

Overcharged

The High Cost of High Finance

Report by
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Executive Summary

A healthy financial system is one that channels finance to productive investment, helps families save for and finance big expenses such as higher education and retirement, provides products such as insurance to help reduce risk, creates sufficient amounts of useful liquidity, runs an efficient payments mechanism, and generates financial innovations to do all these useful things more cheaply and effectively. All of these functions are crucial to a stable and productive market economy. But after decades of deregulation, the current U.S. financial system has evolved into a highly speculative system that has failed rather spectacularly at performing these critical tasks.

What has this flawed financial system cost the U.S. economy? How much have American families, taxpayers, and businesses been "overcharged" as a result of these questionable financial activities? In this report, we estimate these costs by analyzing three components: (1) rents, or excess profits; (2) misallocation costs, or the price of diverting resources away from non-financial activities; and (3) crisis costs, meaning the cost of the 2008 financial crisis. Adding these together, we estimate that the financial system will impose an excess cost of as much as **\$22.7 trillion between 1990 and 2023**, making finance in its current form a net drag on the American economy.

First, we estimate the **rents** obtained by the financial sector. Through a variety of mechanisms including anti-competitive practices, the marketing of excessively complex and risky products, government subsidies such as financial bailouts, and even fraudulent activities, bankers receive excess pay and profits for the services they provide to customers. By overcharging for products and services, financial firms grab a bigger slice of the economic pie at the expense of their customers and taxpayers. We estimate that the total cost of financial rents amounted to **\$3.6 trillion–\$4.2 trillion between 1990 and 2005**.

Second are **misallocation costs**. Speculative finance does not just grab a bigger slice of the pie; its structure and activities are often destructive, meaning it also shrinks the size of the economic pie by reducing growth. This is most obvious in the case of the financial crisis, but speculative finance harms the economy on a daily basis. It does this by growing too large, utilizing too many skilled and productive workers, imposing short-term orientations on businesses, and starving some businesses and households of needed credit. We estimate that the cost of



misallocating human and financial resources amounted to **\$2.6 trillion–\$3.9 trillion between 1990 and 2005.**

Adding rent and misallocation costs, we show that, even without taking into account the financial crisis, the financial system cost between **\$6.3 trillion and \$8.2 trillion more than the benefits it provided** during the period 1990–2005.

On top of this is the massive cost of the financial crisis itself, which most analysts agree was largely associated with the practices of speculative finance. If we add conservative Federal Reserve estimates of the cost of the crisis in terms of lost output (\$6.5 trillion–\$14.5 trillion), it brings the total amount of “overcharging” to somewhere **between \$12.9 trillion and \$22.7 trillion**. This amount represents between \$40,000 and \$70,000 for every man, woman, and child in the U.S., or between \$105,000 and \$184,000 for the typical American family. Without this loss, the typical American household would have doubled its wealth at retirement.

To better understand the mechanisms and financial practices that have led to these excess costs, we describe in detail some of the ways in which banks and other financial institutions have overcharged for their services. We show how the asset management industry charges excessive fees and delivers mediocre returns for households trying to save for retirement; how private equity firms grab excessive levels of payments from pension funds and other investors while often worsening wages and employment opportunities for workers in the companies they buy; how hedge funds underperform; and how predatory lenders exploit some of the most vulnerable people in our society. From this bottom-up perspective, we can see more clearly how the levels of overcharging we identified at the macro level actually come about in practice.

These excess costs of finance can be reduced and the financial sector can once again play a more productive role in society. To accomplish this, we need three complementary approaches: improved financial regulation, building on what Dodd-Frank has already accomplished; a restructuring of the financial system to better serve the needs of our communities, small businesses, households, and public entities; and public financial alternatives, such as cooperative banks and specialized banks, to level the playing field.

No study of this magnitude and objective is going to be perfect, and there will, of course, be areas of disagreement. But after much discussion and multiple reviews, we are convinced that the methods and data we have used provide a clear and rigorous path to answering this question. We hope this analysis contributes to the public debate about the real costs of the finance sector to society, how a healthy financial industry should work, and the reasons we don’t currently have one.

I. Introduction

The financial crisis of 2007–2008, whose massive costs are still being felt in many parts of the country, made clear to most Americans that the financial system is broken and needs serious reconstructive surgery. It has also become apparent that the dysfunctions of finance go far beyond the dramatic crashes; even when the system seems to be operating “normally,” it costs most of us dearly on a daily basis and puts the long-term prosperity of our economy at risk. These dysfunctions involve overcharging for brokerage services, predatory lending, and generally charging high fees for financial services; misallocating human talent from productive employment in technology, education, and health care to less socially productive employment; reorienting non-financial corporate behavior from long-term investment to short-term speculation that costs jobs, wages, and productivity growth; and choosing poor investments that put people’s retirement incomes at risk.

The flip side of this coin is that a relatively small number of owners and operatives in the financial sector make significant salaries, bonuses, and profits as a result of these practices. Yet finance does not simply create a zero sum game that transfers income and wealth from customers to bankers and bank owners. It is worse than that: The destructive aspects of finance also negatively affect the overall health of the economy, both in the short run and in



the long run. That is, finance has operated in recent years as a negative sum game. This means that it costs us more than a dollar to transfer a dollar of wealth to financiers—significantly more. So even if you think our financiers deserve every penny they get, it would be a lot cheaper simply to write them a check every year than to let them continue business as usual.

In this report, we assess the size and survey the mechanisms of this destructive wealth transfer from most Americans to finance. No study of this magnitude and objective is going to be perfect, and there will, of course, be areas of disagreement. But after much discussion and multiple reviews, we are convinced that the methods and data we have used provide a clear and rigorous path to answering this question. We hope this analysis contributes to the public debate about the real costs of the finance sector to society, how a healthy financial industry should work, and the reasons we don't currently have one.

In the second section, we describe the profound evolution of our financial system in recent decades from one that provided significant resources and benefits to businesses and households in the 1950s through the 1980s to one that became much larger and more detached from Main Street. We show that by the 1990s and 2000s, our financial system was much larger, more speculative, and more dangerous, did less and less to serve the prescribed positive functions of finance, and, as a result, became an engine of inequality and economic instability.

In the third section, we present the big-picture costs of our current financial system, over and above the benefits it provides. First we estimate the cost of excessive incomes—rents—going to finance as a result of firms overcharging customers and the public. This amounts to \$3.6 trillion–\$4.2 trillion (in real terms, 2014 dollars) between 1990 and 2005. Second, we estimate the costs to the economy of allocating excessive amounts of human talent and financial resources to finance relative to more productive sectors of the economy. This is estimated to amount to \$6.3 trillion–\$8.2 trillion over the same period. Adding these together, we get an estimate of the total excess cost of finance over the 1990–2005 period to be between \$6.3 trillion and \$8.2 trillion, which is equivalent to 42–50 percent of finance value added (wages plus profits) over this period, and equivalent to almost half of 2005 GDP (measured in 2014 dollars). In short, over this period the high cost of finance is estimated to be around half a year's national income.

However, this estimated total net cost of finance is much higher still, because the \$6.3 trillion–\$8.2 trillion estimate does not include the cost of the financial crisis of 2008. According to most analysts, that crisis was largely if not entirely due to the structure and practices of the speculative components of our financial system in the 1990s and 2000s (including the government policy of "too big to fail"). Adding the costs of the crisis to our estimates is complicated because the crisis costs are long-term and accrue far beyond the 2005 cutoff point of our other estimates; at the same time, it would be a gross understatement to exclude these costs entirely from our estimates.

To deal with this knotty problem, we provide estimates of the cost of the financial crisis by presenting the conservative estimates of Federal Reserve economists. They accrue estimated costs of the financial crisis in terms of recession-induced forgone output from 2008 to 2023, at which time they assume that our economy will return to its pre-crisis trend. Properly discounted and put into 2014 dollars, as with our other estimates, the Fed economists' estimates of forgone output range from \$6.5 trillion to \$14.5 trillion. Adding these figures to the costs of rents and misallocation, we estimate that the financial sector cost the U.S. economy \$12.9 trillion–\$22.7 trillion between 1990 and 2023. This represents between two-thirds (66 percent) and 133 percent of one year's aggregate income in the U.S. (GDP), which amounts to between \$40,000 and \$70,000 for every man, woman, and child in the U.S. or between \$105,000 and \$184,000 for the typical American family. Without this loss, the typical American household would have doubled its wealth at retirement (65 years old).

