecified software upgrade rights are recognized as cost of sales as incurred.

For certain long-term service arrangements, the Company has performance obligations for services it has not yet delivered. For these arrangements, the Company does not have a right to bill for the undelivered services. The Company has determined that any unbilled consideration relates entirely to the value of the undelivered services. Accordingly, the Company has not recognized revenue, and has elected not to disclose amounts, related to these undelivered services.

For the sale of third-party products where the Company obtains control of the product before transferring it to the customer, the Company recognizes revenue based on the gross amount billed to customers. The Company considers multiple factors when determining whether it obtains control of third-party products including, but not limited to, evaluating if it can establish the price of the product, retains inventory risk for tangible products or has the responsibility for ensuring acceptability of the product. For third-party applications sold through the App Store, Mac App Store, TV App Store and Watch App Store and certain digital content sold through the Company's other digital content stores, the Company does not obtain control of the product before transferring it to the customer. Therefore, the Company accounts for such sales on a net basis by recognizing in Services net sales only the commission it retains.

The Company has elected to record revenue net of taxes collected from customers that are remitted to governmental authorities, with the collected taxes recorded within other current liabilities until remitted to the relevant government authority.

Deferred Revenue

As of September 28, 2019 and September 29, 2018, the Company had total deferred revenue of \$8.1 billion and \$8.8 billion, respectively. As of September 28, 2019, the Company expects 68% of total deferred revenue to be realized in less than a year, 25% within one-to-two years, 6% within two-to-three years and 1% in greater than three years.

Disaggregated Revenue

Net sales disaggregated by significant products and services for 2019, 2018 and 2017 were as follows (in millions):

	2019	2018	2017
iPhone (1)	\$ 142,381	\$ 164,888	\$ 139,337
Mac (1)	25,740	25,198	25,569
iPad (1)	21,280	18,380	18,802
Wearables, Home and Accessories (1)(2)	24,482	17,381	12,826
Services (3)	46,291	39,748	32,700
Total net sales (4)	<u>\$ 260,174</u>	<u>\$ 265,595</u>	<u>\$ 229,234</u>

(1) Products net sales include amortization of the deferred value of unspecified software upgrade rights, which are bundled in the sales price of the respective product.

(2) Wearables, Home and Accessories net sales include sales of AirPods, Apple TV, Apple Watch, Beats products, HomePod, iPod touch and Apple-branded and third-party accessories.

(3) Services net sales include sales from the Company's digital content stores and streaming services, AppleCare, licensing and other services. Services net sales also include amortization of the deferred value of Maps, Siri and free iCloud services, which are bundled in the sales price of certain products.

(4) Includes \$5.9 billion of revenue recognized in 2019 that was included in deferred revenue as of September 29, 2018, \$5.8 billion of revenue recognized in 2018 that was included in deferred revenue as of September 30, 2017, and \$6.3 billion of revenue recognized in 2017 that was included in deferred revenue as of September 24, 2016.

The Company's proportion of net sales by disaggregated revenue source was generally consistent for each reportable segment in Note 11, Segment Information and Geographic Data for 2019, 2018 and 2017.

Note 3 – Financial Instruments**Cash, Cash Equivalents and Marketable Securities**

The following tables show the Company's cash and marketable securities by significant investment category as of September 28, 2019 and September 29, 2018 (in millions):

	2019						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 12,204	\$ □	\$ □	\$ 12,204	\$ 12,204	\$ □	\$ □
Level 1 (1):							
Money market funds	15,897	□	□	15,897	15,897	□	□
Subtotal	15,897	□	□	15,897	15,897	□	□
Level 2 (2):							
U.S. Treasury securities	30,293	33	(62)	30,264	6,165	9,817	14,282
U.S. agency securities	9,767	1	(3)	9,765	6,489	2,249	1,027
Non-U.S. government securities	19,821	337	(50)	20,108	749	3,168	16,191
Certificates of deposit and time deposits	4,041	□	□	4,041	2,024	1,922	95
Commercial paper	12,433	□	□	12,433	5,193	7,240	□
Corporate debt securities	85,383	756	(92)	86,047	123	26,127	59,797
Municipal securities	958	8	(1)	965	□	68	897
Mortgage- and asset-backed securities	14,180	67	(73)	14,174	□	1,122	13,052
Subtotal	176,876	1,202	(281)	177,797	20,743	51,713	105,341
Total (3)	\$ 204,977	\$ 1,202	\$ (281)	\$ 205,898	\$ 48,844	\$ 51,713	\$ 105,341
	2018						
	Adjusted Cost	Unrealized Gains	Unrealized Losses	Fair Value	Cash and Cash Equivalents	Short-Term Marketable Securities	Long-Term Marketable Securities
Cash	\$ 11,575	\$ □	\$ □	\$ 11,575	\$ 11,575	\$ □	\$ □
Level 1 (1):							
Money market funds	8,083	□	□	8,083	8,083	□	□
Mutual funds	799	□	(116)	683	□	683	□
Subtotal	8,882	□	(116)	8,766	8,083	683	□
Level 2 (2):							
U.S. Treasury securities	47,296	□	(1,202)	46,094	1,613	7,606	36,875
U.S. agency securities	4,127	□	(48)	4,079	1,732	360	1,987
Non-U.S. government securities	21,601	49	(250)	21,400	□	3,355	18,045
Certificates of deposit and time deposits	3,074	□	□	3,074	1,247	1,330	497
Commercial paper	2,573	□	□	2,573	1,663	910	□
Corporate debt securities	123,001	152	(2,038)	121,115	□	25,162	95,953
Municipal securities	946	□	(12)	934	□	178	756
Mortgage- and asset-backed securities	18,105	8	(623)	17,490	□	804	16,686
Subtotal	220,723	209	(4,173)	216,759	6,255	39,705	170,799
Total (3)	\$ 241,180	\$ 209	\$ (4,289)	\$ 237,100	\$ 25,913	\$ 40,388	\$ 170,799

- (1) Level 1 fair value estimates are based on quoted prices in active markets for identical assets or liabilities.
- (2) Level 2 fair value estimates are based on observable inputs other than quoted prices in active markets for identical assets and liabilities, quoted prices for identical or similar assets or liabilities in inactive markets, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- (3) As of September 28, 2019 and September 29, 2018, total cash, cash equivalents and marketable securities included \$18.9 billion and \$20.3 billion, respectively, that was restricted from general use, related to the State Aid Decision (refer to Note 5, □ Income Taxes□) and other agreements.

The Company may sell certain of its marketable debt securities prior to their stated maturities for reasons including, but not limited to, managing liquidity, credit risk, duration and asset allocation. The maturities of the Company's long-term marketable debt securities generally range from one to five years.

The following tables show information about the Company's marketable securities that had been in a continuous unrealized loss position for less than 12 months and for 12 months or greater as of September 28, 2019 and September 29, 2018 (in millions):

	2019		
	Continuous Unrealized Losses		
	Less than 12 Months	12 Months or Greater	Total
Fair value of marketable debt securities	\$ 28,151	\$ 28,167	\$ 56,318
Unrealized losses	\$ (138)	\$ (143)	\$ (281)

	2018		
	Continuous Unrealized Losses		
	Less than 12 Months	12 Months or Greater	Total
Fair value of marketable securities	\$ 126,238	\$ 60,599	\$ 186,837
Unrealized losses	\$ (2,400)	\$ (1,889)	\$ (4,289)

The Company typically invests in highly rated securities, with the primary objective of minimizing the potential risk of principal loss. The Company's investment policy generally requires securities to be investment grade and limits the amount of credit exposure to any one issuer. Fair values were determined for each individual security in the investment portfolio. When evaluating a marketable debt security for other-than-temporary impairment, the Company reviews factors such as the duration and extent to which the fair value of the security is less than its cost, the financial condition of the issuer and any changes thereto, and the Company's intent to sell, or whether it will more likely than not be required to sell, the security before recovery of its amortized cost basis. As of September 28, 2019, the Company does not consider any of its marketable debt securities to be other-than-temporarily impaired.

Non-Marketable Securities

The Company holds non-marketable equity securities of certain privately held companies without readily determinable fair values. As of September 28, 2019, the Company's non-marketable equity securities had a carrying value of \$2.9 billion.

Restricted Cash

A reconciliation of the Company's cash and cash equivalents in the Consolidated Balance Sheet to cash, cash equivalents and restricted cash in the Consolidated Statement of Cash Flows as of September 28, 2019 is as follows (in millions):

	2019
Cash and cash equivalents	\$ 48,844
Restricted cash included in other current assets	23
Restricted cash included in other non-current assets	1,357
Cash, cash equivalents and restricted cash	\$ 50,224

The Company's restricted cash primarily consisted of cash required to be on deposit under a contractual agreement with a bank to support the Company's iPhone Upgrade Program.

Derivative Financial Instruments

The Company may use derivatives to partially offset its business exposure to foreign currency and interest rate risk on expected future cash flows, net investments in certain foreign subsidiaries, and certain existing assets and liabilities. However, the Company may choose not to hedge certain exposures for a variety of reasons including, but not limited to, accounting considerations or the prohibitive economic cost of hedging particular exposures. There can be no assurance the hedges will offset more than a portion of the financial impact resulting from movements in foreign currency exchange or interest rates.

To protect gross margins from fluctuations in foreign currency exchange rates, certain of the Company's subsidiaries whose functional currency is the U.S. dollar may hedge a portion of forecasted foreign currency revenue, and subsidiaries whose functional currency is not the U.S. dollar may hedge a portion of forecasted inventory purchases not denominated in the subsidiaries' functional currencies. The Company may enter into forward contracts, option contracts or other instruments to manage this risk and may designate these instruments as cash flow hedges. The Company generally hedges portions of its forecasted foreign currency exposure associated with revenue and inventory purchases, typically for up to 12 months.

To protect the net investment in a foreign operation from fluctuations in foreign currency exchange rates, the Company may enter into foreign currency forward and option contracts to offset a portion of the changes in the carrying amounts of these investments due to fluctuations in foreign currency exchange rates. In addition, the Company may use non-derivative financial instruments, such as its foreign currency-denominated debt, as hedges of its net investments in certain foreign subsidiaries. In both of these cases, the Company designates these instruments as net investment hedges.

To protect the Company's foreign currency-denominated term debt or marketable securities from fluctuations in foreign currency exchange rates, the Company may enter into forward contracts, cross-currency swaps or other instruments. These instruments may offset a portion of the foreign currency remeasurement gains or losses, or changes in fair value. The Company may designate these instruments as either cash flow or fair value hedges. As of September 28, 2019, the Company's hedged term debt and marketable securities-related foreign currency transactions are expected to be recognized within 23 years.

The Company may also enter into non-designated foreign currency contracts to offset a portion of the foreign currency exchange gains and losses generated by the remeasurement of certain assets and liabilities denominated in non-functional currencies.

To protect the Company's foreign currency-denominated term debt or marketable securities from fluctuations in interest rates, the Company may enter into interest rate swaps, options or other instruments. These instruments may offset a portion of the changes in interest income or expense, or changes in fair value. The Company designates these instruments as either cash flow or fair value hedges. As of September 28, 2019, the Company's hedged interest rate transactions are expected to be recognized within 8 years.

Cash Flow Hedges

The effective portions of cash flow hedges are recorded in accumulated other comprehensive income/(loss) ("AOCI") until the hedged item is recognized in earnings. Deferred gains and losses associated with cash flow hedges of foreign currency revenue are recognized as a component of net sales in the same period as the related revenue is recognized, and deferred gains and losses related to cash flow hedges of inventory purchases are recognized as a component of cost of sales in the same period as the related costs are recognized. Deferred gains and losses associated with cash flow hedges of interest income or expense are recognized in OI&E in the same period as the related income or expense is recognized. For options designated as cash flow hedges, changes in the time value are excluded from the assessment of hedge effectiveness. The ineffective portions and amounts excluded from the effectiveness testing of cash flow hedges are recognized in OI&E.

Derivative instruments designated as cash flow hedges must be de-designated as hedges when it is probable the forecasted hedged transaction will not occur in the initially identified time period or within a subsequent two-month time period. Deferred gains and losses in AOCI associated with such derivative instruments are reclassified into OI&E in the period of de-designation. Any subsequent changes in fair value of such derivative instruments are reflected in OI&E unless they are re-designated as hedges of other transactions.

Net Investment Hedges

The effective portions of net investment hedges are recorded in OCI as a part of the cumulative translation adjustment. The ineffective portions and amounts excluded from the effectiveness testing of net investment hedges are recognized in OI&E. For foreign exchange forward contracts designated as net investment hedges, the Company excludes changes in fair value relating to changes in the forward carry component from its assessment of hedge effectiveness. Accordingly, any gains or losses related to this forward carry component are recognized in earnings in the current period.

Fair Value Hedges

Gains and losses related to changes in fair value hedges are recognized in earnings along with a corresponding loss or gain related to the change in value of the underlying hedged item in the same line in the Consolidated Statements of Operations. For foreign exchange forward contracts designated as fair value hedges, the Company excludes changes in fair value relating to changes in the forward carry component from its assessment of hedge effectiveness. The amount excluded from the effectiveness testing of fair value hedges was a gain of \$777 million for 2019, and was recognized in OI&E.

Non-Designated Derivatives

Derivatives that are not designated as hedging instruments are adjusted to fair value through earnings in the financial statement line item to which the derivative relates.

The Company records all derivatives in the Consolidated Balance Sheets at fair value. The Company's accounting treatment for these derivative instruments is based on its hedge designation. The following tables show the Company's derivative instruments at gross fair value as of September 28, 2019 and September 29, 2018 (in millions):

	2019		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 1,798	\$ 323	\$ 2,121
Interest rate contracts	\$ 685	\$ □	\$ 685
Derivative liabilities (2):			
Foreign exchange contracts	\$ 1,341	\$ 160	\$ 1,501
Interest rate contracts	\$ 105	\$ □	\$ 105
	2018		
	Fair Value of Derivatives Designated as Hedge Instruments	Fair Value of Derivatives Not Designated as Hedge Instruments	Total Fair Value
Derivative assets (1):			
Foreign exchange contracts	\$ 1,015	\$ 259	\$ 1,274
Derivative liabilities (2):			
Foreign exchange contracts	\$ 543	\$ 137	\$ 680
Interest rate contracts	\$ 1,456	\$ □	\$ 1,456

(1) The fair value of derivative assets is measured using Level 2 fair value inputs and is recorded as other current assets and other non-current assets in the Consolidated Balance Sheets.

(2) The fair value of derivative liabilities is measured using Level 2 fair value inputs and is recorded as other current liabilities and other non-current liabilities in the Consolidated Balance Sheets.

The Company classifies cash flows related to derivative financial instruments as operating activities in its Consolidated Statements of Cash Flows.

The following table shows the pre-tax gains and losses of the Company's derivative and non-derivative instruments designated as cash flow, net investment and fair value hedges in OCI and the Consolidated Statements of Operations for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Gains/(Losses) recognized in OCI of effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ (959)	\$ 682	\$ 1,797
Interest rate contracts	□	1	7
Total	<u>\$ (959)</u>	<u>\$ 683</u>	<u>\$ 1,804</u>
Net investment hedges:			
Foreign currency debt	\$ (58)	\$ 4	\$ 67
Gains/(Losses) reclassified from AOCI into net income of effective portion:			
Cash flow hedges:			
Foreign exchange contracts	\$ (116)	\$ (482)	\$ 1,958
Interest rate contracts	(7)	1	(2)
Total	<u>\$ (123)</u>	<u>\$ (481)</u>	<u>\$ 1,956</u>
Gains/(Losses) on derivative instruments:			
Fair value hedges:			
Foreign exchange contracts	\$ 1,020	\$ (168)	\$ □
Interest rate contracts	2,068	(1,363)	(810)
Total	<u>\$ 3,088</u>	<u>\$ (1,531)</u>	<u>\$ (810)</u>
Gains/(Losses) related to hedged items:			
Fair value hedges:			
Marketable securities	\$ (1,018)	\$ 167	\$ □
Fixed-rate debt	(2,068)	1,363	810
Total	<u>\$ (3,086)</u>	<u>\$ 1,530</u>	<u>\$ 810</u>

The following table shows the notional amounts of the Company's outstanding derivative instruments and credit risk amounts associated with outstanding or unsettled derivative instruments as of September 28, 2019 and September 29, 2018 (in millions):

	2019		2018	
	Notional Amount	Credit Risk Amount	Notional Amount	Credit Risk Amount
Instruments designated as accounting hedges:				
Foreign exchange contracts	\$ 61,795	\$ 1,798	\$ 65,368	\$ 1,015
Interest rate contracts	\$ 31,250	\$ 685	\$ 33,250	\$ □
Instruments not designated as accounting hedges:				
Foreign exchange contracts	\$ 76,868	\$ 323	\$ 63,062	\$ 259

The notional amounts for outstanding derivative instruments provide one measure of the transaction volume outstanding and do not represent the amount of the Company's exposure to credit or market loss. The credit risk amounts represent the Company's gross exposure to potential accounting loss on derivative instruments that are outstanding or unsettled if all counterparties failed to perform according to the terms of the contract, based on then-current currency or interest rates at each respective date. The Company's exposure to credit loss and market risk will vary over time as currency and interest rates change. Although the table above reflects the notional and credit risk amounts of the Company's derivative instruments, it does not reflect the gains or losses associated with the exposures and transactions that the instruments are intended to hedge. The amounts ultimately realized upon settlement of these financial instruments, together with the gains and losses on the underlying exposures, will depend on actual market conditions during the remaining life of the instruments.

The Company generally enters into master netting arrangements, which are designed to reduce credit risk by permitting net settlement of transactions with the same counterparty. To further limit credit risk, the Company generally enters into collateral security arrangements that provide for collateral to be received or posted when the net fair value of certain financial instruments fluctuates from contractually established thresholds. The Company presents its derivative assets and derivative liabilities at their gross fair values in its Consolidated Balance Sheets. As of September 28, 2019, the net cash collateral received by the Company related to derivative instruments under its collateral security arrangements was \$1.6 billion, which was recorded as other current liabilities in the Consolidated Balance Sheet. As of September 29, 2018, the net cash collateral posted by the Company related to derivative instruments under its collateral security arrangements was \$1.0 billion, which was recorded as other current assets in the Consolidated Balance Sheet.

Under master netting arrangements with the respective counterparties to the Company's derivative contracts, the Company is allowed to net settle transactions with a single net amount payable by one party to the other. As of September 28, 2019 and September 29, 2018, the potential effects of these rights of set-off associated with the Company's derivative contracts, including the effects of collateral, would be a reduction to both derivative assets and derivative liabilities of \$2.7 billion and \$2.1 billion, respectively, resulting in a net derivative liability of \$407 million and a net derivative asset of \$138 million, respectively.

