

January 2016

DeForest McDuff, Ph.D.*Vice President*

DeForest McDuff, Ph.D. is a Vice President of Intensity Corporation and an expert in applied business economics, with more than ten years of experience in consulting, finance, and economic research. Dr. McDuff provides expert witness testimony and consulting in a variety of areas, including lost profits, reasonable royalties, unjust enrichment, commercial success, finance, statistics, valuation, and business optimization. He has performed economic analysis on more than 150 professional engagements.

Dr. McDuff provides expert witness analysis and economic consulting in a wide range of high-stakes litigations, with particular expertise and experience in intellectual property, competition, antitrust, finance, labor, employment, and class action. He has provided expert analysis and testimony on a number of engagements, including numerous cases with more than \$100 million at issue and several exceeding \$1 billion at issue.

Dr. McDuff also provides economic analysis to businesses and organizations seeking to improve and optimize pricing, revenues, and business strategies. He and his colleagues at Intensity have developed data-driven algorithms to forecast demand and derive improved pricing to increase profits. He has worked on a number of engagements involving price testing, economic forecasting, and revenue optimization algorithms. He has provided economic consulting services in strategic negotiations and licensing.

Dr. McDuff has expertise and experience in a wide range of industries. His work spans the life sciences (including pharmaceuticals, biotechnology, diagnostics, and medical devices), electronics (including consumer electronics, semiconductors, computers, and telecommunications), finance, real estate, and a diverse range of other industries (interesting examples include scuba diving equipment, golf clubs, and e-commerce).

Dr. McDuff earned his Ph.D. in economics from Princeton University. At Princeton, Dr. McDuff received a National Science Foundation Graduate Research Fellowship (awarded to 25 graduate students in economics nationwide each year) for his academic research studying economic and statistical properties of housing markets and financial derivatives. He has published research in several peer-reviewed academic journals. Dr. McDuff graduated *summa cum laude* with undergraduate degrees in economics and mathematics from the University of Maryland.

Dr. McDuff has been a consultant at Intensity since 2009 and currently leads Intensity's East Coast operations in Boston.

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Education

Ph.D., Economics, Princeton University

M.A., Economics, Princeton University

B.A., Economics, University of Maryland, College Park, *summa cum laude*

B.S., Mathematics, University of Maryland, College Park, *summa cum laude*

Professional Experience

Intensity Corporation (www.intensity.com) (formerly Quant Economics). Boston MA: Vice President, 2015 to present. San Diego CA: Vice President, 2013 to 2015. Senior Economist, 2012 to 2013. Economist, 2009 to 2012.

Academic Integrity Seminar (www.integrityseminar.org). Boston MA. Co-Founder and Managing Partner, 2006 to present.

JPMorgan Chase & Co. New York NY. Trading Analyst, 2006 to 2007.

Princeton University. Princeton NJ. Economic Research Assistant, 2004 to 2006.

Academic Referee. Review of Economics and Statistics; Journal of Urban Economics; Economics of Education Review; Journal of Housing Economics; Journal of Real Estate Economics and Finance.

Economic Expertise

Dr. McDuff frequently provides economic consulting services and expert analysis in a number of areas, including:

- **Intellectual Property.** Dr. McDuff has wide-ranging experience in the economics of technology and intellectual property in the life sciences, electronics, and a variety of other industries. He has extensive experience evaluating economic issues such as lost profits, reasonable royalties, unjust enrichment, irreparable harm, economic prejudice, and commercial success. In one example, he evaluated lost profits, reasonable royalties, and commercial success relating to an at-risk generic drug launch. In another example, Dr. McDuff evaluated reasonable royalties for semiconductor packaging technology, including analysis of license agreements, licensing practices, geographic patent coverage, and economic bargaining in a hypothetical negotiation.
- **Financial Analysis.** Dr. McDuff provides financial analysis in a variety of contexts, including financial modeling, economic forecasting, and strategic business analysis. In one example, he constructed discounted cash flow models of a growing business segment that had been harmed by alleged unfair competition by a competitor. In another example, Dr. McDuff constructed an economic forecasting model in order to project future revenues for the purpose of a potential private equity acquisition.