Note that this figure could still underestimate the cost of finance because it implicitly assumes there are no finance-related rent costs or misallocation costs from 2006 to 2023, and that the financial crisis has not caused any permanent damage to the economy that will last beyond 2023. On the other hand, it might be seen as an overestimate to the extent that it attributes more responsibility for the crisis to finance than is warranted.



After detailing the nature and overall size of these high costs of finance to individuals and households, we then describe in the fourth section the more specific mechanisms by which finance has been able to acquire so much wealth and impose such high costs on the economy. Here we focus on the practices of key financial industries and institutions and the ways in which they have been able to overcharge Americans for services. These mechanisms include the monopoly or oligopoly power of large banks in important financial sub-markets; overly complex, non-transparent financial products that allow financial institutions to overcharge and underperform; government subsidies that allow banks to borrow funds at subsidized rates from investors who believe they are "too big to fail"; and a lax monetary and regulatory environment that allows finance to operate with too much leverage and too little capital at risk, thereby generating asset bubbles that feed both outsized financier income and dangerous instability. We also identify the channels through which finance misallocates credit and distorts the economy.

All these structures and behaviors have significant costs in terms of economic growth and the growth of wages and incomes for many Americans. Oversized incomes have incentivized young people to work on Wall Street rather than in more socially productive venues; the prevalent forms of remuneration and tax incentives have led to excessive focus on short-term profits; and financial firms' easy access to leverage and credit have allowed them to apply these same principles to non-financial corporations through mergers and acquisitions and private equity takeovers, leading in some cases to lower-than-optimal investment, employment, and productivity growth among non-financial corporations.¹ Where possible, we place a "price tag" on these various practices. In this way, we partially account for the huge costs identified in the third section.

Finally, in the fifth section, we outline a series of reforms and structural changes that can help restore a system of socially productive and equity-enhancing finance. This set of reforms includes strengthening the enforcement of and closing loopholes in the Dodd-Frank Act; bringing the entire financial system under strict financial oversight; separating speculative from productive finance; breaking up too-big-to-fail banks; strengthening fiduciary responsibility rules for asset managers and others; providing more enforcement resources for financial regulatory agencies, including the Consumer Financial Protection Bureau; implementing anti-speculation taxes such as the Financial Transactions Tax; and supporting the provision of alternative, more publicly oriented financial institutions such as public banks, cooperative banks, and green banks. (See for example, Stiglitz and The Roosevelt Institute, 2015a.)

II. Setting the Stage: Financial Deregulation and the Genesis of Overcharging

As we discuss in the text box below, following the Great Depression of the 1930s, FDR's New Deal ushered in significant financial reforms and regulations that led to a relatively stable, low-cost, and effective financial system, sometimes called "boring banking." Over time, macroeconomic and global conditions changed, while banks and other financial institutions lobbied hard to deregulate the system. Billions of dollars were spent on lobbying and other political contributions (Wall Street Watch, 2009), and the money paid off for finance. The Federal Reserve and the government peeled away restrictions, allowing boring banking to give way to a system of speculative banking by the 1980s and 1990s.

The 1980s thus ushered in a massive increase in the size of the U.S. financial system.² This is somewhat paradoxical, since the early 1980s were a period of significant financial crises, starting with the huge increase in interest rates engineered by Federal Reserve Chair Paul Volcker in 1980 to reduce inflation. This was followed by

¹ The term "non-financial" corporation refers to corporations whose primary activity involves producing goods or creating non-financial services. As more and more of these companies engage in financial-like activities, such as engaging in credit provision or speculative stock buy-backs, the distinction between "financial" and "non-financial" companies becomes blurred. Still, this distinction has not been obliterated and we will continue to use the term when applicable.

² For useful presentations and analysis or related material, see Levina, Crotty, and Epstein (2010), Philippon, (2015), Copeland (2012), Greenwood and Scharfstein (2013), and Antil et. al. (2014).



the so-called “Third World Debt Crisis” initiated by Mexico’s repayment difficulties in 1982, which spread to many other countries in the next several years. Surprisingly, this period of turmoil ushered in a huge increase in the size and profitability of finance for several related reasons. First, the massive increase in real interest rates from the “Volcker shock” made financial activities extremely profitable. Equally important, the U.S. government and the International Monetary Fund (IMF) used taxpayer money and a great deal of political capital to bail out U.S. banks that had lent billions of dollars to Mexico and a handful of other developing countries that were now in or threatening default. This reinforced the view that the large banks that had lent those countries money were too big to fail and would be bailed out in the event their financial bets went wrong. And, as the financial crisis of 2008 showed, they were right.³

What Defines a Healthy Financial System?

It is important to note at the outset that a well-functioning financial system is crucial to the operation of modern economies. Unfortunately, our current financial system is not well-functioning, so it needs to be reformed and restructured. What does a well-functioning financial system do? Various economists and text-books delineate the roles of finance somewhat differently but they usually come down to some version of the following six key roles (Epstein, 2013):

1. Channel finance to productive investment.
2. Provide mechanisms for families to save for large expenses (e.g. sending their kids to college) and retirement.
3. Help businesses and households reduce risk by, for example, providing home insurance, life insurance, and car insurance.
4. Provide stable and flexible liquidity so that families and businesses can make long-term investments, but can easily and readily sell these assets for cash if needed.
5. Provide an efficient payments mechanism so households and businesses can buy goods and services easily and at a low transaction cost.
6. Develop new products and processes to make all these activities better, cheaper, and more readily available (“financial innovation”).

For several decades after financial regulatory reforms were made in response to the Great Depression, the U.S. financial system performed these functions reasonably well, with relatively little risk and relatively low costs. It has become common to refer to this early postwar system as one of “boring banking.” But starting in the 1980s or so, with the acceleration of financial deregulation and other changes, boring banking increasingly gave way to a much higher-risk and, as we will show, much higher-cost system of “speculative banking” (Epstein and Hubbard, 2013). We argue that this system of “speculative banking” has done a poor job of serving these six functions, and it has done so at a very high cost to the bulk of society. The solution, of course, is not to close down the financial system, but to create a financial system that serves these important functions efficiently, inexpensively, and with relatively low risk.

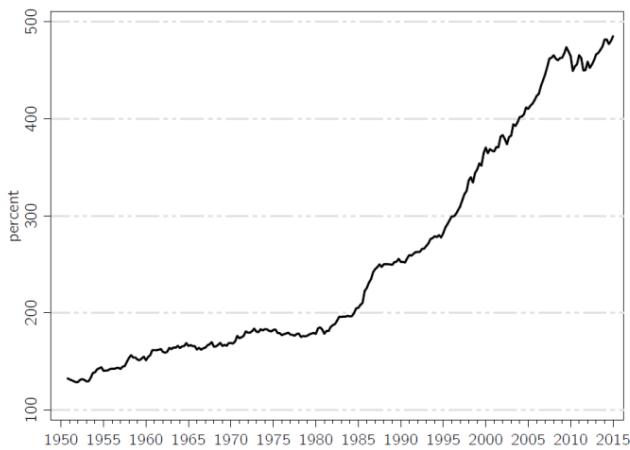
Figure 1 shows the huge increase in the size of the U.S. financial system relative to the size of the economy that began around 1980. Between 1980 and 1999, financial sector assets almost doubled relative to the size of the overall economy (measured by GDP). This growth began to accelerate with the erosion and then final repeal of the Glass-

³ See Epstein and Montecino, (2015), for more details.



Steagall Act and the other deregulatory provisions of the Gramm-Leach-Bliley Act of 1999. By 2008, total financial assets were almost five times the size of the annual production of goods and services in the economy.⁴

Figure 1
Financial Sector Assets as a percent of GDP



Source: Flow of Funds, Board of Governors of the Federal Reserve.

When the crisis hit in 2008–2009, the size of financial assets relative to the size of the economy fell, but then it recovered. In the last several years, the growth of financial assets relative to the economy has resumed its upward trajectory. By 2014, the amount of financial assets relative to the size of the economy was more than double what it was in 1980.

As we already mentioned, one important reason for the rapid growth in the size of finance was that bank profits increased rapidly after 1980. As Figure 2 shows, financial profits as a share of total corporate profits started rising around 1980. They took a big dive and then temporarily stagnated relative to the profits of the economy in the mid-'90s. But in the late 1990s, bank profits took off again with the formal repeal of the Glass-Steagall Act. After 2008, they fell, as one would expect, but by 2014, finance's profit share had rebounded to its 2006 level.

Figure 2
Finance Profits as a Share of Total Corporate Profit



Source: National Income and Product Accounts.