Accounts Receivable

Trade Receivables

The Company has considerable trade receivables outstanding with its third-party cellular network carriers, wholesalers, retailers, resellers, small and mid-sized businesses and education, enterprise and government customers. The Company generally does not require collateral from its customers; however, the Company will require collateral or third-party credit support in certain instances to limit credit risk. In addition, when possible, the Company attempts to limit credit risk on trade receivables with credit insurance for certain customers or by requiring third-party financing, loans or leases to support credit exposure. These credit-financing arrangements are directly between the third-party financing company and the end customer. As such, the Company generally does not assume any recourse or credit risk sharing related to any of these arrangements.

As of September 28, 2019, the Company had no customers that individually represented 10% or more of total trade receivables. As of September 29, 2018, the Company had one customer that represented 10% or more of total trade receivables, which accounted for 10%. The Company's cellular network carriers accounted for 51% and 59% of total trade receivables as of September 28, 2019 and September 29, 2018, respectively.

Vendor Non-Trade Receivables

The Company has non-trade receivables from certain of its manufacturing vendors resulting from the sale of components to these vendors who manufacture sub-assemblies or assemble final products for the Company. The Company purchases these components directly from suppliers. As of September 28, 2019, the Company had two vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 59% and 14%. As of September 29, 2018, the Company had two vendors that individually represented 10% or more of total vendor non-trade receivables, which accounted for 62% and 12%.

Note 4 – Consolidated Financial Statement Details

The following tables show the Company's consolidated financial statement details as of September 28, 2019 and September 29, 2018 (in millions):

Property, Plant and Equipment, Net

	2019	2018
Land and buildings	\$ 17,085	\$ 16,216
Machinery, equipment and internal-use software	69,797	65,982
Leasehold improvements	9,075	8,205
Gross property, plant and equipment	95,957	90,403
Accumulated depreciation and amortization	(58,579)	(49,099)
Total property, plant and equipment, net	\$ 37,378	\$ 41,304

Other Non-Current Liabilities

	2019	2018
Long-term taxes payable	\$ 29,545	\$ 33,589
Other non-current liabilities	20,958	15,325
Total other non-current liabilities	<u>\$ 50,503</u>	<u>\$ 48,914</u>

Other Income/(Expense), Net

The following table shows the detail of OI&E for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Interest and dividend income	\$ 4,961	\$ 5,686	\$ 5,201
Interest expense	(3,576)	(3,240)	(2,323)
Other income/(expense), net	422	(441)	(133)
Total other income/(expense), net	<u>\$ 1,807</u>	<u>\$ 2,005</u>	<u>\$ 2,745</u>

Note 5 – Income Taxes**U.S. Tax Cuts and Jobs Act**

On December 22, 2017, the U.S. enacted the Tax Cuts and Jobs Act (the "Act"), which significantly changed U.S. tax law. The Act lowered the Company's U.S. statutory federal income tax rate from 35% to 21% effective January 1, 2018, while also imposing a deemed repatriation tax on previously deferred foreign income. The Act also created a new minimum tax on certain foreign earnings, for which the Company has elected to record certain deferred tax assets and liabilities. The Company completed its accounting for the income tax effects of the Act during 2019, in accordance with the U.S. Securities and Exchange Commission Staff Accounting Bulletin No. 118.

Provision for Income Taxes and Effective Tax Rate

The provision for income taxes for 2019, 2018 and 2017, consisted of the following (in millions):

	2019	2018	2017
Federal:			
Current	\$ 6,384	\$ 41,425	\$ 7,842
Deferred	(2,939)	(33,819)	5,980
Total	<u>3,445</u>	<u>7,606</u>	<u>13,822</u>
State:			
Current	475	551	259
Deferred	(67)	48	2
Total	<u>408</u>	<u>599</u>	<u>261</u>
Foreign:			
Current	3,962	3,986	1,671
Deferred	2,666	1,181	(16)
Total	<u>6,628</u>	<u>5,167</u>	<u>1,655</u>
Provision for income taxes	<u>\$ 10,481</u>	<u>\$ 13,372</u>	<u>\$ 15,738</u>

The foreign provision for income taxes is based on foreign pre-tax earnings of \$44.3 billion, \$48.0 billion and \$44.7 billion in 2019, 2018 and 2017, respectively.

A reconciliation of the provision for income taxes, with the amount computed by applying the statutory federal income tax rate (21% in 2019; 24.5% in 2018; 35% in 2017) to income before provision for income taxes for 2019, 2018 and 2017, is as follows (dollars in millions):

	2019	2018	2017
Computed expected tax	\$ 13,805	\$ 17,890	\$ 22,431
State taxes, net of federal effect	423	271	185
Impacts of the Act	□	1,515	□
Earnings of foreign subsidiaries	(2,625)	(5,606)	(6,135)
Research and development credit, net	(548)	(560)	(678)
Excess tax benefits from equity awards	(639)	(675)	□
Other	65	537	(65)
Provision for income taxes	<u>\$ 10,481</u>	<u>\$ 13,372</u>	<u>\$ 15,738</u>
Effective tax rate	15.9%	18.3%	24.6%

The Company's income taxes payable have been reduced by the tax benefits from employee stock plan awards. For restricted stock units (RSUs), the Company receives an income tax benefit upon the award's vesting equal to the tax effect of the underlying stock's fair market value. Prior to 2018, the Company reflected net excess tax benefits from equity awards as increases to additional paid-in capital, which amounted to \$620 million in 2017.

Deferred Tax Assets and Liabilities

As of September 28, 2019 and September 29, 2018, the significant components of the Company's deferred tax assets and liabilities were (in millions):

	2019	2018
Deferred tax assets:		
Amortization and depreciation	\$ 11,433	\$ 137
Accrued liabilities and other reserves	5,389	3,151
Deferred revenue	1,372	1,141
Share-based compensation	749	513
Unrealized losses	□	871
Other	697	797
Total deferred tax assets, net	<u>19,640</u>	<u>6,610</u>
Deferred tax liabilities:		
Minimum tax on foreign earnings	10,809	□
Earnings of foreign subsidiaries	330	275
Other	456	501
Total deferred tax liabilities	<u>11,595</u>	<u>776</u>
Net deferred tax assets/(liabilities)	<u>\$ 8,045</u>	<u>\$ 5,834</u>

Deferred tax assets and liabilities reflect the effects of tax credits and the future income tax effects of temporary differences between the consolidated financial statement carrying amounts of existing assets and liabilities and their respective tax bases, and are measured using enacted tax rates that apply to taxable income in the years in which those temporary differences are expected to be recovered or settled.

Uncertain Tax Positions

As of September 28, 2019, the total amount of gross unrecognized tax benefits was \$15.6 billion, of which \$8.6 billion, if recognized, would impact the Company's effective tax rate. As of September 29, 2018, the total amount of gross unrecognized tax benefits was \$9.7 billion, of which \$7.4 billion, if recognized, would have impacted the Company's effective tax rate.

The aggregate change in the balance of gross unrecognized tax benefits, which excludes interest and penalties, for 2019, 2018 and 2017, is as follows (in millions):

	2019	2018	2017
Beginning balances	\$ 9,694	\$ 8,407	\$ 7,724
Increases related to tax positions taken during a prior year	5,845	2,431	333
Decreases related to tax positions taken during a prior year	(686)	(2,212)	(952)
Increases related to tax positions taken during the current year	1,697	1,824	1,880
Decreases related to settlements with taxing authorities	(852)	(756)	(539)
Decreases related to expiration of the statute of limitations	(79)	□	(39)
Ending balances	<u>\$ 15,619</u>	<u>\$ 9,694</u>	<u>\$ 8,407</u>

The Company is subject to taxation and files income tax returns in the U.S. federal jurisdiction and many state and foreign jurisdictions. The U.S. Internal Revenue Service (the "IRS") concluded its review of the years 2013 through 2015 in 2018, and all years before 2016 are closed. Tax years after 2014 remain open in certain major foreign jurisdictions and are subject to examination by the taxing authorities. The Company believes that an adequate provision has been made for any adjustments that may result from tax examinations. However, the outcome of tax audits cannot be predicted with certainty. If any issues addressed in the Company's tax audits are resolved in a manner inconsistent with its expectations, the Company could be required to adjust its provision for income taxes in the period such resolution occurs. Although the timing of resolution and/or closure of audits is not certain, the Company believes it is reasonably possible that its gross unrecognized tax benefits could decrease in the next 12 months by as much as \$2.0 billion.

Interest and Penalties

The Company includes interest and penalties related to income tax matters within the provision for income taxes. As of September 28, 2019 and September 29, 2018, the total amount of gross interest and penalties accrued was \$1.3 billion and \$1.4 billion, respectively. The Company recognized interest and penalty expense in 2019, 2018 and 2017 of \$73 million, \$489 million and \$238 million, respectively.

European Commission State Aid Decision

On August 30, 2016, the European Commission announced its decision that Ireland granted state aid to the Company by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of the Company (the "State Aid Decision"). The State Aid Decision ordered Ireland to calculate and recover additional taxes from the Company for the period June 2003 through December 2014. The recovery amount was calculated to be □ 13.1 billion, plus interest of □ 1.2 billion. During the fourth quarter of 2019, the Irish Minister for Finance approved the Company's request to reduce the recovery amount by □ 190 million due to taxes paid to other countries, resulting in an adjusted recovery amount of □ 12.9 billion as of September 28, 2019. Irish legislative changes, effective as of January 2015, eliminated the application of the tax opinions from that date forward. The Company believes the State Aid Decision to be without merit and appealed to the General Court of the Court of Justice of the European Union. Ireland has also appealed the State Aid Decision. The Company believes that any incremental Irish corporate income taxes potentially due related to the State Aid Decision would be creditable against U.S. taxes, subject to any foreign tax credit limitations in the Act. As of September 28, 2019, the entire adjusted recovery amount plus interest was funded into escrow, where it will remain restricted from general use pending the conclusion of all appeals. Refer to the Cash, Cash Equivalents and Marketable Securities section of Note 3, "Financial Instruments" for more information.

Note 6 – Debt**Commercial Paper**

The Company issues unsecured short-term promissory notes (Commercial Paper) pursuant to a commercial paper program. The Company uses net proceeds from the commercial paper program for general corporate purposes, including dividends and share repurchases. As of September 28, 2019 and September 29, 2018, the Company had \$6.0 billion and \$12.0 billion of Commercial Paper outstanding, respectively, with maturities generally less than nine months. The weighted-average interest rate of the Company's Commercial Paper was 2.24% and 2.18% as of September 28, 2019 and September 29, 2018, respectively. The following table provides a summary of cash flows associated with the issuance and maturities of Commercial Paper for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Maturities 90 days or less:			
Proceeds from/(Repayments of) commercial paper, net	\$ (3,248)	\$ 1,044	\$ (1,782)
Maturities greater than 90 days:			
Proceeds from commercial paper	13,874	14,555	17,932
Repayments of commercial paper	(16,603)	(15,636)	(12,298)
Proceeds from/(Repayments of) commercial paper, net	(2,729)	(1,081)	5,634
Total proceeds from/(repayments of) commercial paper, net	\$ (5,977)	\$ (37)	\$ 3,852

Term Debt

As of September 28, 2019, the Company had outstanding floating- and fixed-rate notes with varying maturities for an aggregate principal amount of \$101.7 billion (collectively the Notes). The Notes are senior unsecured obligations and interest is payable in arrears. The following table provides a summary of the Company's term debt as of September 28, 2019 and September 29, 2018:

	Maturities (calendar year)	2019			2018		
		Amount (in millions)	Effective Interest Rate		Amount (in millions)	Effective Interest Rate	
2013–2018 debt issuances:							
Floating-rate notes	2020 – 2022	\$ 4,250	2.25% – 3.28%	\$ 7,107	1.87% – 3.44%		
Fixed-rate 0.350% – 4.650% notes	2019 – 2047	90,429	0.28% – 4.78%	97,086	0.28% – 4.78%		
2019 debt issuance:							
Fixed-rate 1.700% – 2.950% notes	2022 – 2049	7,000	1.71% – 2.99%	–			
Total term debt		101,679		104,193			
Unamortized premium/(discount) and issuance costs, net		(224)		(218)			
Hedge accounting fair value adjustments		612		(1,456)			
Less: Current portion of term debt		(10,260)		(8,784)			
Total non-current portion of term debt		\$ 91,807		\$ 93,735			

To manage interest rate risk on certain of its U.S. dollar-denominated fixed- or floating-rate notes, the Company has entered into interest rate swaps to effectively convert the fixed interest rates to floating interest rates or the floating interest rates to fixed interest rates on a portion of these notes. Additionally, to manage foreign currency risk on certain of its foreign currency-denominated notes, the Company has entered into foreign currency swaps to effectively convert these notes to U.S. dollar-denominated notes.

A portion of the Company's Japanese yen-denominated notes is designated as a hedge of the foreign currency exposure of the Company's net investment in a foreign operation. As of September 28, 2019 and September 29, 2018, the carrying value of the debt designated as a net investment hedge was \$1.0 billion and \$811 million, respectively. For further discussion regarding the Company's use of derivative instruments, refer to the Derivative Financial Instruments section of Note 3, Financial Instruments.

The effective interest rates for the Notes include the interest on the Notes, amortization of the discount or premium and, if applicable, adjustments related to hedging. The Company recognized \$3.2 billion, \$3.0 billion and \$2.2 billion of interest cost on its term debt for 2019, 2018 and 2017, respectively.

The future principal payments for the Company's Notes as of September 28, 2019 are as follows (in millions):

2020	\$	10,270
2021		8,750
2022		9,528
2023		9,290
2024		10,039
Thereafter		53,802
Total term debt	\$	<u>101,679</u>

As of September 28, 2019 and September 29, 2018, the fair value of the Company's Notes, based on Level 2 inputs, was \$107.5 billion and \$103.2 billion, respectively.

Note 7 – Shareholders' Equity

Share Repurchase Program

On April 30, 2019, the Company announced the Board of Directors increased the current share repurchase program authorization from \$100 billion to \$175 billion of the Company's common stock, of which \$96.1 billion had been utilized as of September 28, 2019. During 2019, the Company repurchased 345.2 million shares of its common stock for \$67.1 billion, including 62.0 million shares delivered under a \$12.0 billion accelerated share repurchase arrangement dated February 2019, which settled in August 2019. The Company's share repurchase program does not obligate it to acquire any specific number of shares. Under this program, shares may be repurchased in privately negotiated and/or open market transactions, including under plans complying with Rule 10b5-1 under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

Shares of Common Stock

The following table shows the changes in shares of common stock for 2019, 2018 and 2017 (in thousands):

	2019	2018	2017
Common stock outstanding, beginning balances	4,754,986	5,126,201	5,336,166
Common stock repurchased	(345,205)	(405,549)	(246,496)
Common stock issued, net of shares withheld for employee taxes	33,455	34,334	36,531
Common stock outstanding, ending balances	<u>4,443,236</u>	<u>4,754,986</u>	<u>5,126,201</u>

Note 8 – Comprehensive Income

The Company's OCI consists of foreign currency translation adjustments from those subsidiaries not using the U.S. dollar as their functional currency, net deferred gains and losses on certain derivative instruments accounted for as cash flow hedges and unrealized gains and losses on marketable debt securities classified as available-for-sale.

The following table shows the pre-tax amounts reclassified from AOCI into the Consolidated Statements of Operations, and the associated financial statement line item, for 2019 and 2018 (in millions):

Comprehensive Income Components	Financial Statement Line Item	2019	2018
Unrealized (gains)/losses on derivative instruments:			
Foreign exchange contracts	Total net sales	\$ (206)	\$ 214
	Total cost of sales	(482)	(70)
	Other income/(expense), net	784	344
Interest rate contracts	Other income/(expense), net	7	(2)
		103	486
Unrealized (gains)/losses on marketable securities	Other income/(expense), net	31	(20)
Total amounts reclassified from AOCI		<u>\$ 134</u>	<u>\$ 466</u>

The following table shows the changes in AOCI by component for 2019 and 2018 (in millions):

	Cumulative Foreign Currency Translation	Unrealized Gains/Losses on Derivative Instruments	Unrealized Gains/Losses on Marketable Securities	Total
Balances as of September 30, 2017	\$ (354)	\$ (124)	\$ 328	\$ (150)
Other comprehensive income/(loss) before reclassifications	(524)	672	(4,563)	(4,415)
Amounts reclassified from AOCI	□	486	(20)	466
Tax effect	(1)	(253)	1,177	923
Other comprehensive income/(loss)	(525)	905	(3,406)	(3,026)
Cumulative effect of change in accounting principle	(176)	29	(131)	(278)
Balances as of September 29, 2018	(1,055)	810	(3,209)	(3,454)
Other comprehensive income/(loss) before reclassifications	(421)	(949)	4,854	3,484
Amounts reclassified from AOCI	□	103	31	134
Tax effect	13	208	(1,058)	(837)
Other comprehensive income/(loss)	(408)	(638)	3,827	2,781
Cumulative effect of change in accounting principle (1)	□	□	89	89
Balances as of September 28, 2019	\$ (1,463)	\$ 172	\$ 707	\$ (584)

(1) Refer to Note 1, □ Summary of Significant Accounting Policies, for more information on the Company's adoption of ASU 2016-01 in 2019.

Note 9 – Benefit Plans

2014 Employee Stock Plan

In the second quarter of 2014, shareholders approved the 2014 Employee Stock Plan (the "2014 Plan") and terminated the Company's authority to grant new awards under the 2003 Employee Stock Plan (the "2003 Plan"). The 2014 Plan provides for broad-based equity grants to employees, including executive officers, and permits the granting of RSUs, stock grants, performance-based awards, stock options and stock appreciation rights, as well as cash bonus awards. RSUs granted under the 2014 Plan generally vest over four years, based on continued employment, and are settled upon vesting in shares of the Company's common stock on a one-for-one basis. RSUs granted under the 2014 Plan reduce the number of shares available for grant under the plan by a factor of two times the number of RSUs granted. RSUs canceled and shares withheld to satisfy tax withholding obligations increase the number of shares available for grant under the 2014 Plan utilizing a factor of two times the number of RSUs canceled or shares withheld. Currently, all RSUs granted under the 2014 Plan have dividend equivalent rights ("DERs"), which entitle holders of RSUs to the same dividend value per share as holders of common stock. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. Upon approval of the 2014 Plan, the Company reserved 385 million shares plus the number of shares remaining that were reserved but not issued under the 2003 Plan. Shares subject to outstanding awards under the 2003 Plan that expire, are canceled or otherwise terminate, or are withheld to satisfy tax withholding obligations for RSUs, will also be available for awards under the 2014 Plan. As of September 28, 2019, approximately 246.4 million shares were reserved for future issuance under the 2014 Plan.

