Finance vs. Wal-Mart: Why are Financial Services so Expensive?

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Abstract.
Despite its fast computers and credit derivatives, the current financial system does not seem better at transferring funds from savers to borrowers than the financial system of 1910.

"I would rather see Finance less proud and Industry more content."
Winston Churchill, 1925

The role of the finance industry is to produce, trade and settle financial contracts that can be used to pool funds, share risks, transfer resources, produce information and provide incentives.

Financial intermediaries are compensated for providing these services. Total compensation of financial intermediaries (profits, wages, salary and bonuses) as a fraction of GDP is at an all-time high, around 9% of GDP.

What does society get in return? Or, in other words, what does the finance industry produce? I measure the output of the finance industry by looking at all issuances of bonds, loans, stocks (IPOs, SEOs), as well as liquidity services to firms and households. Measured output of the financial sector is indeed higher than it has been in much of the past. But, unlike the income earned by the sector, it is not unprecedentedly high.

Historically, the unit cost of intermediation has been somewhere between 1.3% and 2.3% of assets. However, this unit cost has been trending upward since 1970 and is now significantly higher than in the past. In other words, the finance industry of 1900 was just as able as the finance industry of 2010 to produce loans, bonds and stocks, and it was certainly doing it more cheaply. This is counter-intuitive, to say the least. How is it possible for today's finance industry not to be significantly more efficient than the finance industry of John Pierpont Morgan?

What happened? Why did we get the bloated finance industry of today instead of the lean and efficient Wal-Mart? Finance has obviously benefited from the IT revolution and this has certainly lowered the cost of retail finance. Yet, even accounting for all the financial assets created in the US, the cost of intermediation appears to have

increased. So why is the non-financial sector transferring so much income to the financial sector?

One simple answer is that technological improvements in finance have mostly been used to increase secondary market activities, i.e., trading. Trading activities are many times larger than at any time in previous history. Trading costs have decreased, but I find no evidence that increased liquidity has led to better (i.e., more informative) prices or to more insurance.

Measuring the Cost of Financial Intermediation

The sum of all profits and wages paid to financial intermediaries represents the cost of financial intermediation.

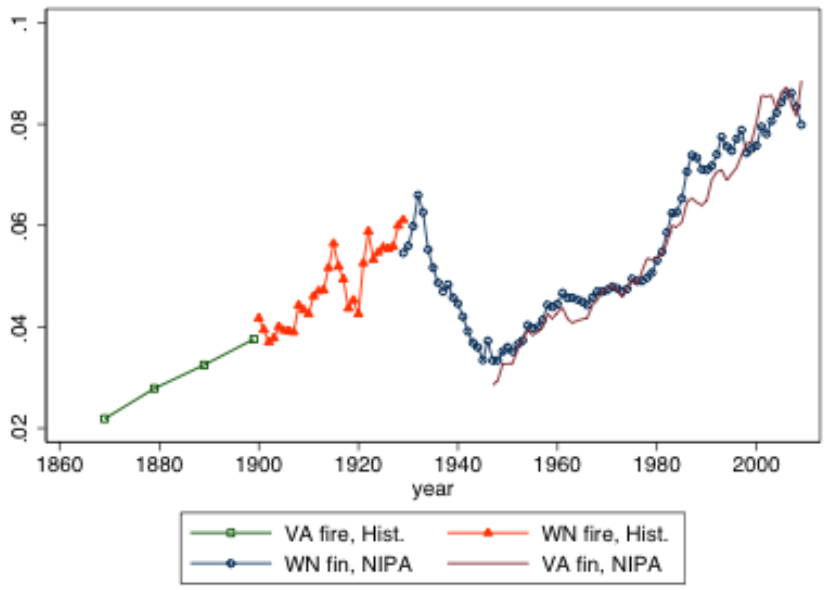
There are various ways to define the size of the financial sector. Conceptually, the measure is:

$$\text{Cost} = \text{Income of Finance Industry} / \text{Total Income}$$

The three most important issues are:

1. Definition of "Finance." For the most part, financial activities are classified consistently over time (but sub-sectors within finance are not). The main issue is with real estate. The value added of the "real estate" industry includes rents and imputed rents for homeowners. Whenever possible, I exclude real estate. In my notations, all variables indexed with "fin" include finance and insurance and exclude real estate.
2. Definition of "Income." The best conceptual measure is Value Added. In this case, "Cost" is GDP of the finance industry over the GDP of the US economy. However, this is only acceptable if we can exclude real estate, or at least imputed rents. When this is not possible, a good alternative is to use the compensation of employees. In this case, "Cost" is the compensation of employees in finance over the total compensation of employees in the US. For the post-war period, the two measures display the same trends, even though annual changes can differ. This simply means that, in the long run, the labor share of the finance industry is the same as the labor share of the rest of the economy. In the short run, of course, profit rates can vary.
3. Definition of "Total Income." During peacetime and without structural change, it would make sense to simply use GDP. WWI and WWII take resources away from the normal production of goods and services. Financial intermediation should be compared to the non-war related GDP. To do so, I construct a measure of GDP excluding defense spending. This adjustment makes the series more stationary.

Figure 1: GDP Share of Finance Industry



I measure this cost from 1870 to 2010, as a share of GDP, and find large historical variations, shown in Figure 1 (with the various data sources, see Philippon 2011 for details).
The first important point to notice is that the measures are qualitatively and quantitatively consistent. It is thus possible to create one "extended" series simply by appending the older data to the newer ones.

The cost of intermediation grows from 2% to 6% from 1870 to 1930. It shrinks to less than 4% in 1950, grows slowly to 5% in 1980, and then increases rapidly to almost 9% in 2010.

This pattern is not driven by globalization or by structural changes in the economy. The pattern remains the same if finance is measured as a share of services, and if net financial exports are excluded (see Philippon, 2011).