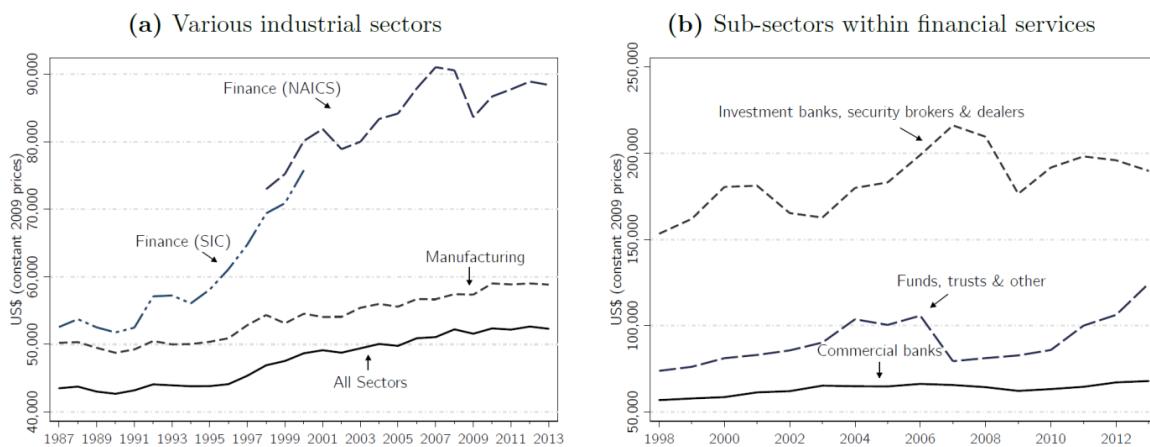
⁴ See Levina, Crotty and Epstein (2010) for more detail.



Banker pay has followed a similar trajectory as profits. In fact, it was the huge incentives from rapidly increasing banker pay that led the CEOs and traders of large financial institutions to engage in the highly risky activities that led to the crash.⁵

In the lead-up to the crisis, the pay of the financial engineers, traders, and CEOs who profited from the financial frenzy that led to the crisis soared. As Figure 3 shows, financial wages soared relative to other sectors of the economy. These bankers benefited greatly from high real interest rates, the perception of government protection of large banks, and increasing financial deregulation. Without these incentives, it is highly unlikely that the financial crisis would have occurred.

Figure 3
Real Wages Per Full – Time Equivalent Worker



Source: National Income and Product Accounts.

But, importantly, not all segments of finance benefited equally from this massive explosion of profitable financial activity. As Figure 3(b) shows, the average incomes of investment banks and security broker-dealers soared in the lead-up to the crisis, with average salaries more than four times as high as those in commercial banking. This divergence between the fortunes of standard retail banks and the large investment and commercial banks is crucial to understanding the financial practices that led to the crisis and the continuing financial problems and dangers that remain. By 2013, average incomes had not quite returned to the 2007 peaks but were almost as high. Since 2010, incomes accruing to funds, trusts, and other sectors have shown tremendous growth.

Part of the growth during this period was focused outside the traditional banking system. This was recognized early on by Jane D’Arista and Tom Schlesinger in their prescient and important work on the “parallel banking” system.⁶ Now termed the shadow banking system, these activities spill outside the regulated retail banking system. They are subject to few or no requirements on leverage, capital, transparency, or data-reporting, or even fiduciary requirements. Many of these institutions have been connected to mortgage companies, consumer credit companies, and securities brokers and dealers. They also include hedge funds and private equity funds.⁷

As Figure 4 shows, over the course of the 1980s, there was a slow reduction in the share of traditional retail banking and a gradual increase in the share of the activities of the shadow banking system.

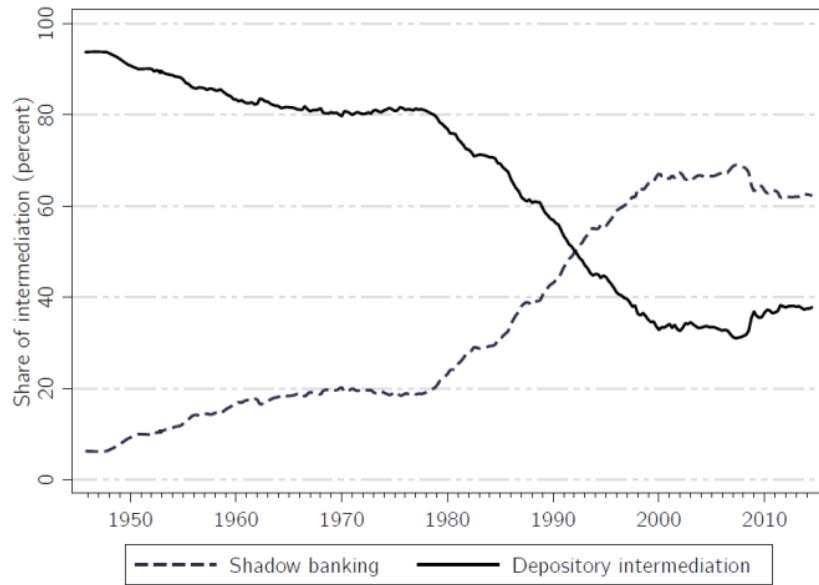
⁵ See James Crotty’s excellent analysis of the role of banker financial incentives as a cause of the financial crisis (Crotty, 2010).

⁶ See Jane D’Arista and Tom Schlesinger (1993).

⁷ For useful discussions of the “shadow banking system” see Pozsar (2015) and Tarullo (2013).



Figure 4
Standard Intermediation Vs. Shadow Intermediation



Source: Authors' calculations based on the Flow of Funds, Board of Governors of the Federal Reserve.

It is important to note that this shift began long before the financial crisis, and certainly long before Dodd-Frank. Still, in the 2000s, as financial deregulation expanded, the nature of shadow banking began to change and become much more dangerous. In the great financial crash, we found out the hard way that these financial activities are not segregated from the traditional banking system. While many of these activities take place outside of the regulatory scrutiny applied to traditional banking activities, there are many points at which these activities connect closely with large traditional commercial banks and investment banks. So, when Lehman Brothers went bankrupt, significant parts of the shadow banking system melted down, and because of their connections with the core banking system, they almost brought traditional banks down as well.

The Repeal of Glass-Steagall and the Super-Charging of Finance

Many of these trends accelerated and qualitatively changed after the repeal of Glass-Steagall in 1999. The Gramm-Leach-Bliley Act, and the opposition to serious financial regulation by Federal Reserve Chair Alan Greenspan and Bill Clinton's key economic advisors, allowed many financial institutions, including large commercial banks, to start engaging in riskier and riskier financial practices.⁸ First was a woefully inadequate financial regulatory system that was highly fragmented among a series of federal and state institutions, inviting regulatory arbitrage; subject to key legal and administrative changes that amounted to massive deregulation of the financial system; and populated with regulators who refused to enforce laws that were actually on the books, for ideological reasons or because of conflicts of interest or both, and who could have limited some of the key problems that led to the crisis. This massive regulatory failure, along with dynamic technological changes in financial markets that regulation failed to keep up with, led to a number of specific financial practices and institutions that were extremely dangerous. Many of these institutions and practices were tied to and facilitated the massive housing asset bubble

⁸ See Crotty (2009), Johnson and Kwak, (2011), Jarsulich (2013) and the excellent book by Pollin (2005).