Apple Inc. Non-Employee Director Stock Plan

The Apple Inc. Non-Employee Director Stock Plan (the "Director Plan") is a shareholder-approved plan that (i) permits the Company to grant awards of RSUs or stock options to the Company's non-employee directors, (ii) provides for automatic initial grants of RSUs upon a non-employee director joining the Board of Directors and automatic annual grants of RSUs at each annual meeting of shareholders, and (iii) permits the Board of Directors to prospectively change the value and relative mixture of stock options and RSUs for the initial and annual award grants and the methodology for determining the number of shares of the Company's common stock subject to these grants, in each case within the limits set forth in the Director Plan and without further shareholder approval. RSUs granted under the Director Plan reduce the number of shares available for grant under the plan by a factor of two times the number of RSUs granted. The Director Plan expires on November 12, 2027. All RSUs granted under the Director Plan are entitled to DERs. DERs are subject to the same vesting and other terms and conditions as the corresponding unvested RSUs. DERs are accumulated and paid when the underlying shares vest. As of September 28, 2019, approximately 1.1 million shares were reserved for future issuance under the Director Plan.

Rule 10b5-1 Trading Plans

During the three months ended September 28, 2019, Section 16 officers Timothy D. Cook, Chris Kondo, Luca Maestri, Deirdre O'Brien and Jeffrey Williams had equity trading plans in place in accordance with Rule 10b5-1(c)(1) under the Exchange Act. An equity trading plan is a written document that pre-establishes the amounts, prices and dates (or formula for determining the amounts, prices and dates) of future purchases or sales of the Company's stock, including shares acquired under the Company's employee and director equity plans.

Employee Stock Purchase Plan

The Employee Stock Purchase Plan (the "Purchase Plan") is a shareholder-approved plan under which substantially all employees may purchase the Company's common stock through payroll deductions at a price equal to 85% of the lower of the fair market values of the stock as of the beginning or the end of six-month offering periods. An employee's payroll deductions under the Purchase Plan are limited to 10% of the employee's compensation and employees may not purchase more than \$25,000 of stock during any calendar year. As of September 28, 2019, approximately 31.1 million shares were reserved for future issuance under the Purchase Plan.

401(k) Plan

The Company's 401(k) Plan is a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the 401(k) Plan, participating U.S. employees may defer a portion of their pre-tax earnings, up to the IRS annual contribution limit (\$19,000 for calendar year 2019). The Company matches 50% to 100% of each employee's contributions, depending on length of service, up to a maximum of 6% of the employee's eligible earnings.

Restricted Stock Units

A summary of the Company's RSU activity and related information for 2019, 2018 and 2017, is as follows:

	Number of RSUs (in thousands)	Weighted-Average Grant Date Fair Value Per RSU	Aggregate Fair Value (in millions)
Balance as of September 24, 2016	99,089	\$ 97.54	
RSUs granted	50,112	\$ 121.65	
RSUs vested	(45,735)	\$ 95.48	
RSUs canceled	(5,895)	\$ 106.87	
Balance as of September 30, 2017	97,571	\$ 110.33	
RSUs granted	45,351	\$ 162.86	
RSUs vested	(44,718)	\$ 111.24	
RSUs canceled	(6,049)	\$ 127.82	
Balance as of September 29, 2018	92,155	\$ 134.60	
RSUs granted	36,852	\$ 215.95	
RSUs vested	(42,088)	\$ 135.21	
RSUs canceled	(5,402)	\$ 162.85	
Balance as of September 28, 2019	81,517	\$ 169.18	\$ 17,838

The fair value as of the respective vesting dates of RSUs was \$8.6 billion, \$7.6 billion and \$6.1 billion for 2019, 2018 and 2017, respectively. The majority of RSUs that vested in 2019, 2018 and 2017 were net share settled such that the Company withheld shares with a value equivalent to the employees' obligation for the applicable income and other employment taxes, and remitted the cash to the appropriate taxing authorities. The total shares withheld were approximately 14.8 million, 16.0 million and 15.4 million for 2019, 2018 and 2017, respectively, and were based on the value of the RSUs on their respective vesting dates as determined by the Company's closing stock price. Total payments for the employees' tax obligations to taxing authorities were \$3.0 billion, \$2.7 billion and \$2.0 billion in 2019, 2018 and 2017, respectively. These net share settlements had the effect of share repurchases by the Company as they reduced the number of shares that would have otherwise been issued as a result of the vesting and did not represent an expense to the Company.

Share-Based Compensation

The following table shows share-based compensation expense and the related income tax benefit included in the Consolidated Statements of Operations for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Share-based compensation expense	\$ 6,068	\$ 5,340	\$ 4,840
Income tax benefit related to share-based compensation expense	\$ (1,967)	\$ (1,893)	\$ (1,632)

As of September 28, 2019, the total unrecognized compensation cost related to outstanding RSUs and stock options was \$10.5 billion, which the Company expects to recognize over a weighted-average period of 2.5 years.

Note 10 – Commitments and Contingencies

Accrued Warranty and Guarantees

The following table shows changes in the Company's accrued warranties and related costs for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Beginning accrued warranty and related costs	\$ 3,692	\$ 3,834	\$ 3,702
Cost of warranty claims	(3,857)	(4,115)	(4,322)
Accruals for product warranty	3,735	3,973	4,454
Ending accrued warranty and related costs	\$ 3,570	\$ 3,692	\$ 3,834

The Company offers an iPhone Upgrade Program, which is available to customers who purchase a qualifying iPhone in the U.S., the U.K. and mainland China. The iPhone Upgrade Program provides customers the right to trade in that iPhone for a specified amount when purchasing a new iPhone, provided certain conditions are met. The Company accounts for the trade-in right as a guarantee liability and recognizes arrangement revenue net of the fair value of such right, with subsequent changes to the guarantee liability recognized within net sales.

Concentrations in the Available Sources of Supply of Materials and Product

Although most components essential to the Company's business are generally available from multiple sources, certain components are currently obtained from single or limited sources. The Company also competes for various components with other participants in the markets for smartphones, personal computers, tablets and other electronic devices. Therefore, many components used by the Company, including those that are available from multiple sources, are at times subject to industry-wide shortage and significant commodity pricing fluctuations.

The Company uses some custom components that are not commonly used by its competitors, and new products introduced by the Company often utilize custom components available from only one source. When a component or product uses new technologies, initial capacity constraints may exist until the suppliers' yields have matured or their manufacturing capacities have increased. The continued availability of these components at acceptable prices, or at all, may be affected if suppliers decide to concentrate on the production of common components instead of components customized to meet the Company's requirements.

The Company has entered into agreements for the supply of many components; however, there can be no guarantee that the Company will be able to extend or renew these agreements on similar terms, or at all.

Substantially all of the Company's hardware products are manufactured by outsourcing partners that are located primarily in Asia, with some Mac computers manufactured in the U.S. and Ireland.

Other Off-Balance Sheet Commitments

Operating Leases

The Company leases various equipment and facilities, including retail space, under noncancelable operating lease arrangements. The Company does not currently utilize any other off-balance sheet financing arrangements. As of September 28, 2019, the Company's total future minimum lease payments under noncancelable operating leases were \$10.8 billion. The Company's retail store and other facility leases typically have original terms not exceeding 10 years and generally contain multi-year renewal options.

Rent expense under all operating leases, including both cancelable and noncancelable leases, was \$1.3 billion, \$1.2 billion and \$1.1 billion in 2019, 2018 and 2017, respectively. Future minimum lease payments under noncancelable operating leases having initial or remaining terms in excess of one year as of September 28, 2019, are as follows (in millions):

2020	\$	1,306
2021		1,276
2022		1,137
2023		912
2024		834
Thereafter		5,373
Total	\$	<u>10,838</u>

Unconditional Purchase Obligations

The Company has entered into certain off-balance sheet commitments that require the future purchase of goods or services (unconditional purchase obligations). The Company's unconditional purchase obligations primarily consist of payments for supplier arrangements, Internet and telecommunication services, intellectual property licenses and content creation. Future payments under noncancelable unconditional purchase obligations having a remaining term in excess of one year as of September 28, 2019, are as follows (in millions):

2020	\$	2,476
2021		2,386
2022		1,859
2023		1,162
2024		218
Thereafter		110
Total	\$	<u>8,211</u>

Contingencies

The Company is subject to various legal proceedings and claims that have arisen in the ordinary course of business and that have not been fully resolved. The outcome of litigation is inherently uncertain. If one or more legal matters were resolved against the Company in a reporting period for amounts above management's expectations, the Company's financial condition and operating results for that reporting period could be materially adversely affected. In the opinion of management, there was not at least a reasonable possibility the Company may have incurred a material loss, or a material loss greater than a recorded accrual, concerning loss contingencies for asserted legal and other claims, except for the following matters:

VirnetX

VirnetX, Inc. (VirnetX) filed two lawsuits in the U.S. District Court for the Eastern District of Texas (the Eastern Texas District Court) against the Company alleging that certain Company products infringe four patents (the VirnetX Patents) relating to network communications technology (VirnetX I and VirnetX II). On September 2016, a jury returned a verdict in VirnetX I against the Company and awarded damages of \$302 million, which later increased to \$440 million in post-trial proceedings. The Company appealed the VirnetX I verdict to the U.S. Court of Appeals for the Federal Circuit (the Federal Circuit). On April 11, 2018, a jury returned a verdict in VirnetX I against the Company and awarded damages of \$503 million. VirnetX II is currently on appeal. The Company has challenged the validity of the VirnetX Patents at the U.S. Patent and Trademark Office (the PTO). In response, the PTO has declared the VirnetX Patents invalid. VirnetX appealed the invalidity decision of the PTO to the Federal Circuit. The Federal Circuit consolidated the Company's appeal of the Eastern Texas District Court VirnetX I verdict and VirnetX's appeals from the PTO invalidity proceedings. On January 15, 2019, the Federal Circuit affirmed the VirnetX I verdict, which the Company intends to further appeal. On July 8, 2019, the Federal Circuit remanded one of VirnetX's two appeals of the PTO's invalidity decisions back to the PTO for further proceedings. On August 1, 2019, the Federal Circuit affirmed-in-part vacated-in-part, and remanded back to the PTO portions of VirnetX's second appeal. The Company has accrued its best estimate for the ultimate resolution of these matters.

Qualcomm

On January 20, 2017, the Company filed a lawsuit against Qualcomm Incorporated and affiliated parties (‘‘Qualcomm’’) in the U.S. District Court for the Southern District of California seeking, among other things, to enjoin Qualcomm from requiring the Company to pay royalties at the rate demanded by Qualcomm. No Qualcomm-related royalty payments had been remitted by the Company to its contract manufacturers since the beginning of the second quarter of 2017. Following the Company’s lawsuit, Qualcomm filed patent infringement suits against the Company and its affiliates in the U.S. and various international jurisdictions, some of which sought to enjoin the sale of certain of the Company’s products in particular countries.

On April 16, 2019, the Company and Qualcomm reached a settlement agreement to dismiss all litigation between the two companies worldwide. The companies also reached a multi-year license agreement and a multi-year supply agreement. Under the terms of the settlement agreement, Apple made a payment to Qualcomm to, among other things, resolve disputes over the withheld royalty payments.

iOS Performance Management Cases

Various civil litigation matters have been filed in state and federal courts in the U.S. and in various international jurisdictions alleging violation of consumer protection laws, fraud, computer intrusion and other causes of action related to the Company’s performance management feature used in its iPhone operating systems, introduced to certain iPhones in iOS updates 10.2.1 and 11.2. The claims seek monetary damages and other non-monetary relief. On April 5, 2018, several U.S. federal actions were consolidated through a Multidistrict Litigation process into a single action in the U.S. District Court for the Northern District of California. In addition to civil litigation, the Company is also responding to governmental investigations and requests for information relating to the performance management feature. The Company believes that its iPhones were not defective, that the performance management feature introduced with iOS updates 10.2.1 and 11.2 was intended to, and did, improve customers’ user experience, and that the Company did not make any misleading statements or fail to disclose any material information. The Company has accrued its best estimate for the ultimate resolution of these matters.

French Competition Authority

In June 2019, the French Competition Authority (‘‘FCA’’) issued a report alleging that aspects of the Company’s sales and distribution practices in France violate French competition law. The Company vigorously disagrees with the allegations, and a hearing of arguments was held before the FCA on October 15, 2019. The Company is awaiting the decision of the FCA, which may include a fine.

Note 11 – Segment Information and Geographic Data

The Company reports segment information based on the ‘‘management’’ approach. The management approach designates the internal reporting used by management for making decisions and assessing performance as the source of the Company’s reportable segments.

The Company manages its business primarily on a geographic basis. The Company’s reportable segments consist of the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. Americas includes both North and South America. Europe includes European countries, as well as India, the Middle East and Africa. Greater China includes China, Hong Kong and Taiwan. Rest of Asia Pacific includes Australia and those Asian countries not included in the Company’s other reportable segments. Although the reportable segments provide similar hardware and software products and similar services, each one is managed separately to better align with the location of the Company’s customers and distribution partners and the unique market dynamics of each geographic region. The accounting policies of the various segments are the same as those described in Note 1, ‘‘Summary of Significant Accounting Policies.’’

The Company evaluates the performance of its reportable segments based on net sales and operating income. Net sales for geographic segments are generally based on the location of customers and sales through the Company’s retail stores located in those geographic locations. Operating income for each segment includes net sales to third parties, related cost of sales and operating expenses directly attributable to the segment. Advertising expenses are generally included in the geographic segment in which the expenditures are incurred. Operating income for each segment excludes other income and expense and certain expenses managed outside the reportable segments. Costs excluded from segment operating income include various corporate expenses such as research and development, corporate marketing expenses, certain share-based compensation expenses, income taxes, various nonrecurring charges and other separately managed general and administrative costs. The Company does not include intercompany transfers between segments for management reporting purposes.

The following table shows information by reportable segment for 2019, 2018 and 2017 (in millions):

	2019	2018	2017
Americas:			
Net sales	\$ 116,914	\$ 112,093	\$ 96,600
Operating income	\$ 35,099	\$ 34,864	\$ 30,684
Europe:			
Net sales	\$ 60,288	\$ 62,420	\$ 54,938
Operating income	\$ 19,195	\$ 19,955	\$ 16,514
Greater China:			
Net sales	\$ 43,678	\$ 51,942	\$ 44,764
Operating income	\$ 16,232	\$ 19,742	\$ 17,032
Japan:			
Net sales	\$ 21,506	\$ 21,733	\$ 17,733
Operating income	\$ 9,369	\$ 9,500	\$ 8,097
Rest of Asia Pacific:			
Net sales	\$ 17,788	\$ 17,407	\$ 15,199
Operating income	\$ 6,055	\$ 6,181	\$ 5,304

A reconciliation of the Company's segment operating income to the Consolidated Statements of Operations for 2019, 2018 and 2017 is as follows (in millions):

	2019	2018	2017
Segment operating income	\$ 85,950	\$ 90,242	\$ 77,631
Research and development expense	(16,217)	(14,236)	(11,581)
Other corporate expenses, net	(5,803)	(5,108)	(4,706)
Total operating income	\$ 63,930	\$ 70,898	\$ 61,344

The U.S. and China were the only countries that accounted for more than 10% of the Company's net sales in 2019, 2018 and 2017. There was no single customer that accounted for more than 10% of net sales in 2019, 2018 and 2017. Net sales for 2019, 2018 and 2017 and long-lived assets as of September 28, 2019 and September 29, 2018 were as follows (in millions):

	2019	2018	2017
Net sales:			
U.S.	\$ 102,266	\$ 98,061	\$ 84,339
China (1)	43,678	51,942	44,764
Other countries	114,230	115,592	100,131
Total net sales	\$ 260,174	\$ 265,595	\$ 229,234

	2019	2018
Long-lived assets:		
U.S.	\$ 24,711	\$ 23,963
China (1)	9,064	13,268
Other countries	3,603	4,073
Total long-lived assets	\$ 37,378	\$ 41,304

(1) China includes Hong Kong and Taiwan. Long-lived assets located in China consist primarily of product tooling and manufacturing process equipment and assets related to retail stores and related infrastructure.

Note 12 – Selected Quarterly Financial Information (Unaudited)

The following tables show a summary of the Company's quarterly financial information for each of the four quarters of 2019 and 2018 (in millions, except per share amounts):

	<u>Fourth Quarter</u>	<u>Third Quarter</u>	<u>Second Quarter</u>	<u>First Quarter</u>
2019:				
Total net sales	\$ 64,040	\$ 53,809	\$ 58,015	\$ 84,310
Gross margin	\$ 24,313	\$ 20,227	\$ 21,821	\$ 32,031
Net income	\$ 13,686	\$ 10,044	\$ 11,561	\$ 19,965

Earnings per share (1):				
Basic	\$ 3.05	\$ 2.20	\$ 2.47	\$ 4.22
Diluted	\$ 3.03	\$ 2.18	\$ 2.46	\$ 4.18

	<u>Fourth Quarter</u>	<u>Third Quarter</u>	<u>Second Quarter</u>	<u>First Quarter</u>
2018:				
Total net sales	\$ 62,900	\$ 53,265	\$ 61,137	\$ 88,293
Gross margin	\$ 24,084	\$ 20,421	\$ 23,422	\$ 33,912
Net income	\$ 14,125	\$ 11,519	\$ 13,822	\$ 20,065

Earnings per share (1):				
Basic	\$ 2.94	\$ 2.36	\$ 2.75	\$ 3.92
Diluted	\$ 2.91	\$ 2.34	\$ 2.73	\$ 3.89

(1) Basic and diluted earnings per share are computed independently for each of the quarters presented. Therefore, the sum of quarterly basic and diluted per share information may not equal annual basic and diluted earnings per share.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Apple Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Apple Inc. as of September 28, 2019 and September 29, 2018, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 28, 2019, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of Apple Inc. as of September 28, 2019 and September 29, 2018, and the results of its operations and its cash flows for each of the three years in the period ended September 28, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), Apple Inc.'s internal control over financial reporting as of September 28, 2019, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated October 30, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of Apple Inc.'s management. Our responsibility is to express an opinion on Apple Inc.'s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the account or disclosure to which it relates.