The second key point is that finance was smaller in 1980 than in 1925. Given the outstanding real growth over this period, it means that finance size is not simply driven by economic development.

Measuring the Output of Financial Intermediation.

Next comes the issue of measuring the output of the financial sector. Following Merton (1995) and Levine (2005), one can propose the following four categories of financial services or functions:

- Provide means of payment (ease the exchange of goods and services)
- Produce information about investment opportunities

- Monitor investments and exert corporate governance
- Provide markets for insurance (diversification, risk management, liquidity)

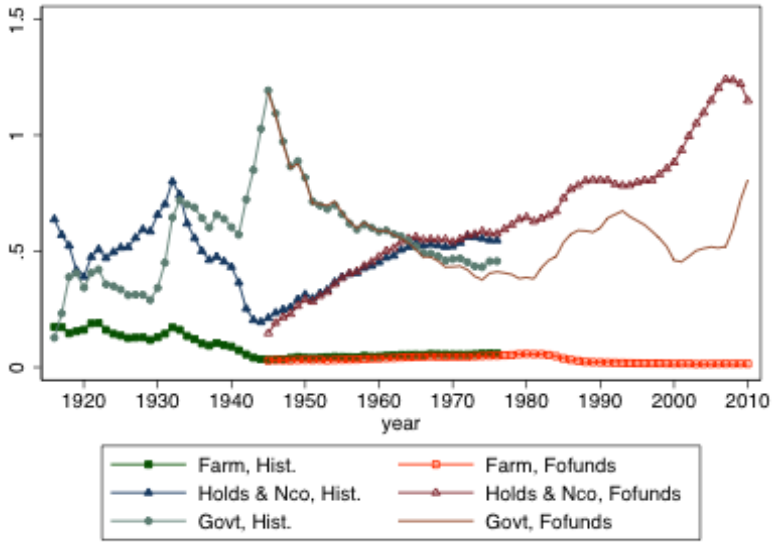
These services are the output of the finance industry and its source of economic value. To the extent that this higher total cost is met with proportionally more output, the greater compensation of the sector should not be surprising.

These services are provided to both households and firms, and facilitate the creation of financial assets. The most important contracts involve the credit markets. I measure the production of credit separately for households, farms, non-financial corporate firms, financial firms, and the government.

I show in Philippon (2011) that a simple benchmark can be constructed using the workhorse of modern macroeconomics, i.e., neo-classical growth model. This benchmark is a weighted average of the financial assets created by the financial sector for the real economy.

The most important trends in recent years are the increase in household debt, and in financial firms' debt. Figure 2 shows the outstanding bonds issued by Farms, Households and Non Profit Organizations, and the Government. Household debt exceeds 100% of GDP for the first time in history (see Figure 2), while financial debt exceeds non-financial corporate debt for the first time. Surprisingly, the non-financial corporate credit market is smaller today than it was at its peak of the late 1920s.

Figure 2: Debt over GDP (selected sectors)

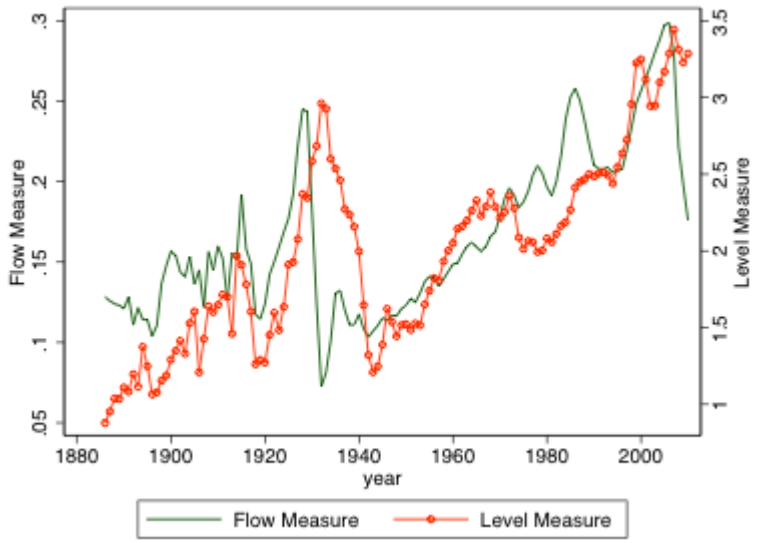


For the corporate sector, we need to look at bonds and stocks, and for stocks, we want to distinguish seasoned offerings and IPOs. We also need to look at the

liquidity benefits of deposits and money market funds. When we put all the pieces together, we obtain a series for output for the finance industry.

I then aggregate all types of non-financial credit, stock issuance, and liquidity services from deposits and money market funds.

Figure 3: Financial Intermediation Output



I construct two series of output in Figure 3: One using the flows (gross issuances over GDP) and one using the levels (debt over GDP). Note that both are relevant in theory. Screening models apply to the flow of new issuances, while monitoring models apply to the stocks. Trading applies to both.

The two series are displayed in Figure 3. The production of financial services increases steadily until WWI, and rapidly after 1919 until 1929. It collapses during the great depression and WWII. It increases steadily until 1975 and more randomly afterwards. The flow and level measures share the same long term trends, but there are clear differences at medium frequencies. The flow variable is more stationary before WWI, suggesting a steady buildup of financial assets. The flow variable collapses much faster during the great depression and the great recession. The level variable peaks in 1933 because of deflation and the need to deal with rising default rates.

The Decreasing Efficiency of Intermediation in the U.S.

I can then estimate the cost of financial intermediation, defined as the value added share divided by output series. The cost of intermediation in the US (expressed as a share of outstanding assets) is between 1.3% and 2.3%.

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