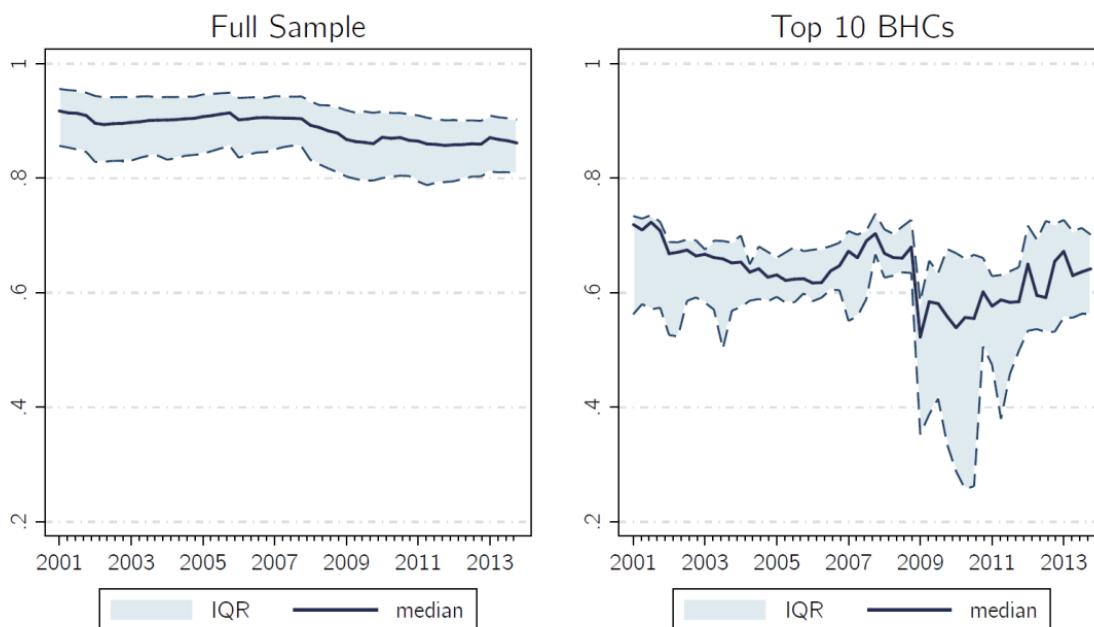


associated with the subprime lending bubble, but were inherently dangerous and destructive in their own right as well.

At the base of many of these trends was a new business model developed by the large banks. To understand this new banking model, we “follow the money”: looking at the sources of bank incomes from different activities. In the 1950s and 1960s, commercial banks received most of their income from simple retail banking: interest and fees from retail lending to households and businesses. As the new financial products and practices associated with the financial crisis developed—including securitization, derivatives trading, and proprietary trading, all financed by very short-term borrowing—the largest banks started receiving a greater and greater share of their income from these activities. We refer to these as “non-traditional” activities. Small and medium-sized banks continued to earn most of their income from traditional activities such as short term lending to businesses and standard, non-securitized mortgages, but even these evolved over time so that the originate-and-distribute model associated with securitization began to dominate more and more lines of banking business, including mortgage and business lending.

The next several figures illustrate these points. Figure 5 shows that from 1994 to 2013, all Bank Holding Companies (BHC) received a fairly steady share of their income from traditional banking activities. This contrasts, however with the 10 largest BHCs, which received only about 75 percent from traditional activities prior to the crisis and an even smaller share (a bit more than 60 percent) afterward.

Figure 5
All Banks vs Top Bank Holding Company (BHC) "Traditional" Income Share



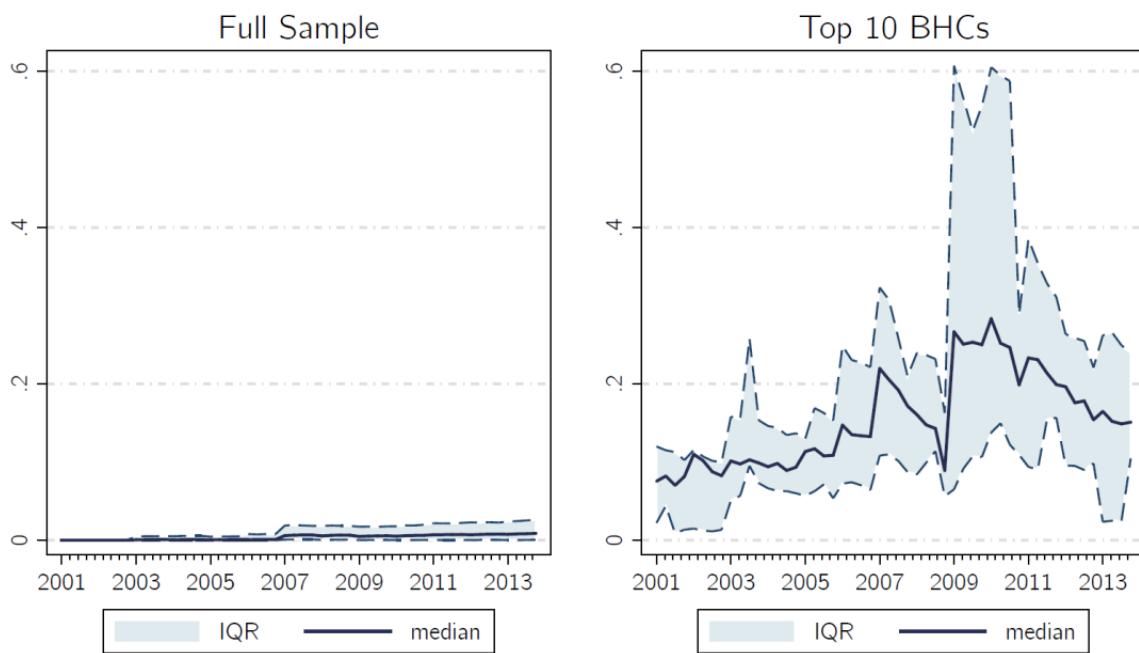
Source: Authors' calculations on FRY-9C regulatory data.

* IQR is the interquartile range.

As Figure 6 shows, BHCs as a group get almost no income from non-traditional activities, with a typical bank getting 15–20 percent both before and after the crisis. But the 10 largest BHCs get a significant share, with some deriving more than 70 percent of their income from such activities.



Figure 6
**Income Share from Non-Traditional Sources,
All Banks and 10 Largest Bank Holding Companies**



Source: Authors' calculations on FRY-9C regulatory data.

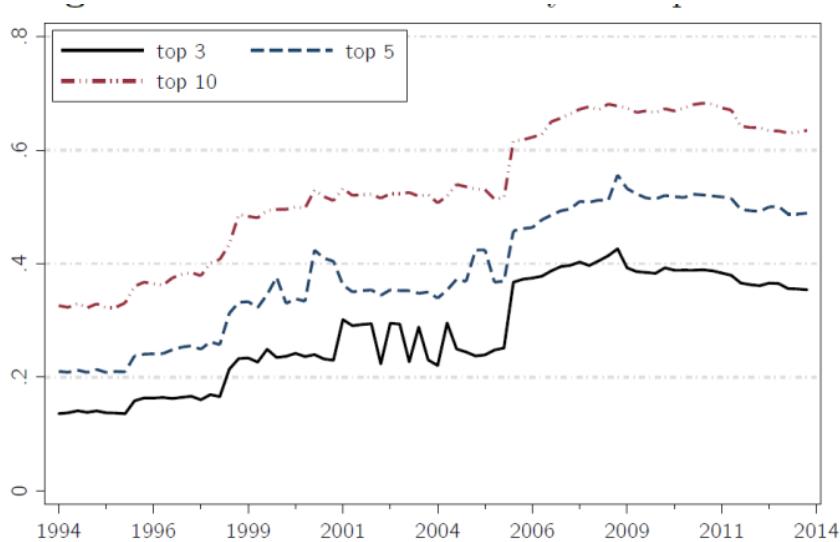
This business model based on short-term financing and investment in complex and opaque securities—which were often, as we will see below, made more complex with extensive use of derivatives—led to banks becoming bigger and bigger and taking over larger and larger shares of the banking business.

Figure 7 shows that banking assets are highly concentrated among the largest banks. By the time of the crisis in 2008, the top three banks held almost 40 percent of bank assets and the top 10 held almost 70 percent. These shares are more than double those that were held by the top banks in 1994. Figure 7 shows, moreover, that the great financial crisis barely put a dent in the top shares.⁹

⁹ An IMF report recently placed these data in international perspective (Laeven, et. al., 2014). The trends in increasing size, concentration, and risk since the early 2000s have taken place among a broad group of wealthy countries, not just in the U.S. And while concentration has increased in the U.S., including during the period since the crisis began, concentration is nonetheless lower than in Europe.



Figure 7
Share of Bank Assets Held by Major Bank Holding Companies



Source: Authors' calculations on FRY-9C regulatory data.

As banks developed increasingly complex products and ways of hiding risk, the growth of these new business models accelerated with mind-boggling speed in the 2000s. In addition, this level of concentration led to uncompetitive structures in banking and finance, which is one of the key factors –along with the opacity created by complexity- that allows finance to overcharge and thereby acquire enormous rents.

Financial Speculation and Risk Accelerate After 1999

This new business model delivered high profits and increasing concentration and market power to the largest banks while delivering huge incomes and bonuses to powerful members of these firms. But all this came at the cost of neglecting important needs of families and businesses and significantly raising risks in the economy.