European Commission State Aid Matter Uncertain Tax Position

Description of the Matter

As discussed in Note 5 of the financial statements, the European Commission ("EC") has announced its decision that Ireland granted state aid to Apple Inc. by providing tax opinions in 1991 and 2007 concerning the tax allocation of profits of the Irish branches of two subsidiaries of Apple Inc. The decision ordered Ireland to calculate and recover additional taxes from Apple Inc. for the period from June 2003 through December 2014. The adjusted amount indicated by the EC to be recovered is up to €12.9 billion, plus interest.

Auditing management's evaluation of the uncertain tax position stemming from the effects of the EC decision is complex and highly judgmental due to the inherent uncertainty in predicting the ultimate resolution of the matter.

How We Addressed the
Matter in Our Audit

We tested controls over the risk of material misstatement relating to the evaluation of the EC state aid matter, including management's evaluation of the advice of legal counsel, the assessment as to whether Apple Inc.'s position is more likely than not to be sustained and the development of the related disclosure.

To evaluate Apple Inc.'s assessment of whether sustainment of its position is a more likely than not outcome, including underlying assumptions, our audit procedures included, among others, reading the EC August 2016 ruling and available correspondence between Apple Inc. and the EC, and the EC and Ireland. We also requested and received internal and external legal counsel confirmation letters, discussed the allegations with internal and external legal counsel and Apple Inc. tax personnel and obtained a representation letter from Apple Inc. We involved our EC and tax subject matter resources in considering the applicable tax laws, the pending appeal, the current status of legal precedent relevant to that appeal and the proceedings at the court hearing in September 2019. In addition, we evaluated Apple Inc.'s disclosure included in Note 5 in relation to this matter.

/s/ Ernst & Young LLP

We have served as Apple Inc.'s auditor since 2009.

San Jose, California
October 30, 2019

Apple Inc. | 2019 Form 10-K | 57

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Apple Inc.

Opinion on Internal Control Over Financial Reporting

We have audited Apple Inc.'s internal control over financial reporting as of September 28, 2019, based on criteria established in *Internal Control – Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the "COSO criteria"). In our opinion, Apple Inc. maintained, in all material respects, effective internal control over financial reporting as of September 28, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (the "PCAOB"), the consolidated balance sheets of Apple Inc. as of September 28, 2019 and September 29, 2018, the related consolidated statements of operations, comprehensive income, shareholders' equity and cash flows for each of the three years in the period ended September 28, 2019, and the related notes and our report dated October 30, 2019 expressed an unqualified opinion thereon.

Basis for Opinion

Apple Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on Apple Inc.'s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to Apple Inc. in accordance with the U.S. federal securities laws and the applicable rules and regulations of the U.S. Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

San Jose, California
October 30, 2019

Apple Inc. | 2019 Form 10-K | 58

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures**Evaluation of Disclosure Controls and Procedures**

Based on an evaluation under the supervision and with the participation of the Company's management, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act were effective as of September 28, 2019 to provide reasonable assurance that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms and (ii) accumulated and communicated to the Company's management, including its principal executive officer and principal financial officer, as appropriate to allow timely decisions regarding required disclosure.

Inherent Limitations over Internal Controls

The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles ("GAAP"). The Company's internal control over financial reporting includes those policies and procedures that:

- (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Company's assets;
- (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that the Company's receipts and expenditures are being made only in accordance with authorizations of the Company's management and directors; and
- (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the financial statements.

Management, including the Company's Chief Executive Officer and Chief Financial Officer, does not expect that the Company's internal controls will prevent or detect all errors and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of internal controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. Also, any evaluation of the effectiveness of controls in future periods are subject to the risk that those internal controls may become inadequate because of changes in business conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management's Annual Report on Internal Control over Financial Reporting

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act). Management conducted an assessment of the effectiveness of the Company's internal control over financial reporting based on the criteria set forth in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on the Company's assessment, management has concluded that its internal control over financial reporting was effective as of September 28, 2019 to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements in accordance with GAAP. The Company's independent registered public accounting firm, Ernst & Young LLP, has issued an audit report on the Company's internal control over financial reporting, which appears in Part II, Item 8 of this Form 10-K.

Changes in Internal Control over Financial Reporting

There were no changes in the Company's internal control over financial reporting during the fourth quarter of 2019, which were identified in connection with management's evaluation required by paragraph (d) of Rules 13a-15 and 15d-15 under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. Other Information

None.

PART III**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item is set forth under the headings "Corporate Governance," "Directors," "Executive Officers" and "Other Information" Security Ownership of Certain Beneficial Owners and Management" in the Company's 2020 Proxy Statement to be filed with the SEC within 120 days after September 28, 2019 in connection with the solicitation of proxies for the Company's 2020 annual meeting of shareholders, and is incorporated herein by reference.

Item 11. Executive Compensation

The information required by this Item is set forth under the heading "Executive Compensation," under the subheadings "Board Oversight of Risk Management" ; "Compensation Committee Interlocks and Insider Participation" under the heading "Corporate Governance" and under the subheadings "Compensation of Directors" "Director Compensation" 2019" under the heading "Directors" in the Company's 2020 Proxy Statement to be filed with the SEC within 120 days after September 28, and is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The information required by this Item is set forth under the headings "Other Information" Security Ownership of Certain Beneficial Owners and Management" and "Other Information" Equity Compensation Plan Information" in the Company's 2020 Proxy Statement to be filed with the SEC within 120 days after September 28, 2019, and incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this Item is set forth under the subheadings "Board Committees," "Review, Approval, or Ratification of Transactions with Related Persons" ; "Transactions with Related Persons" under the heading "Corporate Governance" in the Company's 2020 Proxy Statement to be filed with the SEC within 120 days after September 28, 2019, and is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

The information required by this Item is set forth under the subheadings "Fees Paid to Auditors" and "Policy on Audit Committee Pre-Approval of Audit and Non-Audit Services Performed by the Independent Registered Public Accounting Firm" under the proposal "Ratification of Appointment of Independent Registered Public Accounting Firm" in the Company's 2020 Proxy Statement to be filed with the SEC within 120 days after September 28, 2019, and is incorporated herein by reference.

PART IV

Item 15. Exhibits, Financial Statement Schedules

(a) Documents filed as part of this report

(1) All financial statements

Index to Consolidated Financial Statements	Page
Consolidated Statements of Operations for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	29
Consolidated Statements of Comprehensive Income for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	30
Consolidated Balance Sheets as of September 28, 2019 and September 29, 2018	31
Consolidated Statements of Shareholders' Equity for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	32
Consolidated Statements of Cash Flows for the years ended September 28, 2019, September 29, 2018 and September 30, 2017	33
Notes to Consolidated Financial Statements	34
Selected Quarterly Financial Information (Unaudited)	55
Reports of Independent Registered Public Accounting Firm	56

(2) Financial Statement Schedules

All financial statement schedules have been omitted, since the required information is not applicable or is not present in amounts sufficient to require submission of the schedule, or because the information required is included in the consolidated financial statements and accompanying notes included in this Form 10-K.

(3) Exhibits required by Item 601 of Regulation S-K (1)

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
3.1	Restated Articles of Incorporation of the Registrant effective as of June 6, 2014.	8-K	3.1	6/6/14
3.2	Amended and Restated Bylaws of the Registrant effective as of December 13, 2016.	8-K	3.2	12/15/16
4.1**	Description of Securities of the Registrant.			
4.2	Indenture, dated as of April 29, 2013, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as Trustee.	S-3	4.1	4/29/13
4.3	Officer's Certificate of the Registrant, dated as of May 3, 2013, including forms of global notes representing the Floating Rate Notes due 2016, Floating Rate Notes due 2018, 0.45% Notes due 2016, 1.00% Notes due 2018, 2.40% Notes due 2023 and 3.85% Notes due 2043.	8-K	4.1	5/3/13
4.4	Officer's Certificate of the Registrant, dated as of May 6, 2014, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2019, 1.05% Notes due 2017, 2.10% Notes due 2019, 2.85% Notes due 2021, 3.45% Notes due 2024 and 4.45% Notes due 2044.	8-K	4.1	5/6/14
4.5	Officer's Certificate of the Registrant, dated as of November 10, 2014, including forms of global notes representing the 1.000% Notes due 2022 and 1.625% Notes due 2026.	8-K	4.1	11/10/14
4.6	Officer's Certificate of the Registrant, dated as of February 9, 2015, including forms of global notes representing the Floating Rate Notes due 2020, 1.55% Notes due 2020, 2.15% Notes due 2022, 2.50% Notes due 2025 and 3.45% Notes due 2045.	8-K	4.1	2/9/15
4.7	Officer's Certificate of the Registrant, dated as of May 13, 2015, including forms of global notes representing the Floating Rate Notes due 2017, Floating Rate Notes due 2020, 0.900% Notes due 2017, 2.000% Notes due 2020, 2.700% Notes due 2022, 3.200% Notes due 2025, and 4.375% Notes due 2045.	8-K	4.1	5/13/15
4.8	Officer's Certificate of the Registrant, dated as of June 10, 2015, including forms of global notes representing the 0.350% Notes due 2020.	8-K	4.1	6/10/15

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
4.9	Officer's Certificate of the Registrant, dated as of July 31, 2015, including forms of global notes representing the 3.05% Notes due 2029 and 3.60% Notes due 2042.	8-K	4.1	7/31/15
4.10	Officer's Certificate of the Registrant, dated as of September 17, 2015, including forms of global notes representing the 1.375% Notes due 2024 and 2.000% Notes due 2027.	8-K	4.1	9/17/15
4.11	Officer's Certificate of the Registrant, dated as of February 23, 2016, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2021, 1.300% Notes due 2018, 1.700% Notes due 2019, 2.250% Notes due 2021, 2.850% Notes due 2023, 3.250% Notes due 2026, 4.500% Notes due 2036 and 4.650% Notes due 2046.	8-K	4.1	2/23/16
4.12	Supplement No. 1 to the Officer's Certificate of the Registrant, dated as of March 24, 2016.	8-K	4.1	3/24/16
4.13	Officer's Certificate of the Registrant, dated as of June 22, 2016, including form of global note representing 4.15% Notes due 2046.	8-K	4.1	6/22/16
4.14	Officer's Certificate of the Registrant, dated as of August 4, 2016, including forms of global notes representing the Floating Rate Notes due 2019, 1.100% Notes due 2019, 1.550% Notes due 2021, 2.450% Notes due 2026 and 3.850% Notes due 2046.	8-K	4.1	8/4/16
4.15	Officer's Certificate of the Registrant, dated as of February 9, 2017, including forms of global notes representing the Floating Rate Notes due 2019, Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.550% Notes due 2019, 1.900% Notes due 2020, 2.500% Notes due 2022, 3.000% Notes due 2024, 3.350% Notes due 2027 and 4.250% Notes due 2047.	8-K	4.1	2/9/17
4.16	Officer's Certificate of the Registrant, dated as of March 3, 2017, including form of global note representing 4.300% Notes due 2047.	8-K	4.1	3/3/17
4.17	Officer's Certificate of the Registrant, dated as of May 11, 2017, including forms of global notes representing the Floating Rate Notes due 2020, Floating Rate Notes due 2022, 1.800% Notes due 2020, 2.300% Notes due 2022, 2.850% Notes due 2024 and 3.200% Notes due 2027.	8-K	4.1	5/11/17
4.18	Officer's Certificate of the Registrant, dated as of May 24, 2017, including forms of global notes representing the 0.875% Notes due 2025 and 1.375% Notes due 2029.	8-K	4.1	5/24/17
4.19	Officer's Certificate of the Registrant, dated as of June 20, 2017, including form of global note representing the 3.000% Notes due 2027.	8-K	4.1	6/20/17
4.20	Officer's Certificate of the Registrant, dated as of August 18, 2017, including form of global note representing the 2.513% Notes due 2024.	8-K	4.1	8/18/17
4.21	Officer's Certificate of the Registrant, dated as of September 12, 2017, including forms of global notes representing the 1.500% Notes due 2019, 2.100% Notes due 2022, 2.900% Notes due 2027 and 3.750% Notes due 2047.	8-K	4.1	9/12/17
4.22	Officer's Certificate of the Registrant, dated as of November 13, 2017, including forms of global notes representing the 1.800% Notes due 2019, 2.000% Notes due 2020, 2.400% Notes due 2023, 2.750% Notes due 2025, 3.000% Notes due 2027 and 3.750% Notes due 2047.	8-K	4.1	11/13/17
4.23	Indenture, dated as of November 5, 2018, between the Registrant and The Bank of New York Mellon Trust Company, N.A., as Trustee.	S-3	4.1	11/5/18
4.24	Officer's Certificate of the Registrant, dated as of September 11, 2019, including forms of global notes representing the 1.700% Notes due 2022, 1.800% Notes due 2024, 2.050% Notes due 2026, 2.200% Notes due 2029 and 2.950% Notes due 2049.	8-K	4.1	9/11/19
4.25*	Apple Inc. Deferred Compensation Plan.	S-8	4.1	8/23/18
10.1*	Employee Stock Purchase Plan, as amended and restated as of March 10, 2015.	8-K	10.1	3/13/15
10.2*	Form of Indemnification Agreement between the Registrant and each director and executive officer of the Registrant.	10-Q	10.2	6/27/09
10.3*	Apple Inc. Non-Employee Director Stock Plan, as amended and restated as of February 13, 2018.	8-K	10.1	2/14/18
10.4*	2003 Employee Stock Plan, as amended through February 25, 2010.	8-K	10.1	3/1/10
10.5*	Form of Restricted Stock Unit Award Agreement under 2003 Employee Stock Plan effective as of November 16, 2010.	10-Q	10.10	12/25/10
10.6*	2014 Employee Stock Plan, as amended and restated as of October 1, 2017.	10-K	10.8	9/30/17

Exhibit Number	Exhibit Description	Incorporated by Reference		
		Form	Exhibit	Filing Date/ Period End Date
10.7*	Form of Amendment, effective as of August 26, 2014, to Restricted Stock Unit Award Agreements and Performance Award Agreements outstanding as of August 26, 2014.	10-K	10.13	9/27/14
10.8*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 5, 2015.	10-Q	10.16	3/26/16
10.9*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of October 14, 2016.	10-K	10.18	9/24/16
10.10*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.	10-K	10.20	9/30/17
10.11*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of September 26, 2017.	10-K	10.21	9/30/17
10.12*	Form of Restricted Stock Unit Award Agreement under Non-Employee Director Stock Plan effective as of February 13, 2018.	10-Q	10.2	3/31/18
10.13*	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of August 21, 2018.	10-K	10.17	9/29/18
10.14*	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of August 21, 2018.	10-K	10.18	9/29/18
10.15*, **	Form of Restricted Stock Unit Award Agreement under 2014 Employee Stock Plan effective as of September 29, 2019.			
10.16*, **	Form of Performance Award Agreement under 2014 Employee Stock Plan effective as of September 29, 2019.			
21.1**	Subsidiaries of the Registrant.			
23.1**	Consent of Independent Registered Public Accounting Firm.			
24.1**	Power of Attorney (included on the Signatures page of this Annual Report on Form 10-K).			
31.1**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Executive Officer.			
31.2**	Rule 13a-14(a) / 15d-14(a) Certification of Chief Financial Officer.			
32.1***	Section 1350 Certifications of Chief Executive Officer and Chief Financial Officer.			
101**	Inline XBRL Document Set for the consolidated financial statements and accompanying notes in Part II, Item 8, <input type="checkbox"/> Financial Statements and Supplementary Data <input type="checkbox"/> of this Annual Report on Form 10-K.			
104**	Inline XBRL for the cover page of this Annual Report on Form 10-K, included in the Exhibit 101 Inline XBRL Document Set.			

* Indicates management contract or compensatory plan or arrangement.

** Filed herewith.

*** Furnished herewith.

(1) Certain instruments defining the rights of holders of long-term debt securities of the Registrant are omitted pursuant to Item 601(b)(4)(iii) of Regulation S-K. The Registrant hereby undertakes to furnish to the SEC, upon request, copies of any such instruments.

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: October 30, 2019

Apple Inc.

By: /s/ Luca Maestri

Luca Maestri
Senior Vice President,
Chief Financial Officer

Power of Attorney

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Timothy D. Cook and Luca Maestri, jointly and severally, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Annual Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his substitute or substitutes, may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Name	Title	Date
<u> /s/ Timothy D. Cook </u> TIMOTHY D. COOK	Chief Executive Officer and Director (Principal Executive Officer)	October 30, 2019
<u> /s/ Luca Maestri </u> LUCA MAESTRI	Senior Vice President, Chief Financial Officer (Principal Financial Officer)	October 30, 2019
<u> /s/ Chris Kondo </u> CHRIS KONDO	Senior Director of Corporate Accounting (Principal Accounting Officer)	October 30, 2019
<u> /s/ James A. Bell </u> JAMES A. BELL	Director	October 30, 2019
<u> /s/ Al Gore </u> AL GORE	Director	October 30, 2019
<u> /s/ Andrea Jung </u> ANDREA JUNG	Director	October 30, 2019
<u> /s/ Arthur D. Levinson </u> ARTHUR D. LEVINSON	Director	October 30, 2019
<u> /s/ Ronald D. Sugar </u> RONALD D. SUGAR	Director	October 30, 2019
<u> /s/ Susan L. Wagner </u> SUSAN L. WAGNER	Director	October 30, 2019

Apple Inc. | 2019 Form 10-K | 64

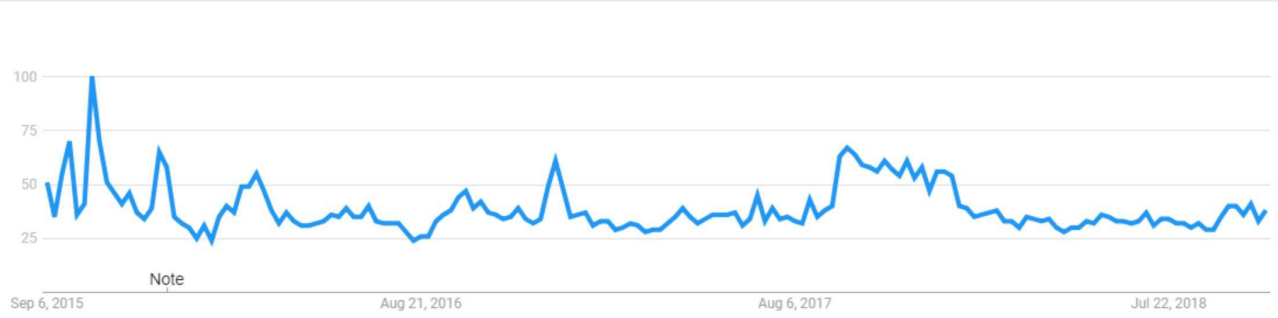
● live photos
Search term

+ Compare

United States ▾ 9/1/15 - 10/25/18 ▾ All categories ▾ Web Search ▾

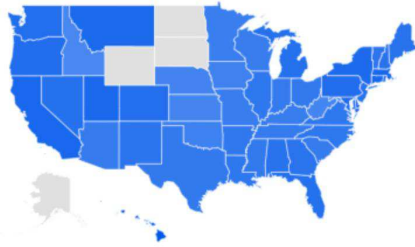
Interest over time ?