- **Labor & Employment.** Dr. McDuff has significant experience in the economics of labor and employment. In one example, he provided expert witness testimony relating to employee labor income and consumer expenditures in the context of a debtor and trustee in bankruptcy court. In another example, Dr. McDuff evaluated the economic impact of an employee solicitation between two large insurance companies, using an econometric model that accurately separated the effects of the alleged conduct from unrelated factors, including the financial crisis in 2008.
- **Competition.** Dr. McDuff performs economic analysis of competition and anti-competitive behavior. In one example, he examined allegations of market power and antitrust price injury in the flash memory industry, including defining the relevant market and determining competitive effects of certain alleged conduct. In another example, Dr. McDuff provided expert witness analysis of alleged unfair competition and false advertising in the healthcare industry, including analysis of lost profits and unjust enrichment.
- **Valuation.** Dr. McDuff provides expert economic valuation analysis in a wide range of contexts and industries. In one example, he provided expert witness analysis and testimony relating to a patent portfolio in the telecommunications industry, including evaluation of valuation methodologies. In another example, Dr. McDuff provided valuation analysis for strategic negotiations for a company attempting to license its technology in the computer hardware industry, including evaluation of royalty structures and rates.
- **Business Optimization.** Dr. McDuff designs and implements a variety of data-driven methodologies to optimize prices, revenues, and business strategies. In one example, he evaluated and designed price optimization algorithms for a high-volume e-commerce client with thousands of visitors across hundreds of products daily. In another example, Dr. McDuff analyzed and proposed marketing and pricing strategies for an online retailer seeking to enhance revenue and profitability heading into the holiday season.

Publications and Papers

McDuff, DeForest, Ryan Sullivan, and Justin Skinner: “Downgrade to ‘Neutral’: A Diminishing Role of the Georgia-Pacific Factors in Reasonable Royalty Analyses,” (2015) *les Nouvelles* 50(3), 134-137.

McDuff, DeForest and Ryan Sullivan: “AstraZeneca and Damages In ‘At-Risk’ Generic Drug Launches,” April 28, 2015, Law360, <http://www.law360.com/ip/articles/642615/astrazeneca-and-damages-in-at-risk-generic-drug-launches>.

McDuff, DeForest and Justin Skinner: “Reasonable Royalties: All About that Base ... Or That Rate,” December 18, 2014, Law360, <http://www.law360.com/articles/603598/reasonable-royalties-all-about-that-base-or-that-rate>.

McDuff, DeForest, Susan McDuff, Jennifer Farace, Carolyn Kelley, Maria Sovaia, and Jess Mandel: “Evaluating a Grading Change at UCSD School of Medicine: Pass/Fail Grading is Associated with Decreased Performance on Preclinical Exams but Unchanged Performance on USMLE Step 1 Scores” (2014) *BioMed Central Medical Education* 14:127.

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McDuff, DeForest and Justin Skinner: "Apple v. Motorola May Help Defenders of Daubert Challenges" with Justin Skinner, May 21, 2014, Law360, <http://www.law360.com/articles/539384/apple-v-motorola-may-help-defenders-of-daubert-challenges>.

McDuff, DeForest: "Home Price Risk, Local Market Shocks, and Index Hedging," (2012) *The Journal of Real Estate Finance and Economics* 45(1), 212–237.

McDuff, DeForest: "Demand Substitution Across U.S. Cities: Observable Similarity and Home Price Correlation," (2011) *Journal of Urban Economics* 70(1), 1–14.

McDuff, DeForest: "Quality, Tuition, and Applications to In-State Public Colleges," (2007) *Economics of Education Review* 26(4), 433–449.

McDuff, DeForest: "Analyzing Income and Happiness: The Effects of Placing Too Much Emphasis on Income in a Job" (2005), Princeton manuscript.

Speaking Engagements

"Damages Whirlwind: Navigating Reasonable Royalties in 2015," Presenter, Boston Patent Law Association, 2015.

"Asset Valuation and Patent Monetization: A Review of Valuation Methods and Transaction Structures," Presenter, Law Seminars International, 2015.

"Jury Trials for At-Risk Generic Launches," Presenter, Continuing Legal Education, 2015.