Large banks and investment banks borrowed trillions of dollars of short-term funding on a wholesale basis to support the creation, buying, and selling of complex, illiquid, and highly opaque securities, many of them tied to a massive asset bubble in real estate. This originate-and-distribute model relied on the bundling of traditional loans into big packages of securities, that is, securitization. This resulted in an enormous amount of leverage that was unsupported by sufficient capital cushions. Indeed, that was the intention: to avoid capital requirements by investing in assets that banks did not have to hold capital against. Often, these assets were held off balance sheet, in the shadow banking system.

Together, these new policies adopted by the largest commercial and investment banks reflected a new business model.¹⁰ That model was very lucrative, but, as we came to discover, extremely dangerous.¹¹

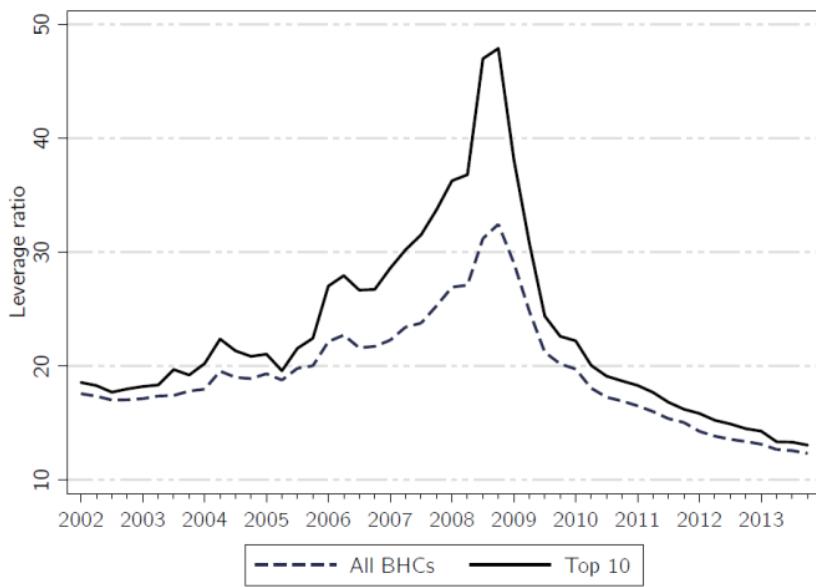
Figure 8 shows the staggering increase in leverage that resulted from these practices.

¹⁰ This new business model has been described by some economists at the OECD as a “hedge fund model of banking.” See Blundell-Wignall, et. al. (2013), Blundell-Wignall (2015).

¹¹ For recent analyses of this new model see Blundell-Wignall (2015); Antil, et. al. (2014); Copeland, (2012); Bailey, et. al. (2015).



Figure 8
Aggregate Tangible Leverage Ratio of Banks
(Tangible Assets/Tangible Equity)



Source: Authors' calculations on FRY-9C regulatory data.

In the run-up to the financial crisis, the largest BHCs increased their leverage from 20-to-1 in 2001 to more than 45-to-1 in 2009. BHCs on average raised their leverage ratio to 35-to-1. This striking increase helps to explain the massive disruption in the financial system that resulted from the financial bust. Since 2009, bank leverage has come way down; while this has made banks safer, the process of deleveraging has meant that banks have failed to provide sufficient credit to help propel the economic recovery.¹²

Leverage was further increased by taking positions in derivatives that multiplied both the possible returns and risks of these assets, again without greater capital cushions to offset said risks. Under the originate-and-distribute model of credit allocation, banks would sell off complex securities to other banks, pension funds, and other investors who often knew little of their true nature. Some of the ways in which these securities were marketed have been shown to be fraudulent. The large banks also engaged in significant amounts of proprietary trading, making investments and trades for their own accounts, with a vast array of other financial institutions as customers and counter-parties to these trades. A key problem associated with this increased complexity of the financial system was therefore a huge increase in interconnectedness of the financial system.¹³

In the end, these changes in the banking business model, enabled by financial deregulation and caused by increased leverage and wholesale borrowing in the shadow banking, all drove and fed on a credit bubble that created an asset bubble in housing. That bubble was bound to burst and wreak havoc, but in the meantime it also created costs for society on a daily basis, even as it generated enormous wealth for financiers.

III. Estimating the High Cost of Finance: The Big Picture

¹² Historically, this debt overhang and deleveraging process is a damaging but typical result of the excessive and risky lending that occurred in the bubble. See, for example, Reinhart and Rogoff (2010).

¹³ See Yellen (2013), D'Arista and Epstein (2011), and Jarsulic (2013).



In looking at the aggregate excess costs of the speculative financial system in the U.S., we assess the degree to which the financial system that has evolved in the last 25 years is imposing costs on the economy over and above the benefits that it provides. A number of studies have looked at particular components of this question, but there has been no attempt to generate an overall cost estimate. That is what we do in this section. In adding up the overall cost of our current speculative financial system, we draw on a number of major studies undertaken by various economists over the last several years (see below for references to these studies). Here, before we dive into the details, we start with an overview of the logic of our analysis.

First we ask, to what are we comparing the costs of this financial system? This is what economists call "the counterfactual." To be sure, we are not comparing the net costs to a world in which we have no financial system. As we explain in the textbox in the preceding section, all modern economies need a well-functioning financial system. Our problem is not that we have a financial system; it is that we have a poorly functioning and costly financial system.

One possibly appealing counterfactual would be to compare our speculative financial system to the system of "boring banking" that, as we described earlier, existed in the 1950s–'70s. But this doesn't seem quite right because our world has changed significantly since the 1970s, and so there is probably no simple return to the past.

Instead, for our counterfactual we have chosen a set of appropriate benchmarks that reflect realistic alternative financial practices with lower net costs. We will describe these as we discuss each of the components of the costs we tally. Generally speaking, our counterfactuals compare the net costs imposed by this speculative financial system with a realistic financial system that is less risky, extracts less in excess payments, and allocates resources more efficiently than our current one. Of course, no counterfactual is perfect, and reasonable and informed people can always critique the use of particular counterfactuals. But we have found ours to be much less vulnerable to criticism than others.

We should emphasize that in our analysis, we are estimating the NET costs of our financial system: the costs over and above what an efficient financial system would cost society. Financial rents measure how much more customers and tax payers have to pay bankers to get the level of services (benefits) they are receiving. The mis-allocation costs measure the costs of having a lower economic growth rate than we would have if finance were at the socially optimal size and performing efficiently. These costs are net in the sense that the calculation acknowledges that the financial system creates significant benefits, but that those benefits would be HIGHER if the system were operating at the right scale and in the right way. Finally, the cost of the financial crisis is a net cost in the sense that it measures how much output was lost relative to if we did not have a financial crisis.

Let's be more specific. Our framework for assessing the high cost of finance to the overall economy is, in principle, quite simple and intuitive. We divide the costs into three main components:

- Financial rents
- Growth costs from the misallocation of resources toward finance and away from other activities that are more socially productive
- The costs imposed on society by financial crises, as measured by the economic costs of the great financial crisis (GFC) that began in 2007–2008

Financial Rents

Financial rents are the excess incomes that operators and investors in the financial sector receive over and above the incomes they would need in order to induce them to supply their financial products or services in an efficient, competitive, capitalist economy. (See Stiglitz, 2015 a, b) for a recent discussion of the meaning of rent in this context.) Financial engineers who make twice as much income as they would if they were regular engineers, or financial CEOs who make 10 times as much income as they would if they applied their talents to manufacturing firms, much less government service or teaching, are earning rents. An asset manager who makes twice as much as



she would make if she gave an investor full information about a more appropriate investment than the one she is recommending is also earning a rent. Another example is a hedge fund connected to a bank that makes a killing by investing in a highly leveraged, risky asset that then goes bust and is bailed out by taxpayers. Hence, the counterfactual is a traditional one: What would these financiers' income be if the financial system operated the way mainstream economics often imagines it does—that is, competitively and efficiently?

Note that by assuming efficiency as the counterfactual in this way, we actually underestimate the costs of the financial system by excluding all the ways in which our speculative system misallocates resources and generates financial instability and financial crises.¹⁴ We take these costs into account in our next two categories.

Growth Costs from the Misallocation of Resources to Finance

The second cost is the cost of lower incomes that arise from allocating too many financial and human resources to the speculative financial sector and away from other activities that are more productive at the margin. The economics literature has come to call this "too much finance," after one of the best-known academic papers in this area (Arcand et. al, 2015; see also Checchetti and Kharroubi, 2012, 2015). This literature shows that countries that have financial sectors that are "too big" tend to have lower economic growth. While this literature analyzes, in the first instance, the size of the financial sector, its results are most likely also picking up the low-productivity types of financial activities in which speculative financial systems engage. Using this literature, we estimate the growth costs to the U.S. economy of having a financial system that "is too large" and misoriented. Here, the counterfactual is a financial system that is "the appropriate size" and operates in a more socially efficient manner, using, as this literature does, other financial systems or times as a baseline.