📄 ⏪ ⏩ 🔗



Interest by subregion ?

Subregion ▾ 📄 ⏪ ⏩ 🔗



1	Hawaii	100	<div style="width: 100%;"></div>
2	California	86	<div style="width: 86%;"></div>
3	Massachusetts	86	<div style="width: 86%;"></div>
4	Delaware	86	<div style="width: 86%;"></div>
5	Connecticut	86	<div style="width: 86%;"></div>

< Showing 1-5 of 47 subregions >

Related topics ?

Rising ▾ 📄 ⏪ ⏩ 🔗

1	iPhone 6S - Topic	Breakout
2	iPhone 6s Plus - Topic	Breakout
3	iOS 10 - Topic	Breakout
4	Boomerang - Sports tool	Breakout
5	iPhone SE - Topic	Breakout

< Showing 1-5 of 25 topics >

Related queries ?

Rising ▾ 📄 ⏪ ⏩ 🔗

1	iphone 6s live photos	Breakout
2	iphone 6s	Breakout
3	turn off live photos iphone	Breakout
4	post live photos to instagram	Breakout
5	iphone 6 plus live photos	Breakout

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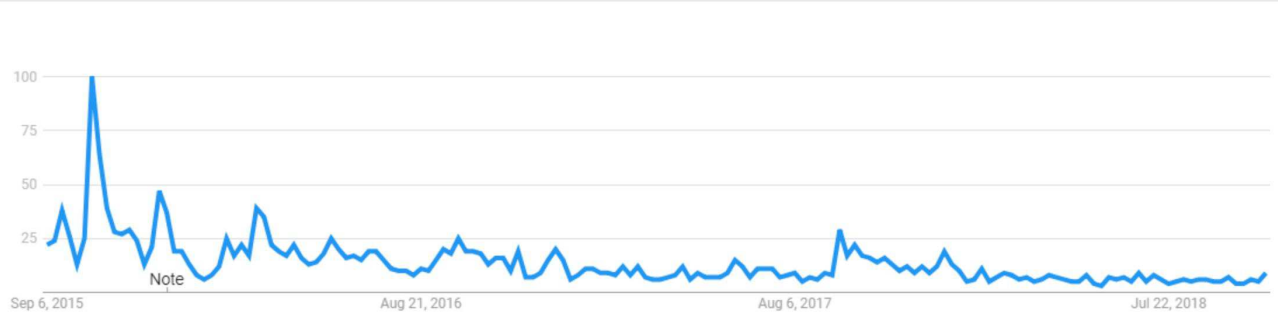
Cao v. Apple
Apple Trial Exhibit
60

iphone 6 live photos
Search term

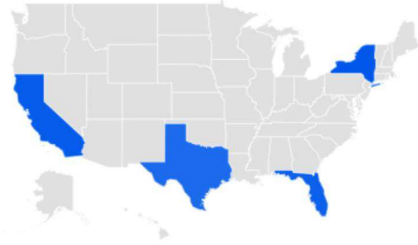
+ Compare

United States 9/1/15 - 10/25/18 All categories Web Search

Interest over time



Interest by subregion



Rank	Subregion	Interest Index
1	New York	100
2	California	97
3	Florida	93
4	Texas	84

Related topics

- 1 iPhone 6 - Topic Breakout
- 2 iPhone - Smartphone Breakout
- 3 Photograph - Topic Breakout
- 4 Apple Photos - Topic Breakout
- 5 iPhone 6S - Topic Breakout

Showing 1-5 of 21 topics

Related queries

- 1 live photos on iphone Breakout
- 2 live photo Breakout
- 3 live photo iphone 6 Breakout
- 4 iphone 6s live photos Breakout
- 5 iphone 6s Breakout

Showing 1-5 of 25 queries

Cao v. Apple
Apple Trial Exhibit
61

● live photos
Search term

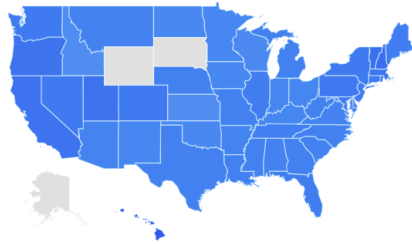
+ Compare

United States ▾ 9/1/15 - 7/31/20 ▾ All categories ▾ Web Search ▾

Interest over time ?



Interest by subregion ?



Rank	Subregion	Interest Score
1	Hawaii	100
2	New Hampshire	81
3	Vermont	80
4	District of Columbia	78
5	Rhode Island	78

< Showing 1-5 of 48 subregions >

Related topics ?

Rising ▾

Rank	Topic	Interest Score
1	Apple iPhone 6s - Mobile phone	Breakout
2	iPhone 7 - Mobile phone	Breakout
3	Apple iPhone 7 - Mobile phone	Breakout
4	iPhone 6 Plus - Mobile phone	Breakout
5	iPhone X - Mobile phone	Breakout

< Showing 1-5 of 25 topics >

Related queries ?

Top ▾

Rank	Query	Interest Score
1	live photos iphone	100
2	live photos on iphone	40
3	live photo	33
4	iphone 6 live photos	25
5	turn off live photos	18

< Showing 1-5 of 25 queries >

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Apple Trial Exhibit
62**

What is Motion Photo?

Motion Photo puts a little context into the making of the shot by letting you capture a few seconds of action leading up to when the shutter button is released. It even allows you to pinpoint which moment you want to preserve as the still frame. Also, when it comes to sharing photos with friends and family, you have the option to share the Motion Photo as a video file.

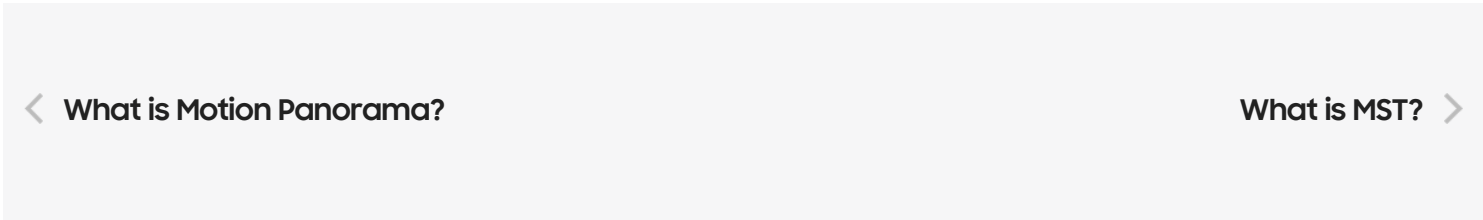
Motion Photo is available on Galaxy S20, S20+, S20 Ultra, Z Flip, Note10, Note10+, S10e, S10, S10+, Fold, Note9, S9, S9+, Note8, S8, S8+, S7, and S7 edge.

Discover more about Galaxy for yourself.

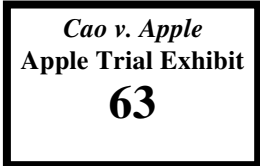
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C MY NETWORK SPEED (HIGH) ▾ SITE MAP > GLOBAL SAMSUNG >



Take motion photos & use Top Shot on your Pixel phone








To capture something in motion, you can take a motion photo. To select a favorite individual shot from a motion photo or video, you can use Top Shot on your Pixel phone.


Turn on motion photos

To turn on motion photos, tap the Down arrow . Then, tap either Motion auto  or Motion on .

Take a motion photo

To take a photo that contains a short video:






1. Open your Google Camera app . [Learn how.](#)
2. At the top of the screen, tap the Down arrow  > Motion on .
 - a. To use motion photos, you may have to turn off Social media depth features. To turn it off, at the top of the screen, tap the Down arrow  > Settings  > Advanced .
 - b. Turn off Social media depth features.
3. Tap Capture .

To view your motion photo, in the bottom right, tap the small photo. If the motion video doesn't play at first, at the top, tap Play motion photo .

To save the motion photo as a video, tap More  > Export > Video > Export.

Save individual shots from a motion photo or video

When you take a motion photo or quick video, your Pixel 3 or later may recommend a better-quality photo from your motion photo or video. You can also pick your favorite shot.

1. Open your Google Camera app . [Learn how.](#)
2. At the top of the screen, tap the Down arrow  > Motion on .
3. Take a photo or video:
 - To take a photo, tap Capture .
 - To take a video, touch and hold Capture .
4. Open your photo or video and swipe up.
5. Tap Shots in this photo or Shots in this video.
6. Scroll through the shots and pick your favorite.

Recommended shots are saved in higher resolution and in HDR. They have a white dot over them.




Automatically focus on faces you photograph often

You can help the camera on your Pixel 4 or later identify and recommend better shots of the faces you photograph or record the most.

When your camera finds and recommends other shots within your motion photos or quick videos, your camera recognizes which shots include the faces you capture often. Then, your camera recommends better photos of those faces.

If you turn on Frequent Faces, your camera saves data about the faces you photograph or record. All face data is saved on your phone, not sent to Google. If you turn off Frequent Faces, your data is deleted.

To turn on Frequent Faces:

1. Open your Google Camera app . [Learn how.](#)
2. At the top, tap the Down arrow  > Settings  > Frequent Faces.
3. Turn on Frequent Faces.

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Lumia Camera

Microsoft Mobile • [Photo & video](#)

♡ Wish list

Lumia Camera is the optimal camera app for your Lumia device.

Living Images add motion to bring your photos to life in your camera roll and Lumia Storyteller. Any photos and videos you [More](#)



Free



[See System Requirements](#)

- Overview
- System Requirements
- Related

Available on

Mobile device

Description

Lumia Camera is the optimal camera app for your Lumia device.

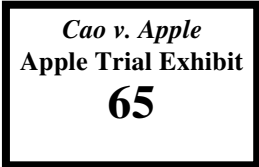
Living Images add motion to bring your photos to life in your camera roll and Lumia Storyteller. Any photos and videos you shoot in Lumia Cinemagraph and Lumia Refocus also appear as Living Images, playing as you browse through them in the camera roll.

Use auto mode when you want to simply point and shoot, or switch to full manual control to create the perfect composition. For action photography, smart sequence is a great way to quickly shoot and combine a series of photos.

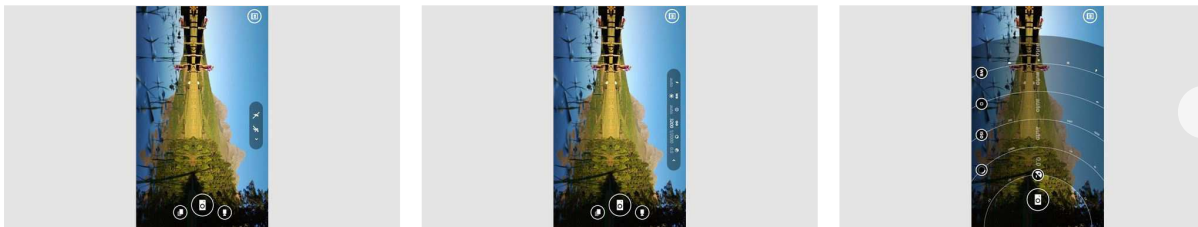
New in this version:
- New Name; Lumia Camera
- Bug fixes

New in 4.7.2.5 with Cyan:

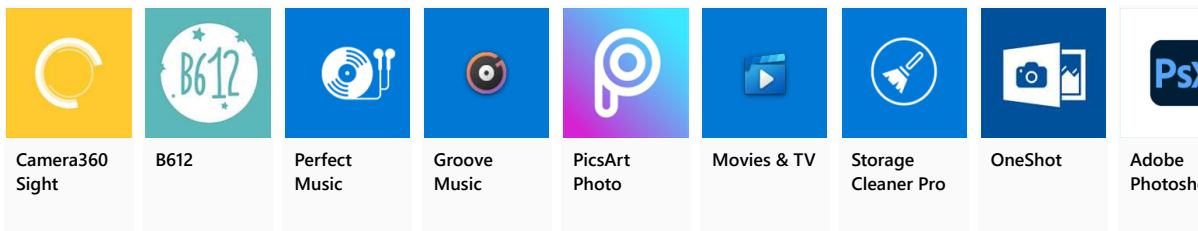
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Additional information

Published by
Microsoft Mobile

Approximate size
15.78 MB

Installation
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Developed by
Microsoft Mobile

Age rating
For all ages

Language supported
English (United States)
Afrikaans (Suid-Afrika)
العربية (المملكة العربية السعودية)
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Release date
6/14/2013

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Gang Cao (CANADA INDIVIDUAL)
Po Box 93053 Caulfeild Village
West Vancouver, B.c., CANADA V7W3G4

Registered Mar. 12, 2019

Int. Cl.: 9

CLASS 9: Computer software for touch devices, namely, mobile phones, portable media players, tablets, handheld computers, desktop computers, laptop computers and computer-enabled appliances for use in connection with capturing, exploring, interacting with and generating multimedia that are deliverable to social media, media servers, devices and services

Trademark

Principal Register

FIRST USE 7-8-2017; IN COMMERCE 3-15-2018

THE MARK CONSISTS OF STANDARD CHARACTERS WITHOUT CLAIM TO ANY PARTICULAR FONT STYLE, SIZE OR COLOR

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Andrei Iancu

Director of the United States
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What and When to File:

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The above documents will be accepted as timely if filed within six months after the deadlines listed above with the payment of an additional fee.

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MORE INFO

About: A global online network where millions of photographers discover + share incredible photos, gain exposure, and get paid. Need help? Visit support.500px.com.

Company Overview: Launched in 2009, 500px is the premier community and social network for aspiring and practicing photographers. Millions of creatives from 195 countries come to 500px to discover and share incredible photos, gain global exposure, and get paid for their work and skills.

Launched in 2009, 500px is a global online photography community for sharing, discovering and licensing amazing photos. Images on 500px represent the work of ov... See More

General Information: Handmade in Toronto, Canada

Founding Date: 2009

Community

STORY

How 500px began

500px started as a photography community on LiveJournal in 2003, where photographers could submit their work and community curators published the best photos. At the time, 500 pixels was the ideal size for displaying photos on web and all of the images were—you guessed it—sized to 500 pixels. That's where our name comes from. 500px's official websi...

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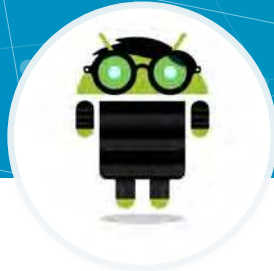
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Aug 2008 – Present · 11 yrs 11 mos

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1990 – 2003

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- Sri Krishna Institute of Technology, Bangalore

Experience

Section Editor and Video Producer
Beebom
Oct 2015 – Present · 4 yrs 9 mos
New Delhi Area, India

Author
MobiGyaan
Jan 2014 – Jun 2015 · 1 yr 6 mos
Bengaluru Area, India

Chief Editor
Gadgetnote
Jun 2013 – Dec 2013 · 7 mos
Bangalore

Techgyo Techblog
Techgyo
Sep 2012 – Dec 2013 · 1 yr 4 mos
Bengaluru Area, India

Chief News Editor and Reviewer
InstallorNot
Dec 2011 – Aug 2012 · 9 mos

Education



Sri Krishna Institute of Technology, Bangalore

Bachelor of Technology (B.Tech.), Computer Science
2012 – 2016



Allen Career Institute

+2, High School/Secondary Diploma Programs
2009 – 2011



Saint Joseph's School, Bhagalpur

Schooling
1996 – 2009

Skills & Endorsements

Blogging · 10

Subhash Sharma and 9 connections have given endorsements for this skill

Web Content · 5

Bikash kumar and 4 connections have given endorsements for this skill

Editorial · 4

Bikash kumar and 3 connections have given endorsements for this skill

Industry Knowledge

Editing · 3

Content Writing · 2

Writing · 2


Content Management · 2

Social Media Marketing · 1

Copy Editing · 1

Copywriting · 1

Social Networking · 1

Other Skills 

Books · 2

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Accomplishments

1 Project

Tech Blogging



Interests



Amazon

14,831,008 followers



Content Innovators

2,527 members



Accenture

5,522,975 followers



SEO Content Writer

1,497 members



Dell

2,958,695 followers



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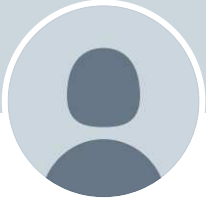
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Trump's visa curbs: Who is affected and what may happen next

US President Donald Trump's move to suspend visas is a mixed bag for the Indian diaspora.

- As doubts linger, these stocks scale record highs
- 12 things that will decide stock action on Thursday
- Shutting down economy was a big mistake: Jim Rogers

Here's another grim warning for economy

The IMF projected a sharp contraction of 4.5% for the Indian economy in 2020, a "historic low".

ETPrime

Auto dealers face consolidation

Auto dealerships' income from service and spare-parts, a sticky revenue stream, has taken a hit.

Dream11 fights a washout season

Sanitary-pad market lacks innovation

Can India snap economic ties with China?

Here are a string of issues that law makers and regulators will have to deal with.

Leave policies are changing due to Covid

Diesel is now costlier than petrol in Delhi

Tax compliance deadlines extended, again

Xiaomi's India boss shrugs off a backlash

ED raids premises related to boss of realty firm

Trump's visa curbs to hit spouses of H1B holders

A jumbo slump heading India's way?

West Bengal extends lockdown till July 31

LIVE: Bengal gov announces extension of lockdown

Pak is safe haven for terror groups: US State Dept

India, China hold diplomatic talks to ease tension

LIVE: China continues military build-up along LAC

Goonka Twitter's most-influential, Mahindra follows

What's so unusual about this Market rally

Co-op banks to be brought under RBI supervision

When Kunal Bahl's H-1B visa was rejected

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456,183 Confirmed **14,476** Deaths

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Companies tweak leave policies as work from home is here to stay

Low intensity quake hits Rohtak; 8th since April 12

What are balanced funds?

Share market update: Realty shares fall; Sobha slips nearly 3%

Equity funds are giving double-digit returns; is it time to party?