"Careers for PhDs in Start-ups," Panelist, University of California at San Diego, 2014.

"How to Prove Reasonable Royalty in Patent Damages," Panelist, The Knowledge Congress, 2013.

"Careers in Economics and Finance," Presenter, University of California at San Diego, 2010.

"Home Price Risk, Local Market Shocks, and Index Hedging," Presenter, National Bureau of Economic Research, 2008.

Awards

National Science Foundation Graduate Research Fellowship. Awarded to top 25 economics graduate students nationwide each year, Princeton University.

Princeton University Graduate Research Fellowship. Full tuition fellowship and stipend for graduate research, Princeton University.

Towbes Teaching Prize for Outstanding Teaching. Awarded to top 4 teaching assistants in the economics department each semester, Princeton University.

Dillard Prize. Awarded to top undergraduate in economics, University of Maryland.

Expert Testimony and Consulting

Dr. McDuff has been retained as the testifying expert on the following cases:

1. *Sanofi and Sanofi-Aventis U.S., LLC v. Glenmark Generics Inc., USA, Glenmark Pharmaceuticals Limited, Watson Laboratories Inc., Alkem Laboratories Ltd., First Time US Generics LLC, Sun Pharma Global FZE, Sun Pharmaceutical Industries, Ltd., Alembic Pharmaceuticals Limited, and Sandoz Inc.* United States District Court, District of Delaware, Case No. 1:14-cv-00264. Expert report. Evaluation of commercial success related to Multaq (dronedarone) for the treatment of atrial fibrillation.
2. *NCR Corporation v. Documotion Research, Inc.* United States District Court, District of Delaware, Case No. 1:14-cv-00395. Expert report. Patent infringement damages including evaluation of lost profits and reasonable royalty for food and beverage labeling products.
3. *United Therapeutics Corporation v. Teva Pharmaceuticals USA Inc.* United States District Court, District of New Jersey, Case No. 3:14-cv-05498. Retained as expert. Evaluation of commercial success related to Remodulin (trepostinil sodium) for the treatment of pulmonary arterial hypertension.
4. *In the Inter Partes Review of U.S. Patent No. 8,822,438.* United States Patent and Trademark Office, Patent Trial and Appeal Board, IPR2016-00286. Expert declaration. Evaluation of commercial success related to Zytiga (abiraterone) and the treatment of prostate cancer.
5. *CH₂O, Inc. v. Meras Engineering, Inc., Houweling's Nurseries Oxnard, Inc., HNL Holdings, Ltd., Houweling Utah Operations, Inc., and Houweling's Nurseries, Ltd.* United States District Court, Central District of California, Case No. 2:13-cv-08418. Expert report. Evaluation of lost profits and reasonable royalty for patent infringement related to agricultural technology.
6. *TrendSettah USA Inc. and Trend Settah, Inc. v. Swisher International, Inc.* United States District Court, Central District of California, Case No. 8:14-cv-01664. Expert report, declaration and deposition. Antitrust liability and damages, including evaluation of market definition, market power, monopolization, and damages related to tobacco products.
7. *Lights Out Holdings, LLC and Shawne Merriman v. Nike, Inc.* United States District Court, Southern District of California, Case No. 3:14-cv-00872. Expert report and deposition. Evaluation of trademark infringement and false endorsement related to athletic apparel.
8. *Enzo Life Sciences, Inc. v. Abbott Laboratories and Abbott Molecular, Inc.* United States District Court, District of Delaware, Case No. 1:12-cv-00274. Two expert reports. Evaluation of economic prejudice and reasonable royalties related to molecular diagnostics.
9. *AbbVie, Inc. and AbbVie Deutschland GmbH & Co. KG v. Mylan Pharmaceuticals, Inc., and Mylan Laboratories Ltd.* United States District Court, District of Delaware, Case No. 1:13-cv-01072. Retained as expert. Evaluation of commercial success related to Kaletra (lopinavir/ritonavir) and Norvir (ritonavir) for the treatment of HIV / AIDS.
10. *Merck Sharp & Dohme B.V. v. Warner Chilcott Company, LLC and Warner Chilcott (US), LLC.* United States District Court, District of Delaware, Case No. 1:13-cv-02088. Expert

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