It might appear that in adding up the costs of rent extraction and resource misallocation we are double counting; that is, either one or the other would measure finance's net costs. But in fact, though these two costs are related, they are not the same thing. Rents are zero-sum; they measure the income lost by one group in society (retirees, borrowers, taxpayers) in making excess payments to another group (bankers, rentiers, traders). In principle, it is possible that this would be the end of the story: Paul, the banker, takes an extra dollar from Peter the customer. Period.

But in fact, Peter pays more than a dollar because of Paul's activities. Since Paul is working in finance and not as an architect, schoolteacher, or industrial engineer, the economy might not be operating as efficiently and growing as fast as it could be. This inefficient allocation of human resources might adversely affect many people in the economy. Peter's wages might go up more slowly; tax revenue might be lower; the government might choose not to hire as many teachers or repair as many bridges. The misallocation of too many resources to finance has growth costs in addition to the extra dollar that Paul takes from Peter. Peter is both paying too much to Paul and losing out on higher wage growth to boot.

Of course, there is a connection between these two phenomena. More and more Pauls will want to work in finance because of the high profits and rents, and the high incomes flowing to finance will lead it to become too big and too risky. But this is a causal link between rents and excessive growth of finance; it is not double counting.

The Costs of the Great Financial Crisis

Speculative finance not only gains excess incomes and causes slower long-run economic growth because of the misallocation of financial and human resources, but also imposes costs on society—sometimes very large costs—because of the large financial crises it periodically causes.¹⁵ Large financial crises lead to high unemployment, lower output, less on-the-job training, and significant psychological and social suffering. In some cases, these costs can

¹⁴ Some economists refer to these as externalities.

¹⁵ Charles Kindleberger, in his masterful overview of the history of financial crises, finds that over the course of history, financial crises have occurred on average about every seven years (Kindleberger, 1978).



last for a very long period of time. So in order to give a fair assessment of the costs of our current financial system, we must incorporate the costs of financial crises associated with the excessive speculation and destructive economic activities that are now well understood to have been key to the recent economic crisis.

Some economists argue that the GFC had multiple causes and so it would be incorrect to attribute all the costs of the crisis to finance. To be sure, the debate about the true underlying causes of the biggest crisis since the Great Depression is bound to rage on for years, if not decades, just as economists still disagree about the causes of the Great Depression of the 1930s. In light of this uncertainty, it might not be reasonable to attribute all of the costs of the GFC to our speculative financial system. After all, it is true that recessions sometimes do happen without financial crises.

Nonetheless, there is growing evidence that recessions associated with financial crises are worse than "normal" recessions. Moreover, there is growing evidence that recessions associated with large debt "overhangs" are also worse than those without them. Relevant to this discussion is the large literature that shows that economic downturns associated with financial crises are deeper and last longer than normal recessions (e.g., Reinhart and Rogoff, 2009, 2010; Jorda, Schularick and Taylor, 2013; Koo, 2008; Mian and Sufi, 2011). Moreover, economic downturns associated with financial crisis are more likely to lead to permanent declines in the productive capacity of the economy (i.e., potential output). As a result, the recession is deeper and longer, and some of the costs are permanent (see Furceri and Mourougane, 2012; Bosworth, 2015). Hence, even if one cannot prove that the GFC was caused by the speculative financial system, there is no doubt that the financial crisis contributed significantly to the overall costs of the crisis. Hence, a key counterfactual in this case is the costs of the great financial crisis relative to the average business cycle downturn not associated with a financial crisis.¹⁶

In making these estimates, we draw on the best research available (Epstein and Crotty, 2013; Philippon and Reshef, 2012; Philippon, 2015; Arcand, et. al, 2015; Greenwood and Scharfstein, 2013; Haldane, et. al., 2010; Wang, 2011). As with all such cost estimates, though these use the best available research, they are nonetheless our best approximations of a complex reality.¹⁷

The issue of possible double counting arises again in this context. Some might argue that it is double counting to include the economic growth costs of both the misallocation of resources (cost number two above) and the GFC. This might be a problem if estimates of the costs of "too much finance" failed to control for business cycles associated with financial crises; in that case, the business cycle costs of financial crises would already be counted.

Simon Sturn and one of the authors looked into this potential problem (Sturn and Epstein, 2014). After extensive analysis we concluded that, after controlling properly for business cycle effects, the "too much finance" result holds. In other words, there appears to be longer-run resource allocation costs from speculative finance on top of the costs of the large financial crises with which they are associated. In short, in adding the two costs together, we are not double counting.

Detailed Presentation of the Overall Costs

Rents

As discussed earlier, conventionally speaking, economic rents are the incomes that some individuals or institutions receive over and above what would be required to incentivize them to engage in a given economic activity (Stiglitz, 2015a, 2015b). For example, in the case of bankers, the rent is the amount of their income that they are able to command over and above what would be required to get them to perform their activities. More generally, we think of rent as an excess payment, excess in the sense that it is a payment not justified by the requirements of an efficient economy.

¹⁶ Still, we believe that the most likely main culprit for the great crisis of 2007–2008 is our deformed financial system.

¹⁷ Our estimates of the cost of the financial crisis are quite conservative, partly because we do not include the enormous psychological and health costs of the crisis.



In the case of modern finance, rents come in two basic forms: One form is the excess payments made to bankers—top traders, CEOs, financial engineers, and other highly paid employees of banks and other financial institutions; the other form is excess profits, or returns over and above the long-run sustainable returns that accrue to shareholders as a result of the financial services provided by a firm. A key issue that is not easy to specify with a high level of precision are the factors that determine the split of rents between the bank employees and the shareholders. In any event, some common factors determine the overall level of rents to the financial firms that are then split among the bankers and traders and the shareholders.

The sources of these rents—high pay for bank CEOs and traders, and excess returns to shareholders—are not completely understood, but we know many of the factors that contribute. They operate at the macroeconomic level, the industrial level, and the microeconomic level—that is, at the level of the firm and the customer.¹⁸

At the macroeconomic level, the key factors are the overall growth of the economy and, most importantly, the asset price booms and busts. When asset prices boom, as they did in the 2000s, they create excess returns that CEOs and traders—what James Crotty calls “rainmakers”—do their best to grab and cash in before the asset bubble bursts. Shareholders also try to cash in on these asset bubbles and grab the profits.¹⁹

The government’s commitment to bail out too-big-to-fail banks was a crucial factor in underwriting the high rents and excess profits of the financial system. Bankers could have an excessive amount of debt (leverage) by borrowing and by taking positions in derivatives and other complex securities that also contained leverage, knowing that if the bets went bad, they were likely going to be bailed out by taxpayers. So the more than \$20 trillion of committed bailout funds played a crucial role in generating these rents and excess profits (Wray, 2011; Better Markets, 2012; Kane, 2012). Other kinds of tax subsidies are also rampant in finance (Carrow et. al., 2011), and these serve to increase rents accruing to bankers and shareholders.

At the industry level, there are a number of key factors that help to determine the level of rents. One is the degree of competition or lack thereof in key activities. For example, take the over-the-counter derivatives market: In this market, the top six banks control more than 95 percent of the business. Such a highly concentrated market is likely to be one with a significant amount of market power and therefore high market power rents. (Tregenna, 2009).

This issue of market power is related to a second key factor: regulatory policy and enforcement. The credit derivatives market was allowed to be so lucrative and concentrated because of legislative and regulatory rules and enforcement that allowed the market to develop and flourish (see, for example, Greenberger, in Wolfson and Epstein, 2013). The repeal of the Glass-Steagall Act allowed highly levered banks with short-term funding to engage in this market. A third industry-level determinant of rents is the nature and degree of enforcement of transparency and anti-fraud laws that are supposed to govern financial transactions, such as those that governed the buying and selling of asset-backed securities and mortgage products.

There are also important processes at the firm level that we describe in detail below.