IRDAI allows insurers to offer short-term health policies for coronavirus treatment

This could be the best time to opt for teaching. Here's why

Share price of HDFC Life Insurance Company Ltd. falls as Sensex gains 55.87 points

TVS Motor Company Ltd. shares up 1.21% as Nifty gains

Irdai brings out new draft Covid policy

India to clear air on repatriation flights, may allow US same

India and China taking measures to disengage troops in Eastern Ladakh

Hygiene, food issues at Covid hospitals: Minister warns heads of government hospitals in Karnataka

Malls reports 30% footfall, shorter stay time of customers

Leading US lawmakers chide Donald Trump's H-1B order

View: Neighbourhood first; India must continue to reach out to Nepal

Suspension of foreign work visas to free up to 5.25 lakh jobs in US: White House

Gold: The new currency?

Lifestyle changes due to lockdown may trigger weight gain and enhanced risk of type 2 diabetes mellitus in

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Trump signs order to suspend H-1B, L-1 visas till December

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Trump likely to sign order to restrict H-1B visa by Monday

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PPF rate may fall below 7% to a 46-year low

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India digs up old coordinates: China's Galwan claim of 1960 stopped short of faceoff point

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After a turnaround against Covid, Madhya Pradesh now goes for 'Kill Corona' campaign

14,000 teams are being formed which will survey 100 homes daily over the 15-day campaign, translating to all two crore-odd families being surveyed door-to-door by the teams, the state government announced on Wednesday.

VVIP chopper scandal: ED raids premises related to Boss of realty firm Emaar MGF

The ED, in its charge sheet filed in 2015 in a local court, had claimed to have detected flow of alleged kickbacks sent from abroad to companies of the accused Advocate Gautam Khaitan and cousin brothers of the former IAF chief, S P Tyagi.



West Bengal extends lockdown till July 31 with certain relaxations

The state recorded 370 new cases of coronavirus yesterday, which took the total to 14,728. Of these, the number of active cases is 4,930.

healthy people

Even healthy may turn diabetic due to lockdown: Study



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Rollovers to dominate; do not chase short-covering bounce
Thursday's session is likely to see a soft start.

- Stock Recos: SBI| Bajaj Finj| Asian Paints| Infosys
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- Boycotting Chinese goods is easier said than done
- Sebi comes out with guidelines for algo trades
- Canara Bank to seek approval for fund raising
- Fitch revises HUDCO outlook to negative from stable
- Dow Jones slumps on virus worries, grim outlook



Majority of investors trust Indian financial markets: Survey
The 'Trust Survey' conducted by CFA Institute polled 3,525 retail investors and 921 institutional investors in October and November last year.



24 carat gold crosses Rs 50,000 as recovery worries weigh
Most of the borrowers are from MSME businesses, including owners, who want to activate their businesses post the lockdown, said Muthoot.



Market Moguls
Dhiraj Relli
MD & CEO, HDFC Securities
Dichotomy between markets and economy... can you still benefit?

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Editor's Pick



Things are looking up for Indian economy



Slow clearance of Chinese goods may hit retailers



Hinduja brothers fight over a letter



What does China really want?

Top Mutual Funds

ETMONEY
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Equity Tax Saver Debt Hybrid Others Featured Return Duration: 3Y

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<p>FEATURED</p> <p>ICICI Prudential Bluechip Fund Direct-Growth</p> <p>3Y RETURN: ↑ 3.51%</p> <p>FUND SIZE: ₹ 21765.71 Crs</p> <p>CATEGORY RETURNS: -2.60% to +10.54%</p> <p>★★★★★</p> <p>INVEST NOW</p>

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<p>Axis M</p> <p>3Y RETURN: ↑ 9.12%</p>
<p>Axis M</p> <p>3Y RETURN: ↑ 9.12%</p>
<p>FEATURED</p> <p>L&T Mi</p> <p>3Y RETURN: ↓ -1.04%</p>

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Economy >

Custom check for Chinese goods can worsen shortages of smartphones, laptops, TV

Three senior industry executives said supplies will be impacted for brands such as Apple, Xiaomi, Oppo, Vivo, OnePlus, Realme, Lenovo and several online focused brands, as consignments for most of them are currently stuck at customs. Most of these brands work on extremely lean inventory levels.



DPIIT seeks views of e-commerce firms on mentioning 'country of origin' on each product

This comes against the backdrop of calls to boycott Chinese goods following border clashes between India and China in Ladakh. The government procurement portal GeM has made it mandatory for suppliers/sellers to specify the country of origin while registering new products on the portal.



- > IMF projects sharp contraction of 4.5% in Indian economy in 2020; a historic low
- > Aluminium association urges government to remit export duties and taxes under RoDTEP scheme
- > Government announces 2 per cent interest subsidy for small borrowers under Mudra Yojana

Mutual fund investments are subject to market risks. Read all scheme related documents carefully.

SPOTLIGHT

Covid-19 Updates



Cipla to price remdesivir version for COVID-19 under 5,000 rupees

Indian pharma major Cipla Ltd and Hetero Labs gained approval to sell generic versions of remdesivir in the country. Remdesivir, intravenously administered in hospitals, is the first treatment to show improvement in COVID-19 trials.

- Covid pandemic could trigger "reverse royalty" for several multinationals
- Active cases may hit peak of 2.6L on July 15: Report



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(Jun 24, 2020)

Petrol Diesel

CHENNAI

PETROL (₹/L)

83.04 0.00

DELHI

PETROL (₹/L)

79.76 0.00

KOLKATA

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81.45 0.00

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PETROL (₹/L)

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Unclear skies



Silicon Valley slams Trump's move to freeze H-1B visas; Pichai disappointed, Microsoft bosses feel it's not the right time



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Mutual Funds



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ICICI Prudential Large & Mid Cap Fund Direct Plan-Growth

Returns in %

1M	3M	6M	1Yr	3Yrs
14.13	33.31	-13.27	-11.75	-0.22

For regulatory disclaimers, .

RISE >



The other stock exchange: Why a lucrative way to fund a business has remained largely untapped

Being user friendly and with less compliance, SME exchanges were supposed to be a panacea for cash strapped small businesses to find funding. Eight years since its launch, the platforms face a familiar woe - liquidity.



Dell Technologies partners with Nasscom to help SMEs, startups

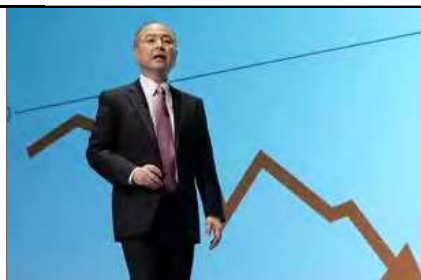
This partnership aims to ensure smooth operations and business continuity for these small scale businesses during such a challenging time and to build a robust ecosystem to support them by bringing together important products and services.



Indian customs may start inspection of all imports from China at ports and airports

No formal instruction has been issued to stop clearances, but these consignments are likely to face 100% check, they said. "From midnight Monday clearances were stalled," said one of the persons.

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Inside the baffling world of Masayoshi Son's presentations

Son is closely involved in making the slides. He has a team of about a half a dozen up-and-coming SoftBank employees in their late 20s and early 30s responsible for drafting the presentations.

- Startups help blue collar workers start their own gigs
- From Oyo to Zomato, startups soften pay cuts by expanding Esops pool



Vande Bharat flies into trouble

Boycott China: Xiaomi more Indian than local handset companies, says India MD



Stocks in the news: RIL, Asian Paints, IOC, Adani Power, Ujjivan Financial and YES Bank



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Wealth >



Father is not immediate legal heir of Hindu male

According to succession laws, a Hindu male's father is not an immediate legal heir. Here's a look at who are considered legal heirs of a Hindu male who dies intestate.



3-11 months health policies for Covid soon

Short term health policy means any health insurance policy contract which has been issued for a policy term of less than 12 months. However, a policy term less than three months is not permitted by the regulator.



Should you get indemnity-based Covid health cover?

This will be a standard health policy which will provide coverage of up to Rs 5 lakh for hospitalisation expenses related to Covid-19. The policy will cover consumables such as PPE Kit, gloves, mask and other similar expenses used for the treatment.



4 new things that your Form 26AS will now show

The government via a notification dated May 28, 2020, has made changes to the Form 26AS. These changes have come into effect from June 1, 2020. Here are the four new changes in Form 26AS that will appear from now onwards.

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Mutual Funds > TOP MUTUAL FUNDS: [Edelweiss Maiden Opportunities Fund Series 1 Direct-G - 9.07 %](#)



Nivesh Lakshya Fund is timing, interest-rate agnostic: Prashant Pimple of Nippon India MF

Nippon India Nivesh Lakshya Fund has caught the imagination of many individual investors. Many of them want to know the details of this long-term gilt fund. Most mutual fund advisors ask their clients to stay away from long-term debt funds, as these schemes are extremely sensitive to interest rate changes and one has to time the entry and exit in them to maximise returns.



Best banking & PSU funds to invest in 2020

Most mutual fund advisors are asking risk-averse investors to consider investing in relatively-safer banking & PSU funds these days.



Equity funds are giving double-digit returns; is it time to party?

Disproving many doomsday predictions, equity mutual funds have made impressive double-digit returns in the last one-month and three-month horizons.

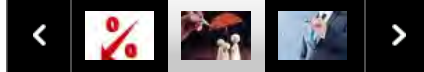
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Two ways to calculate how much life cover you need

The first step of a financial plan is to make sure that your insurance needs are covered.

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Should I shift to direct, growth from dividend reinvestment option?

If you have any mutual fund queries, message on ET Mutual Funds on Facebook. We will get it answered by our panel of experts.

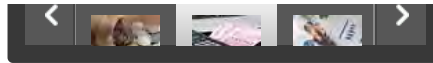
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Some of the most successful ways to make any business profitable



They are unable to buy more shares of RIL due to mandatory limits on holding a particular stock.



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More than 100 vaccines in the making



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Tit-for-tat



Slow clearance of Chinese goods may put etailers like Amazon, Flipkart in a spot



Small investors in India are latest to snag beaten-down stocks

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Motorola One Fusion+ goes on sale on Flipkart at Rs 16,999; e-commerce giant offers lucrative deals



The problem



Modi govt has unlocked corona pandemic, petrol-diesel prices: Rahul Gandhi

Do you think the Indian stock market is overvalued at present?

Yes
 No
 Can't say

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Information Technology >

[Xiaomi covers up its store branding with Make in India logo](#)



India's largest smartphone maker, Xiaomi has started to cover its logo and sign boards outside exclusive and multi-brand cellphone stores with the 'Made in India' logo and has asked its shop floor promoters not to wear uniform fearing that miscreants may damage the shops or attack promoters due to anti-China sentiments.



Identity theft tops Indian consumer security concerns: Unisys Security Index

The Index score of 223 out of 300 signifies that Indians have a high level of security concern across national, financial, internet and personal security covered by the survey. Identity theft has emerged as the top security concern overall, with 83% of Indians seriously concerned about this issue.



Reverie eyes big boost from local translation services with Reliance products

According to co-founder and CEO Arvind Pani, Reliance's current digital strategy targets the same set of audiences as Reverie, which makes software solutions for Indian language services. In his view, language inclusion would be critical for the parent company's larger digital inclusion plans. Reliance Jio, its telecom unit, has a subscriber base of 388 million.



Facing 'mob mentality' on social media, but Indian consumers are smart: Xiaomi's Jain

We have generated employment for 50,000 people in India, including Xiaomi India team members and everybody that works exclusively for Xiaomi, said Xiaomi India MD Manu Kumar.

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Is WFH here to stay? With network issues, wrecked employee morale & security threats, the answer is not that simple

Due to coronavirus, office workers around the world were forced to participate in world's biggest telecommuting experiment.



Pooches that save lives! Mumbai Police honours dogs-in-training, throws a paw-licious birthday bash

The netizens couldn't help but express their admiration for the doggos-turned-saviours.



Second film based on Sushant Singh Rajput announced, will explore the life of strugglers in Mumbai

Mishra clarified that the film is not a biopic and will be partially based on the late actor's life.



Covid: Tips professionals must follow to take care of their mental health. Join Webinar

In this webinar, we will look at ways of addressing anxieties and stress brought about by this changed climate.

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Opinion >

Enforce biomedical disposal norms

Personal protective equipment (PPE) — face masks and shields, gloves, head and shoe covers, and hazmat suits — is reportedly left strewn at the cremation grounds. This



Twitter permanently suspends account of Trump supporter who created doctored video tweeted by POTUS

The move was the second action Twitter took related to Trump's tweets within 24 hours.

- Motorola One Fusion+ goes on sale on Flipkart at Rs 16,999; e-commerce giant offers lucrative deals
- Built-in battery adapters the way forward during small power outage, says Paytm founder



Spouses on H4 visas stuck in India following Trump's ban

[Why Term Insurance is crucial if you are Self Employed?](#)



Defence >

DRDO developing agricultural technologies for locals and army in high altitude areas of Eastern Ladakh

The Defence Institute of High Altitude Research (DIHAR), a DRDO lab based in Leh, has been contributing to the agro-animal development of the Ladakh region by providing training programs on the cultivation techniques and technologies that it has developed for locals at places such as Shyok, Darbuk, Tangtse and Demchok.



> [India China News LIVE: China warns US against missile deployment](#)

> [India and China taking measures to disengage troops in Eastern Ladakh](#)

[More from Defence News »](#)

International >

China tames new outbreak but elsewhere virus cases surge

China appears to have tamed a new outbreak of the coronavirus in Beijing, once again demonstrating its ability to quickly mobilize vast resources by testing nearly 2.5 million people in 11 days.



> [China's got a new plan to overtake the U.S. in tech](#)

> [North Korea's Kim suspends military plans against South: KCNA](#)

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Jobs/Careers >

COVID-19 has led to 20 lakh job losses in bus, taxi sector; more on anvil: Industry Body

Industry body Bus & Car Operators Confederation of India (BOCI), which claims to represent 20,000 operators with 15



Don't let H-1B suspension let you down. Kunal Bahl's US visa rejection story will inspire every Indian entrepreneur

About 13 years ago, Kunal Bahl was employed with Microsoft in Seattle.

- Tencent's 48-yr-old Pony Ma dethrones Jack Ma to become China's richest
- Twitter permanently suspends account of Trump supporter who created doctored video tweeted by POTUS



INTERVIEWS

- [Facing 'mob mentality' on social media, but Indian consumers are smart: Xiaomi's Jain](#)



is a public health and environmental hazard, especially...



Some signs of a fast recovery

The economic tea leaves seem to suggest that a

welcome rebound is underway, as India 'unlocks' after the Covid-19 nationwide lockdown. Notice that production capacity at Hindustan Unilever, the biggest consumer goods company here, has...

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- Mumbai will be able to breathe easy by July 15: BMC commissioner
- Don't expect any further hurdles to sale of Aircel assets, including spectrum: UVARCL CFO

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Blogs

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- Why India needs a new bad bank

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lakh buses and maxi-cabs and 11 lakh tourist taxis providing direct employment to 1 crore people, said these private operators need government support in the form of waiver of taxes and interest on loans as many of them are facing closure.



> 9 in 10 engineers from top tech firms rate system design as crucial skill for career growth: Study

> Employees at large firms most confident about future of their employers: Survey

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Hitesh Raj Bhagat · 3rd
Director of Corporate Communications - Truecaller India
South Delhi, Delhi, India · 500+ connections · [Contact info](#)

-  **The Economic Times**
-  **Symbiosis Institute of Mass Communication**

About

Ex Editor (17 yrs work experience) with a demonstrated history of working in print, TV and the internet industry. Skilled in Journalism, Media Relations, Corporate Communications, Magazines, Online, Video and Newspapers

Experience



The Economic Times

9 yrs 1 mo



Editor

Apr 2014 – Sep 2019 · 5 yrs 6 mos

Assistant Editor

Sep 2010 – Mar 2014 · 3 yrs 7 mos

Responsible for content on the personal technology pages of the Economic Times



Associate Editor - Living Digital & Sr, Manager, Technology, CyberMedia Labs

CyberMedia

Jan 2006 – Sep 2010 · 4 yrs 9 mos

Review new technologies and products



Special Correspondent

Reliant Media

Aug 2004 – Nov 2005 · 1 yr 4 mos



Technical & Motorsports Correspondent

Overdrive

Feb 2003 – Jun 2004 · 1 yr 5 mos

Car & motorcycle reviews, road tests, expeditions, performance testing, rally, stunt, open-wheel & precision driving

Education



Symbiosis Institute of Mass Communication

Mass Communication/Media Studies

2001 – 2003



The Hindu College, Delhi University

B.A. English (Hons)

1998 – 2001



The Daly College, Indore

10 + 2, CBSE

1995 – 1998

Skills & Endorsements

Content Development · 92



Endorsed by Mala Bhargava and 15 others who are highly skilled at this



Endorsed by 3 of Hitesh Raj's colleagues at The Economic Times

Journalism · 47



Endorsed by Praseon Srivastava and 5 others who are highly skilled at this



Endorsed by 12 of Hitesh Raj's colleagues at CyberMedia

Newspapers · 38



Endorsed by 8 of Hitesh Raj's colleagues at CyberMedia



Endorsed by 7 people who know Newspapers

[Show more](#)

Recommendations

[Received \(2\)](#)

[Given \(1\)](#)



Shekhar Govindarajan

Technology Consultant

February 18, 2019, Hitesh Raj worked with Shekhar in the same group

To start with, I worked with Hitesh at Living Digital magazine, Cybermedia where he used to scrutinize my articles so that it can be explained to the end user. Hitesh is an articulate person. And I have learnt from him. I'm following Hitesh on Twitter and his insights about consumer technology like phones, televi... [See more](#)



Hoshie Ghaswalla

BW Businessworld

September 11, 2010, Hoshie was senior to Hitesh Raj but didn't manage directly

Always on top of the gadget domain and world is the ideal way to describe Hitesh. Whenever I or others (friends and colleagues) had queries on what to buy or how to better use gadgets / personal technology, Hitesh would have immediate and very valid responses. Seldom was his need to do research. Beside... [See more](#)

Accomplishments

1 Language
Hindi



Interests



Media Movements

1,783 members



The Economic Times

1,385,254 followers



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to build Executive Vice President, ...
342,027 followers



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4,862 members



Microsoft

11,570,238 followers



Dell

2,962,974 followers

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Karan Bajaj · 3rd

 **freelance editor/writer**

Freelance Digital Content Creator

Canada · 500+ connections · [Contact info](#)

#OpenToWork
Content Specialist, Content Writer, Content Editor, Content Strategist and Editor roles
[See all details](#)

About

Detail-oriented professional with 13+ years of experience and proven knowledge of content creation, content strategy, communications, and brand management.