The Big Payout: Banker Rents

To estimate banker rents, we draw on the well-known empirical work of Thomas Philippon and Ariel Reshef (2012). Philippon and Reshef develop a data series on wages in finance relative to other industries in the U.S. over a 100-year period, 1906–2006. Philippon and Reshef define banker rents as the wages in finance over and above those that can be explained by the remuneration to education, skill levels, and other standard factors had these

¹⁸ Crotty (2010) has written the most insightful analysis of the sources of banker rents at the bank level. See also the work of Stiglitz (2015b) for many insights into these processes. Haldane et. al. (2010), Wang (2011), and Kay (2015) have provided useful insights into the sources of excess finance profits.

¹⁹ See Levina (2014) for an insightful analysis of asset appreciations as a source of financial profit. Accounting conventions allowed banks to book profits even before they were realized (Crotty, 2010; Kay, 2015).



employees worked in non-financial sectors of the economy. Philippon and Reshef report that these rents grew dramatically after the 1990s.²⁰

In Figure 9 we reproduce their figures calculated as rent per worker and total rent in finance for the period 1980–2005, in real 2014 dollars. Figure 9 shows that by 2005, the average rent was almost \$30,000 per finance worker and the total was more than \$150 billion. Of course, this is an average of all workers in finance.²¹ We know that overall the rents were highly concentrated among a relatively small number of top officials, financial engineers, and traders.²²

Figure 9
Banker Rents, Per Worker and Total
1980–2005 (Real, 2014 dollars)



Source: Calculated from rent estimates: Philippon and Reshef (2012);
See text and Appendix A.

The next step is to calculate the total accrued rents to financial workers (financiers) over this period. To accumulate the total excess wages, we make a very conservative assumption that the rate of return that the bankers could have made on their excess income is 2 percent per year.²³ So we compound the excess income (rent) each year at the interest rate of 2 percent. The first row of Table 2 below shows the total accumulated excess wages over this period. By 2005, the total accumulated rent reached almost \$1.4 trillion (in real 2014 dollars).

Note that these excess wage estimates are quite conservative for several reasons. First, they do not include bonuses.²⁴ Second, they compare incomes in finance relative to incomes in non-finance. But we know that at the upper reaches, CEOs and top officials in non-financial firms also received extraordinarily high incomes over this period. Studies have suggested that the high CEO pay in non-financial companies is due to several factors, notably the fact that CEOs choose their pay, backed up by compliant boards, and pay consultants who want to curry favor in order to keep their consulting contracts. In addition, CEO compensation of non-financial firms is augmented by financial activities such as manipulating stock options, similar to those of financial traders. Finally, the high rents in finance undoubtedly affect the norms identified by pay consultants who help push up non-financial sector CEO

²⁰ Philippon and Reshef control for numerous determinants of pay (see Philippon and Reshef, 2012).

²¹ All of the data are presented in real 2014 dollars, unless otherwise stated.

²² As we detail in Appendix A below, we used these results from Philippon and Reshef to calculate the total banker rents accruing to finance over the period, that is, over and above what could be explained by education, skills, and other standard determinants.

²³ Long-term, sovereign debt real interest rates in the "advanced" economies were well above 2 percent (on average about 3 percent) through the 1990s and into the early 2000s. They hovered around 2 percent until around 2011 and have been moving around zero since that time (Rachel and Smith, 2015; King and Low, 2014). A commonly used discount rate for cost benefit analysis is 3.5 percent (Moore et. al., 2004; Atkinson et. al., 2013). Two percent is thus clearly a significant underestimate, especially considering that, during the relevant time period, financial actors had the ability to (temporarily) earn excessively high rates of return. By using a low-interest compounding rate, we are thus underestimating the total amount of rents accumulated by financiers over this period.

²⁴ Bell and Van Reenen (2013) show that in the UK, for example, bonuses make up a significant portion of banker pay.



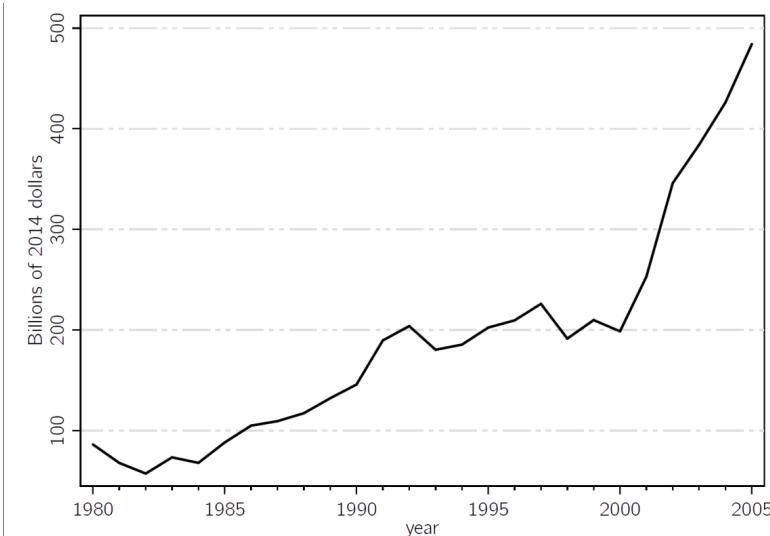
pay (e.g., Lazonick, 2014; Bakija et. al., 2012; Kaplan and Rauh, 2010). Hence, because of this interaction between finance pay and non-finance pay, the rent calculation for financial pay packages is likely to be underestimated based on the gap between financial and non-financial pay since, at the top, non-financial CEO pay is pushed up by norms set for pay in finance.²⁵

In sum, between the period 1994 and 2005, based on Philippon and Reshef's data and analysis, we estimate that financial CEOs, traders, and financial engineers received a minimum of approximately \$1.4 trillion in excess payments (rents). To this we must add excess profits.

Excess Profits

To calculate comparable data for profits, we use the same universe of financial institutions as we used to estimate rents for finance workers. As we see in Figure 10, these financial profits also began to grow rapidly starting in the early 1990s and then grew even more rapidly in the go-go years before the crisis of the 2000s. By 2005, banks were receiving \$400 billion per year in profits.

Figure 10
Profits in Finance, 1980-2015



From NIPA; see Appendix A for more details.

The question is, how much of this is rent? A number of economists have tried to address this question (Crotty, 2009, 2010; Epstein and Crotty, 2013; Haldane, et. al., 2011; Kay, 2015; Wang, 2011). We first must ask what could explain excess profits in finance. Earlier we mentioned key factors that can help explain such rents. These include the asset bubbles that generated high rents that financial institutions could capture during the boom because of accounting conventions and lax regulatory enforcement. A second factor was monopoly or oligopolistic power that financial institutions could exercise because of non-transparent financial products, and easy access to massive amounts of capital because of their too-big-to-fail subsidy. A third factor was their ability to benefit in the short term from the returns to highly risky activities, while shedding the downside costs onto others (customers, other employees, taxpayers).

²⁵ One suggested explanation for the pay differential between finance and other industries is that the higher pay in finance represents a "compensating differential" for longer hours and higher stress affecting financiers. In general, there is little empirical evidence in the economics literature in support of the idea of "compensating differentials" (see Dorman, 1996 and Dorman and Hagstrom, 1998). Casual observation shows that high-stress jobs such as firefighter, police officer, or middle school and high school teacher, though requiring very high skills, earn many times less than investment bankers. In addition, there is a lot of evidence that there is a huge excess supply of young people who want to become traders and bankers but who cannot get these jobs. If, at the margin, they were indifferent because the pay just covered the compensating differential, we would not observe such a massive queue for these jobs (Crotty, 2010; Lewis, 1989).



In Epstein and Crotty (2013) we study the sources of profits of the major investment banks prior to the financial crisis. We find that well over 50 percent of these reported profits were due to trading and other speculative activities in the years leading up to the financial crisis. It might be thought that this type of risk-taking provides a service to the economy and so its returns should not be seen as excess profit but as a payment for a service. But as Wang, Haldane, Crotty, Kay, and others make clear, this view is mistaken. The key to understanding the issue is to distinguish, as Haldane does, between "risk-taking" and "risk management." Risk management involves research and due diligence to identify the riskiness of loans and other investments; here it is discovering and providing information that can help investors assess investments. Risk-bearing, per se, does not add income to the economy but simply shares it from one person or time period to another.

Indeed, as is now well known, in the lead-up to the GFC, financial institutions undertook excessive risks and reaped excessive profits by taking on excessive leverage and shifting risks to customers and taxpayers. Much of their "risk management" was designed not to assess risks for customers but to game the system, get high ratings for collateralized debt obligations and other such securities so they could be marketed to customers. These financial institutions failed to do due diligence on the underlying risks associated with mortgages and other investments (Financial Crisis Inquiry Commission (FCIC)2011; Jarsulic, 2013; Crotty, 2010). In the end, these financial institutions did not provide risk-bearing or risk management, but rather engaged in risk-shifting to customers and taxpayers. Nonetheless, they made enormous profits from these activities.