Experience



Freelance Writer

freelance editor/writer · Self-employed
Dec 2019 – Present · 8 mos
Ontario, Canada

> Writing columns, editorials, commentaries, or reviews that interpret events or offer opinions for leading media houses in India



Features by Karan Bajaj -
The Economic Times



Articles by Karan Bajaj at
CNBCTV18.COM



Senior Manager, PR

OPPO Mobiles India Pvt. Ltd. · Full-time
Sep 2019 – Dec 2019 · 4 mos

Gurgaon, India

- > Identify opportunities and develop content strategies by working with product, marketing & customer service teams
- > Manage the creation and production of all of the content assets to build brand identity.
- > Assign, supervise and review the activities of the public relations team
- > Create and execute communications strategy for the PR team by collaborating with cross-functional teams, internal and external agencies
- > Direct activities of external agencies, establishments, and departments that develop and implement communication strategies and information programs
- > Draft speeches for company executives, and arrange interviews and other forms of contact for them
- > Establish and maintain effective working relationships with clients, government officials, and media representatives and use these relationships to develop new business opportunities

[see less](#)



Assistant Editor

The Economic Times · Full-time

Apr 2011 – Aug 2019 · 8 yrs 5 mos

New Delhi Area, India

- > Develop story or content ideas, considering the reader or audience appeal for The Economic Times newspaper and web portal
- > Write columns, editorials, commentaries, or reviews that interpret events or offer opinions
- > Oversee publication production, including artwork, layout, computer typesetting, and printing, ensuring adherence to deadlines and budget requirements
- > Review copy and correct errors in content, grammar, and punctuation, following prescribed editorial style and formatting guidelines
- > Monitor news-gathering operations to ensure utilization of all news sources, such as press releases, telephone contacts, radio, television and wire services
- > Research and analyze background information related to stories in order to be able to provide complete and accurate information

[see less](#)



Articles by Karan Bajaj -
The Economic Times



Senior Technology Analyst

Cyber Media (India) Ltd. · Full-time

Oct 2006 – Apr 2011 · 4 yrs 7 mos

Gurgaon, India

- > Create the content on consumer technology for PCQuest + Living Digital print magazine and web

portal

[...see more](#)**Organizer - Electronic Sports World Cup**

Indiatimes.com · Contract
Apr 2007 – Jun 2007 · 3 mos

Structured and supervised "Electronics Sports World Cup" organized by Indiatimes – an International electronic sports competition held across India

**Game Reviewer**

www.gamersindia.com · Freelance
May 2005 – Jun 2006 · 1 yr 2 mos

Write articles about the latest PC and console games launched in the Indian market. From Game reviews to industry features, the role required interesting articles with a knack for details.

**Consultant**

Bharti Airtel Limited
2005 – 2006 · 1 yr

Worked with Bharti Airtel India as a consultant during the pre-launch of "Games on Demand" service

[Show fewer experiences](#) ^**Education****Maximus Autodesk Media and Entertainment**

Diploma, Graphics
2006 – 2007

Activities and Societies: Sketching, Modeling, Particle effects, Audio and Video editing

**Delhi University**

B.Com, Hons
2001 – 2004

**New Green Fields School, Saket, New Delhi**

12th, Commerce with maths
1990 – 2001

Licenses & Certifications**Fundamentals of Digital Marketing**

Google Digital Garage
Issued Apr 2020 · No Expiration Date
Credential ID YS3 KUL NA9

[See credential](#)

Skills & Endorsements

Content Development · 99+



Endorsed by Nimish Dubey and 14 others who are highly skilled at this



Endorsed by 4 of Karan's colleagues at The Economic Times

Editorial · 91



Endorsed by Srinivasa Raghavendra Rao and 2 others who are highly skilled at this

Blogging · 75



Endorsed by Srinivasa Raghavendra Rao and 4 others who are highly skilled at this



Endorsed by 10 of Karan's colleagues at CyberMedia

[Show more](#)

Recommendations

[Received \(39\)](#)

Given (34)



Parvathy Raja
Brand Marketing at OZiva

I had the opportunity to work with Karan (through my agency) in my very first job. It was great working with him especially since he was open to discussions and willing to listen to ideas.



Eashwari Deshpande
Sales & Marketing Leader |
Communications Excellence |
Building Strategic
Partnerships | Women in Tech
December 6, 2011, Eashwari worked with Karan but at different companies

Any tech PR professional in India will vouch for Karan's ability as a 'true tech journalist'. His understanding of the technology space is unprecedented and his passion for consumer technology is very apparent through his fantastic work! Karan has the unique ability to marry his deep understanding and passion of techno... [See more](#)

[Show more](#)

Accomplishments

2

Languages

English • Hindi



1

Publication



The Economic Times

[See publication](#)

Interests



Nokia

1,087,846 followers



Online Journalists of India

607 members



Ryan Holmes

Chairman and Co-founder at Hootsuite
1,726,932 followers



Hewlett Packard Enterprise

3,193,774 followers



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1999 Inception: Times Internet
Manages: Indiatimes, TOI, ET, NBT

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Indian online audience spends 3/4th of their business news reading time on **Economictimes.com**

As per Comscore December 2019 data, Economic Times website received 115.4 minutes of...



MX Player named top streaming app in India in 2019

MX Player was named the top streaming app in India for 2019 by App Annie, a San Francisco-base...



Gaana becomes first music app to reach 150 Mn monthly active users

Our portfolio brand, Gaana became the first music streaming app to have crossed the mighty 150...

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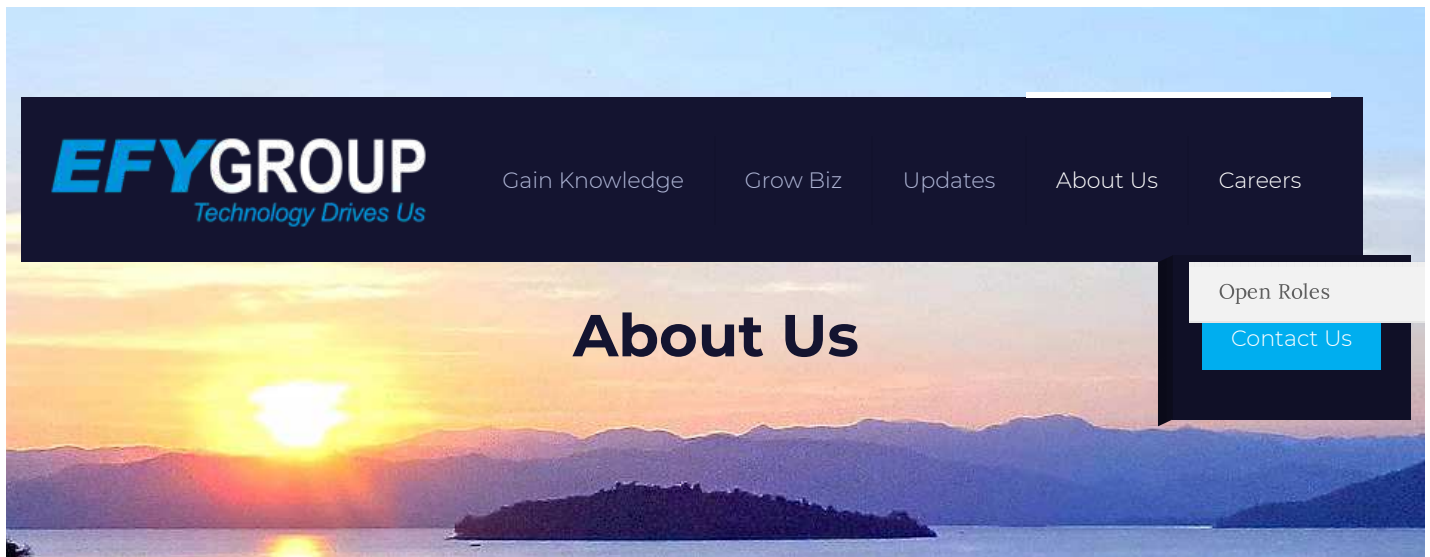
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Ecstasy IT Park
Plot 391, Udyog Vihar
Phase 3, Gurugram
Haryana - 122016



Over the last five decades, the EFY Group has become synonymous with information on cutting-edge technology. Today, this renowned media group is spread across eight cities of India and caters to over two million techies spread across the globe.

Its print publications not only reach every nook and corner of India but are also read by techies in South Asian countries, like Nepal, Pakistan, Bangladesh, Sri Lanka, Bhutan, and Afghanistan. The Group is also amongst the few Indian publishers to have its publications distributed in Singapore and Malaysia.

The online communities of the group provide tech content to readers from all across the globe. The group's online portfolio includes some global leaders, like, electronicsforu.com, opensourceforu.com, chipsnwfers.electronicsforu.com, test.electronicsforu.com, smart.electronicsforu.com, electronicsb2b.com and eleb2b.com. Plus, the company manages six social media (Facebook) communities, which are global leaders in their respective domains. These include [EFY's Electronics Design Community](#), [Open Source For You](#), and [EFY's Electronics Test Community](#), [Electronics of Things](#), [Engineering Jobs For You](#), facebook.com/tablets.india. Recently, EFY launched digital editions of its publications to make them easily accessible to readers all across the globe.

The digital publications are now available on all popular platforms including iOS (Apple), Android, Kindle and e-zine (Web browser). The group has also tied up with leading online distributors including Amazon, Scoop, PocketMags, Zinio, Magzter, etc. We also have our own online distribution service grab.electronicsforu.com

While EFY Group has been organizing events since 2004 when it launched LinuxAsia (now called Open Source India), its events division got fully established with the launch of Electronics For You Expo in 2011. Now, the group boasts of a strong portfolio of events including India Electronics Week (IEW) and Open Source India. Starting 2015, EFY has started organizing many co-located events under the umbrella of India Electronics Week. For the first time in 2017, IEW has played host to seven co-located shows including EFY Expo, IoTshow.in, LEDAsia.in, E-rocks, T&M India, Raksha India and DIY Expo.



EFY has set itself the target of empowering and helping 10 million techies, across the globe by 2018, and it's investing heavily on growing the online communities and increasing the number of readers of its digital publications to achieve the goal.

ABOUT US

Over the last five decades, the EFY Group has become synonymous with information on cutting-edge technology. Today, this renowned media group is spread across eight cities of India and caters to over two million techies spread across the globe.

CONTACT US

info@efy.in
+91-11-40596600

HEAD OFFICE

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D87/1 Okhla Industrial Area
Phase 1, New Delhi 110020
(INDIA)



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Personal Information of Minor Children

Important Note to Parents: Fixel does not include information or content on this site that is intentionally directed at children under the age of 16. We do not knowingly collect personally identifiable information from children on our site. All of our contests require that participants be adults. **Important Note to Children:** Before providing your name, address, email address, or any other personal information to anyone on the Internet, be sure to ask your parents if it is okay.

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In certain jurisdictions, you may have the right to know what personal information Fixel has

In certain jurisdictions, you may have the right to know what personal information Fixel has related to you, to have access to that personal information and to have it corrected or annotated if it is inaccurate. To exercise this right, contact Fixel's privacy contact as set out below.

If you have any questions about your personal information or this Privacy Policy, email us at support@fixel.com. Our mailing address is 488 Wellington Street West, Suite 304, Toronto, ON M5V 1E3.

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Politics Reporter: [Zi-Ann Lum](#)

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Ian Hardy

Publisher, Director of Advertising, Partnerships

I still love Tetris and still the biggest fan of Tim Hortons in the world. Now into its tenth year, my focus at MobileSyrup is advertising and partnership and ensuring Canadians have a voice in the wireless market.

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Patrick O'Rourke

Managing Editor

Patrick O'Rourke is passionate about video games, virtual reality and mobile technology. He's covered the tech industry for various publications since 2007. patrick@mobilesyrup.com

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Dean Daley

Senior Staff Reporter, Evening Editor



Bradly Shankar

Staff Reporter

Graduate of the Journalism



Dean is a graduate from Durham College's Journalism program. He loves all sorts of Android devices and video games.

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Graduate of the Journalism program at Ryerson University. In the tech space, I'm most interested in video games, virtual reality and artificial intelligence. I'm also vehemently against pineapple on pizza.

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Aisha Malik

Telecom Reporter

Aisha is a telecom and technology reporter for MobileSyrup. She holds a Master of Media in Journalism and Communication from Western University and obtained her Honours Bachelor of Arts from the University of Toronto. She's passionate about all things tech, especially artificial intelligence and cybersecurity.

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Jonathan Lamont

Staff Reporter, Weekend Editor

My passion for tech started with my first iPod and has carried through smartphones and computers of all kinds. Android is my jam, but I get excited for anything cool that happens in tech. I also enjoy gaming, building my own computers and digging into how things work.

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Brad Bennett

Staff Reporter

I've been a lover of the internet since I got my first dial-up connection at seven-years-old. Since then, I've been captivated by weird gadgets, weird technology and the beautiful culture that surrounds them.

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Ted Kritsonis

Automotive and IoT Editor

I've been a freelance journalist covering the tech industry since 2003, where I've had the chance to see old industries evolve and entirely new ones emerge. It's been a thrilling ride and I have no intention of stopping now. Over the course of my career, I've written for about two dozen publications in Canada and the United States.

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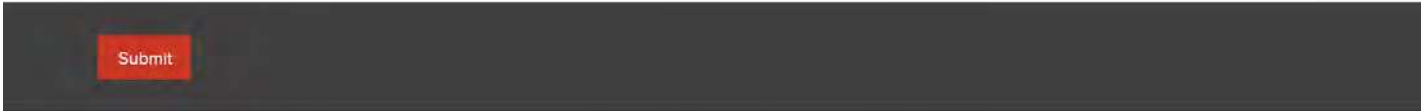
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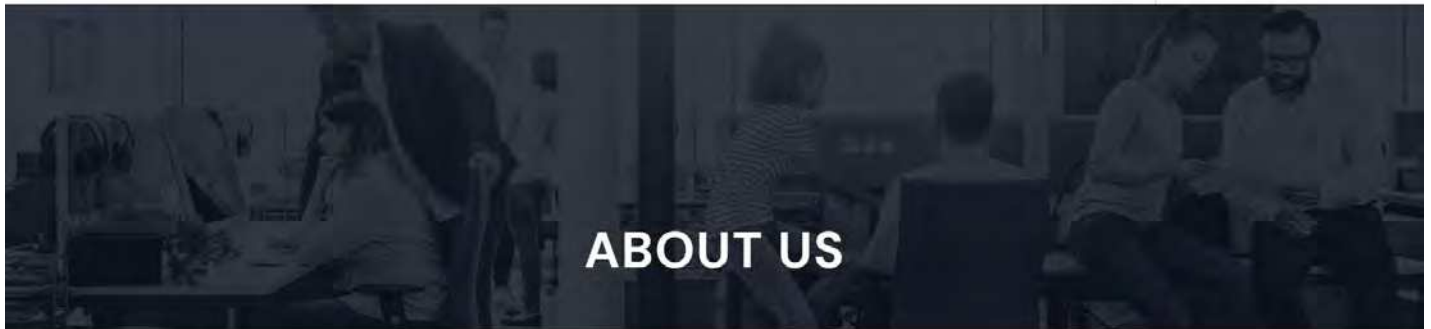
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We help New Brunswick innovators take their ideas further.

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We promise

- to act as leaders, carefully guiding New Brunswick innovators through the complex world of growth and commercialization; and
- to inspire our New Brunswick innovators to be brave in their pursuit of global relevance.

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We're optimistic realists – grounded in reality and returns on investment, but with an unwavering belief in New Brunswick potential. We're passionate cheerleaders of our little province that can, and we believe greatness can come from anywhere – especially here. We make it happen by delivering the resources and expertise needed to achieve new opportunities, growth, and advancements in New Brunswick.

\$100M+ Invested	113+ Companies Created
494+ Applied Research Projects	75+ Professors Recruited



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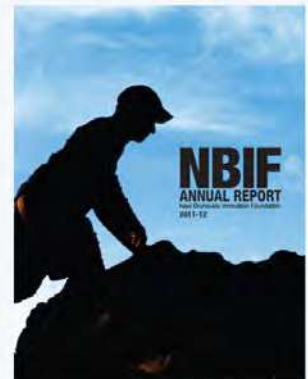
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2014



2013



2012

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Twitter interface showing a profile for Sudip Majhi (@sudipmus) and several tweets. The profile includes a bio, location (Kolkata), and follower count (2,799). The tweets are:

- Tweet 1:** "Skype Privacy Settings, Groups and Video Calls" - A screenshot of Skype settings with the 'Audio & Video' section highlighted. The 'Only allow Skype calls from contacts to ring on this device' toggle is turned on.
- Tweet 2:** "Do you know that you can empty Recycle Bin in 6 different ways?" - A link to an article on the Windows Club website.
- Tweet 3:** "How to add Google Drive to File Explorer Navigation Pane in Windows 10" - A comparison of File Explorer navigation panes labeled 'Before' and 'After'. The 'After' pane shows 'Google Drive' added to the 'Devices and drives' section.
- Tweet 4:** "How to pin Text and Image to Clipboard History in Windows 10" - A screenshot of the Windows 10 clipboard history window with the 'Pin' button highlighted.



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Description

Founded in 2011, Toronto-based Fixel Photos is the maker of Cinemagraph Pro - the world's most popular software platform for creating and sharing mesmerizing living photos. The company has raised over \$6M in investments from Angel Investors including supermodel Tyra Banks and won the prestigious Apple Design Award in 2014.

Stats

Joined Mar 19, 2012

4,116,852 views

Details

For business inquiries: [VIEW EMAIL ADDRESS](#)

Location: Canada

About

TheWindowsClub is conceptualized and created by **Anand Khanse**, a Microsoft MVP Awardee (2006-2016), a Windows Insider MVP and an end-user Windows enthusiast. If you wish to contact me, you can do so at thewindowsclub@hotmail.com – or you may [click here](#).

The site is primarily targeted at the Windows 10, Windows 8, Windows 7 & Windows Vista user and will address and cover issues in relation to Microsoft and Windows operating system. All the information & tips offered on this website is provided on 'as-is' basis, without any warranties. The author or the site-owner **Khanse Webmedia Pvt Ltd**, will not be liable for any special, incidental, consequential or indirect damages due to loss of data or any other reason. The views expressed by the **TheWindowsClub Team** are their own and may not necessarily reflect the views of TheWindowsClub.

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While we do not accept paid reviews on TheWindowsClub.com, our reviews section [Reviews.TheWindowsClub.com](#) carries Sponsored paid posts. The news section [News.TheWindowsClub.com](#) covers news about the Microsoft ecosystem. You may also want to check out our forum at [Forum.TheWindowsClub.com](#). We primarily discuss everything Windows, and we'd love to have you register and participate in it.

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Joined Nov 11, 2016

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The image shows a screenshot of a YouTube channel page for 'Video Ampuh'. At the top, there is a navigation bar with the YouTube logo, a search bar containing 'video ampuh', and icons for camera, grid, notifications, and a profile icon 'K'. Below the navigation bar is a banner image featuring a woman and various animation-related terms like 'creative SCRIPT', 'voice over', 'Creative scene Transitions', and 'Come Alive Images'. The channel name 'Video Ampuh' is displayed with a profile picture and '319 subscribers'. A red 'SUBSCRIBE' button is visible. The 'ABOUT' tab is selected, showing a description, stats, details, and links.

Navigation: HOME, VIDEOS, PLAYLISTS, CHANNELS, DISCUSSION, **ABOUT**

Description

Halo perkenalkan, nama saya Arnold. Video Ampuh adalah nama brand saya. Video Ampuh merupakan Jasa Video khususnya Animasi 2D, yang telah berjalan selama 5 tahun dan sampai saat ini telah melayani lebih dari 40 negara untuk berbagai kebutuhan animasi.

Pahit manis dalam proses perjalanan bisnis animasi yang saya lalui menciptakan banyak pengalaman berharga yang tidak pernah bisa dilupakan. Oleh karena itu, melalui channel Video Ampuh ini saya bukan hanya ingin show off tentang karya - karya yang pernah saya buat. Melainkan saya ingin berbagi banyak hal berharga tentang perjalanan saya dalam merintis bisnis video animasi ini. Mulai dari cara pembuatan script yang kreatif, desain ilustrasi untuk kebutuhan animasi, pembuatan storyboard, animasi yang menakjubkan sampai dengan sisi bisnisnya.

Semoga apa yang saya bagikan dalam channel ini dapat bermanfaat bagi teman - teman semua.

Stats

Joined Nov 12, 2013

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Location: Indonesia

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WHO WE ARE

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DANIEL BADER 6 Mar 2020



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The Android Central Team

Michael Alison, Freelance Writer





Source: Android Central

Michael Allison is another of Android Central's tall and handsome stable of freelance writers. He's generally interested in any and all consumer tech, with his current obsessions being Google's Pixel line and Chromebooks. When not writing on Android Central, he can often be found reading fiction, writing for fun, or working out.

- Read: [Michael's articles](#)
- Twitter: [@mkeallison](#)

Daniel Bader, Managing Editor



Source: Android Central

Daniel Bader is Android Central's Managing Editor and resident Canadian. Hailing from Toronto, he began his career at MobileSyrup before moving to Android Central in 2016. His job involves trying to balance all of Android Central's various facets, from editorial to commerce to social, and trying to keep sane doing it. Luckily he has an amazing staff of writers, editors, and videographers. When he's not working (which is rare), he's spending time with his Great Dane, Zadie, or trying to keep his toddler out of trouble.

- Read: [Daniel's articles](#)
- Twitter: [@journeydan](#)
- Instagram: [@journeydan](#)
- Email: daniel.bader@futurenet.com

Alex Dobie, Executive Editor, U.K.





Source: Android Central

Alex is the global Executive Editor for Android Central and is usually found in the U.K. when not globetrotting and Instagramming. He has been blogging since before it was called that, and spends most of his time leading video for Android Central on YouTube and beyond, which involves pointing a camera at shiny things and speaking words at a microphone.

- Read: [Alex's articles](#)
- Twitter: [@alexdobie](#)
- YouTube: [Android Central](#)
- Email: alex.dobie@futurenet.com

Jerry Hildenbrand, Senior Editor/Editor of Dope Shit



Source: Android Central

Jerry Hildenbrand is a Linux Professional, aging hippie, and recovering engineer who would *always* rather be fishing. While not fishing, he's the editor in charge of touching things until they break, trying to figure stuff out, and the consummate Android expert. Jerry thinks the black jelly beans are the best and wears sneakers he bought in 1996. Born and raised in South Florida, Jerry now resides in a bunker somewhere in the mountains of West Virginia.

- Read: [Jerry's articles](#)
- Twitter: [@gbhil](#)
- Email: jerry.hildenbrand@futurenet.com

Hayato Huseman, Staff Writer/Videographer





Source: Android Central

Hayato is Android Central's Indianapolis-based videographer who's been an Android lover ever since he first rooted his HTC Inspire back in 2011. He's an avid lover of coffee, prog metal, and cameras — and as a frequent traveler, he can usually be found enjoying all three anywhere but home.

- Read: [Hayato's articles](#)
- Twitter: [@hayatohuseman](#)
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Jeremy Johnson, Staff Writer/Help & How-To Editor



Source: Android Central

Jeremy Johnson came to the tech field later than most, but he has been obsessed with gadgets for years. He was born and raised in central Texas, went to graduate school in Washington D.C., and now lives in Austin with his wife, two kids, and two cats. He's addicted to travel and the outdoors and loves hiking wherever he goes. For almost 20 years, he worked in study abroad and visited exotic places like Bhutan, Croatia, Iceland, and Qatar.

- Read: [Jeremy's articles](#)
- Twitter: [@jeramyutgw](#)

Harish Jonnalagadda, Asia Editor





Source: Android Central

Harish Jonnalagadda tries to make sense of the befuddling maze that is the Asian smartphone industry. Before switching to phones, he used to write about PC hardware, covering motherboards and video cards. When he's not playing with the latest phones, he's either reading on his Kindle or trying to clear his backlog of games on Steam. He can also be found shouting at the TV over the weekends at Arsenal and McLaren's continued woes.

- Read: [Harish's articles](#)
- Twitter: [@chunkynerd](#)
- Instagram: [@harishlj](#)

Jennifer Locke, Staff Writer (Gaming)



Source: Android Central

Jennifer Locke helps our PlayStation coverage at Android Central but plays a fair bit of Xbox and Nintendo Switch as well. Her first console was an NES, and after that, she was instantly hooked on all things gaming. When a controller isn't in her hands, she's reading books or taking her dog out for a long walk (or sharing memes with her friends, let's be real). She's always down to talk Star Wars, sci-fi, Pokémon, superheroes, or other pop culture stuff on Twitter.

- Read: [Jen's articles](#)
- Twitter: [@JenLocke95](#)

Joe Maring, Senior Editor



Source: Android Central

Joe Maring wears a lot of different hats at AC. Whether it's covering breaking news, reviewing headphones, or cranking out spicy editorials, he's done it all. Joe lives in

8/9/2020

Kalamazoo, MI with his wife Kennedy, cats Minnie and Polo, and handsome pitbull/boxer mix Damon. He's addicted to Starbucks, could rant about Star Wars for hours, and will gladly talk your ear off about credit card points and miles.

- Read: [Joe's articles](#)
- Twitter: [@joemaring1](#)

Andrew Martonik, Executive Editor, U.S.A.



Source: Android Central

Andrew Martonik helms American coverage for Android Central and has been with the site since 2012. He's been tinkering with computers, PDAs (remember those?), gadgets and phones his whole life. Andrew was born and raised in Seattle, but has made the cross-country move and now lives in New York City. When he's not writing about tech, you'll probably be able to find him playing soccer, running, or offering opinions on beer and whiskey.

- Read: [Andrew's articles](#)
- Twitter: [@andrewmartonik](#)
- Email: andrew.martonik@futurenet.com

Andrew Myrick, Freelance Writer



Source: Android Central

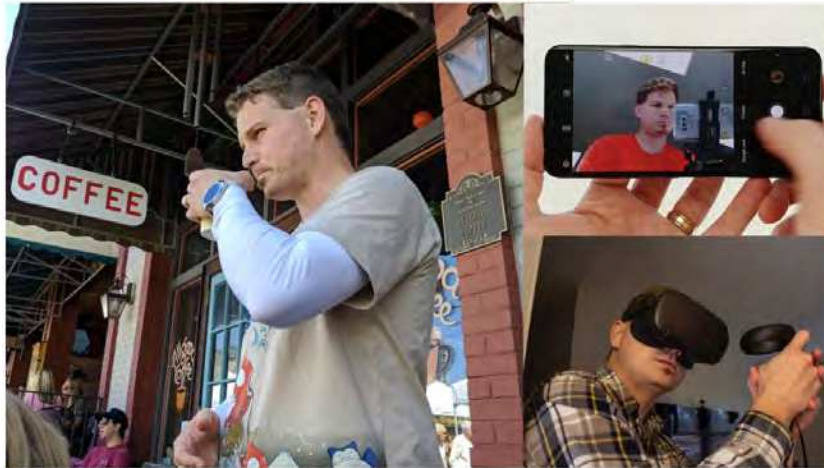
Andrew is a Freelance Contributor with Android Central and is ready and willing to talk about all things Ravens, Caps, Orioles, UFC, and whatever new tech is being released at the time. Andrew drinks way too much coffee, but it's what keeps the motor going on a daily basis. You can find him lurking on Twitter from time to time, but usually, he's just rewatching Star Wars for the umpteenth time even if it's just on in the background.

- Read: [Andrew's articles](#)

8/9/2020

- Twitter: [@andymyrick](#)
- Instagram: [@gingerbeard42](#)

Nick Sutrich, Freelance Writer



Source: Android Central

Nick has been professionally writing about tech since 2011 and has run through the gamut of tech and gaming. If he's not slicing blocks in Beat Saber, he's probably tinkering with some smart home gadget or going on a hike in the mountains of Western North Carolina.

- Read: [Nick's articles](#)
- Twitter: [@gwanatu](#)

Ara Wagoner, Staff Writer (Chromebooks, Cases, Accessories)



Source: Android Central

Born and raised in Austin, Texas, Ara Wagoner dove into Android in 2011 and has been theming launchers and poking entertainment apps with a stick. When she's not writing about cases and Chromebooks, Ara tests her tech at Walt Disney World and bakes bread and pumpkin seeds depending on the season. If you see her without headphones, RUN.

- Read: [Ara's articles](#)
- Twitter: [@AraWagco](#)

Chris Wedel, Freelance Writer



<https://www.androidcentral.com/about>



Source: Android Central

Chris Wedel is a fan of all things tech and gadgets. Living in rural Kansas with his wife and two young boys makes finding ways to get and stay online tricky. By utilizing his years of experience with the tech and mobile communications industries — success is assured. When not conquering connectivity challenges and testing new gadgets, Chris enjoys cruising a gravel road in his UTV with some good tunes.

- Read: [Chris's articles](#)
- Twitter: [@chris_wedel](#)

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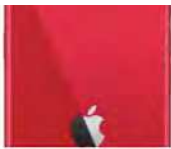
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NDTV

New Delhi Television is, and has been for more than a quarter century, a pioneer in India's news television and digital journalism. Founded in 1988 by Radhika Roy and Prannoy Roy, NDTV is today the most watched, credible and respected news network in India and a leader in Internet. From the path-breaking "The World This Week" (nominated as one of India's 5 best television programmes since Independence), the first private news on Doordarshan "The News Tonight", producing India's first 24-hour news channel "Star News" and the country's first ever 2-in-1 channel Profit-Prime, NDTV has been at the forefront of every single news revolution. NDTV is now primarily an internet company with the flagship website - ndtv.com - India's number 1 destination for general news.

NDTV is most proud of how its work impacts the real world and how it is using its powerful reach to campaign for and with the people of India. Over 30 years of dedicated and innovative programming has brought into focus a number of social issues ranging from the 7 Wonders of India; Save Our Tigers; the Greenathon and Jeene ki Asha to Marks for Sports; Support My School; the University Sports Championships and the most recent Health4U campaigns on Heart Care, Diabetes, Cancer and Organ Donation, Banega Swachch India, the Road to Safety and What's your Choice? campaigns. Seen as an honest, unbiased and fearless crusader, NDTV's sustained and award winning campaigns against injustice and human rights violations have forced apathetic governments to act, legislation to be changed and made the nation aware of the power of the people.

Its channels NDTV 24x7 (English), NDTV India (Hindi) and India's first ever 2-in-1 channel NDTV Profit-NDTV Prime (Business and Infotainment) continue to raise the standards of journalism with innovative programming and uncompromising integrity.

Incisive and creative, the channels target the global Indian with news that is credible, true and fast. NDTV 24x7 is the only English News Channel from India which is beamed in the UK, USA, Canada, South Africa, Middle East, Australia, New Zealand, Mauritius and most of the SAARC Countries to reach out to the Indian Diaspora.

Over the years, NDTV has expanded its brand portfolio to seize opportunities in the 'beyond news space' and has step-down subsidiaries: NDTV Convergence (triple play, to exploit the synergies between television, Internet and mobile and owns the website ndtv.com) and NDTV Worldwide offering high end consultancy for setting up of local television news channels in emerging markets across the world.

In 2007, the company launched NDTV Good Times (now Goodtimes), an up-market lifestyle channel for the global urban Indian; and used its expertise to launch a global channel, Astro Awani, in Malaysia.

NDTV has further consolidated its transition to a digital media company from a pure television play by moving into the e-commerce space. The Group's Red Pixels Ventures Ltd unveiled the first look of its e-commerce portal - Gadgets 360°. Gadgets 360° will curate a marketplace for exclusive launches of mobile phones and other electronic gadgets.

Fifth Gear Auto is a new auto portal leveraging on the massive following of NDTV's car and bike programming. The current auto site Car and Bike has proven the credibility of the brand in this space, having become one of the fastest growing auto portals since its launch.

NDTV's new venture Mojarto.com, India's largest art marketplace of authentic artworks curated from best artists offers affordable and unique Indian Art & Collectibles with original paintings, digital prints, jewellery, object d'art and other decor items.

NDTV has offices and studios across the country which house India's most modern and sophisticated production, newsgathering and archiving facilities with award winning production and creative teams.

NDTV has been rated India's Most Trusted TV Media Brand in the TRA Trust Brand Report, India Study 2016. In 2014 and 2015 NDTV was rated the Most Trusted Band across all forms of media in India, including newspapers, radio, web sites and of course television. It was the first time in media history that a media company has been both: Number 1 - India's most trusted brand across all newspaper and channels, (All India Brand Trust Report 2014 and 2015). Several large and credible nationwide surveys have showed that NDTV 24x7 has by far the highest viewership amongst all English News channels and is Number 1 in viewership amongst all English news channels (independent Nationwide survey of 90,000 + households by Hansa Research). In addition, NDTV's website ndtv.com created a record in 2014 by recording 13 billion hits on one day, the day of the Lok Sabha (Parliament) Election results.

NDTV, the UK's longest running Indian news channel has long been the top choice for any Indian election coverage. NDTV 24x7 witnessed record audience figures since it joined the UK's audience measuring



Anchoring Success

NDTV was the brainchild of its Executive Co-Chairpersons, Radhika and Prannoy Roy. Prannoy Roy brought a country to the edge of its seat with his innate knack of translating the complicated facts of election politics and...



From the Reel to the Real

Commercial and critical success aside, what the corporation is most proud of is how its work works in the real world. Using its powerful reach to campaign for and with the people of India.

body, BARB. Data has shown the channel is the most watched Indian news broadcaster in the UK. The Broadcasters' Audience Research Board (BARB) is the official source of television viewing figures in the UK and as per BARB official data NDTV 24x7 is consistently no.1/most viewed Indian news channel in the UK.



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MOBILE PHONE ADVISOR LIMITED

Company Type

Private limited with Share Capital

Company Status

Active - Accounts Filed

Incorporated On

22 August 2017

Nature of business (SIC)

61900 Other telecommunications activities -

Accounts

Available to 31 Aug 2018. Next accounts due by 31 May 2020

Directors & Secretaries

For a full in-depth analysis on each of these directors, click any of the links below

Name	Role	Date Of Birth	Appointed ▲	Resigned
MR SANJIT BISWAS	Company Secretary	-	22 Aug 2017	-
MR SANJIT BISWAS	Director	Oct 1957	22 Aug 2017	-

Mortgages and ChargesNo mortgages or charges have been registered against this company. [Get free alerts](#)

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Accounts	2018	2019
Cash	£93.00	£2,270.00
Net Worth	£693.00	£1,670.00
Total Current Assets	£93.00	£2,270.00
Total Current Liabilities	£1,800.00	£3,542.00

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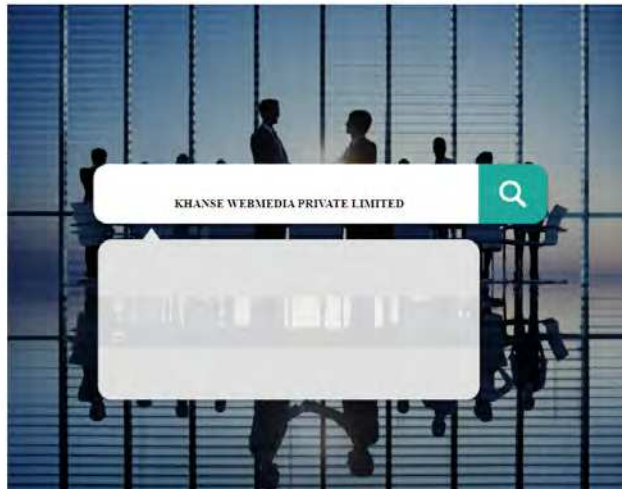
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KHANSE WEBMEDIA PRIVATE LIMITED

SHORT DESCRIPTION OF KHANSE WEBMEDIA PRIVATE LIMITED




Last Update on 2019-08-08



The Khanse Webmedia Private Limited Company is Private Company which CIN (Corporate Index Number) is U74900PN1996PTC097915 and it is registered in Maharashtra State with 100000 INR Authorized Capital and 100000 rupees Paid up Capital. Khanse Webmedia Private Limited was incorporated on 07/03/1996 in Company limited by Shares category and sub categorized as Non-govt company and current status of this company is Active.

Latest financial statement year of Khanse Webmedia Private Limited is 31-03-2017 and Last Annual Return is 31-03-2017. The main business type of Khanse Webmedia Private Limited is Business Services that appears in 74900 Industrial class. Registered office address of this company is Regent Chamberskarve Rd Pune Mh in 411004 that is registered under RoC-Pune and the contact email address is anankhanse@hotmail.com. If you are looking for Company Registration in Maharashtra, then you can contact us. There are various types of business entities that you can register in Maharashtra state.


Company Details	
Company Name	Khanse Webmedia Private Limited
Date Of Registration	07/03/1996
Registered State	Maharashtra
CIN Number	U74900PN1996PTC097915
Activity	Business Services
Class	Private
Category	Company limited by Shares
Sub Category	Non-govt company
ROC	RoC-Pune
Company Status	Active
Financial Report	
Paid-up Capital	100000
Authorized Capital	100000
Latest Annual Return	31-03-2017
Latest Financial Statement	31-03-2017
Contact Details	
Registered Office Address	Regent Chamberskarve Rd Pune Mh in 411004
Email	anankhanse@hotmail.com

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