Studying the broader universe of banks, Wang and her co-authors have estimated the share of financial profits that are illusory in the sense of representing excess profits from risk-taking, rather than from the provision of risk management and related financial services (Wang, 2011; Basu, Inklaar, and Wang, 2011).

In Table 1, we reproduce Wang's estimates.

Table 1
Excess Profits from Risk-Taking In Banking

	Capital Share in Value Added	Internal Rate of Return on Fixed Assets
Unadjusted for Risk	59	17.8
Net of Risk-Adjusted Return	41	6.8
Private Economy	42	9.3

Notes: Financial intermediation refers to NAICS industries 521 and 522 from the BEA.

Source: Wang, 2011.

Wang's results suggest that the capital share of value added in finance is about one-third lower once one adjusts for the associated risk. In column 2, she estimates the internal rate of return on fixed assets taking into account these risk characteristics and finds that the internal rate of return is almost two-thirds less than the non-risk-adjusted return (17.8 versus 6.8). Thus the excess profitability of finance from this perspective is somewhere between one-third and two-thirds. We split the difference and assume that half of the accumulated profits are excess in the sense that they stem from improper adjustment for risk.

Wang and co-authors' analysis thus provides a way of estimating the excess profits due to the inappropriate treatment of risk by these financial institutions. We can use this metric to assess the total compounded excess profits over the period 1990–2005. Total compounded profits equal almost \$4.6 trillion over the period. We



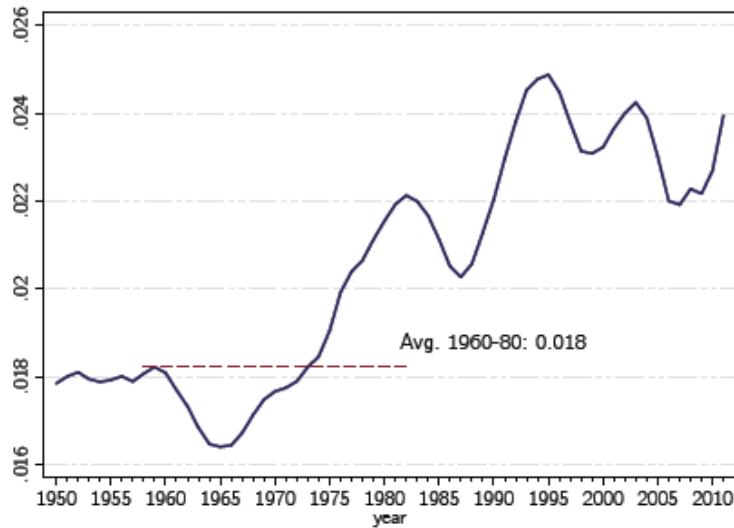
estimate that roughly half, or \$2.28 trillion, reflects excess profits or rents. We believe this is a conservative figure given the highly speculative activities undertaken by much of the financial sector in the run-up to the GFC.²⁶

Adding the excess wages (\$1.39 billion) and the excess profits (\$2.28 trillion) together, we estimate that between 1990 and 2005 finance accumulated more than \$3.6 trillion in rents from the rest of the economy (see Table 2).

An Alternative Measure of Financial Rents

As a check on our estimates of financial rents, we calculated the rents using an alternative method. This alternative method is based on the work of Thomas Philippon (2015), who estimated what he calls the “user cost of finance.” This is an alternative measure of the amount of rents that finance can extract from society. Philippon defines the user-cost of financial intermediation as the total income of the financial sector divided by the total amount of financial assets intermediated by the financial sector. Figure 11 shows the user cost of financial services as estimated by Philippon (2015). As shown in Figure 11, the user cost of finance as a share of intermediated assets had been more or less constant since the early 1900s until around 1980. Since 1980 or so it increased significantly, currently hovering around 2.4 cents on every dollar of intermediated assets. This compares with the average of 1.8 cents on every dollar of intermediated assets on average for the period of regulated finance between 1960 and 1980 (see Figure 3).

Figure 11
The User-Cost of Financial Services



Note: This series was taken from Philippon (2015).

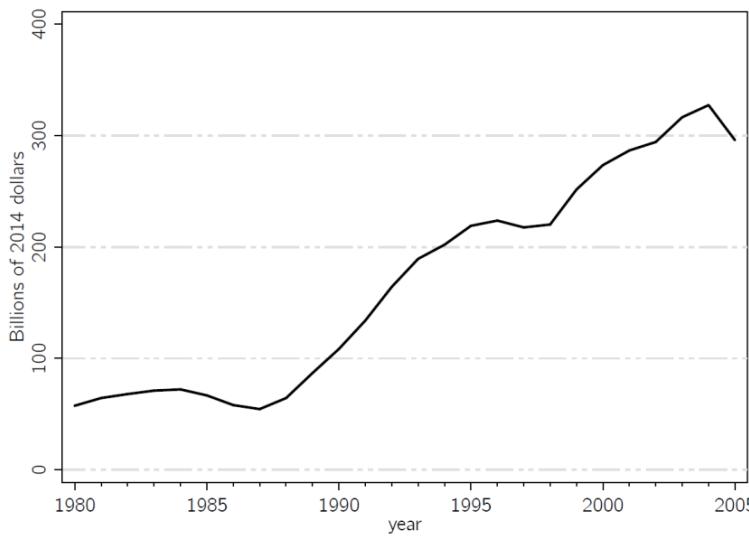
This increase in “user cost” per unit of financial service provided can be used as an alternative measure of excess profit and rent. The logic here is that these “costs” to customers increased significantly after 1980 despite the large technological and efficiency improvements over this period associated with digitalization and other technological changes. It is difficult, then, to explain these increased costs in any other way than this: They probably reflect higher rents and excess profits accruing to finance.

We can calculate the excess user costs by taking the average cost multiplied by the average amount of assets in the period 1994–2005, compared with the same figures in early periods. Figure 12 shows the measure of excess real financial sector income measured in this way.

²⁶ Wang and co-authors’ main interest in these metrics is to identify the overestimation of bank profits in national income accounts due to the inappropriate treatment of income associated with risk-bearing rather than risk management. But as Haldane and Wang suggest in their 2011 pieces, many of these same considerations apply to the treatment of excess profits at the industrial level as we analyze it here.



Figure 12
**Financial Rents Measured by Excess User Costs,
 1980–2010 relative to 1960–1980**



Source: Calculated from Philippon (2015); see Appendix A for details.

We now compound these excess real financial sector incomes in the same way as before and calculate the total accumulated excess income for the period 1990–2005. This comes to \$4.2 trillion (See Table 2, column 2). This is a bigger figure than calculated by our alternative methods, but is of the same order of magnitude, giving credence to the estimation methods we used earlier.

In sum, we have estimated that the total rent accruing to the financial sector over the period 1990–2005 is somewhere between \$3.6 trillion and \$4.2 trillion. But, as we will see presently, this rent is only a part of the significant costs that finance has imposed on the American economy over this period.

The Tab: Cost of Too Much Finance

As mentioned in the introduction, the cost of finance to society is not only a result of transfers of income and wealth from society as a whole to finance; there are additional costs if finance itself undermines the health of the economy for households and workers. In this section we analyze two significant ways in which finance hurts the overall economy: by misallocating resources and by creating crises.

In our calculations so far, we implicitly assumed that finance was performing well with respect to the overall economy in zero-sum fashion. But we know this is not true; the speculative financial system imposes costs on the overall economy: It is a negative-sum operation. The clearest case is the costs of the crisis (see below). But the financial system costs the economy on a daily basis by attracting too many talented workers, distorting incentives to engage in long-term investments, making poor strategic decisions in managing firms it controls, and other problems associated with allocation of credit, capital, and talent. These problems are increasingly recognized by economists (Tobin, 1984; Epstein and Crotty, 2013; Epstein, 2013; Stiglitz, 2015a; Lazonick, 2013, 2014; Kay, 2015).

In recent years, several economists have done econometric studies linking the size of the financial sector to economic growth and have found that there can be too much finance. Epstein and Crotty estimated that the financial sector in the U.S. was roughly two times too big to be justified by its contributions to the economy. Arcand et. al. (2015) and Cecchetti and Kharroubi (2012, 2015) have identified an inverted U-shaped relationship between the size of finance (measured by the level of private credit in the economy) relative to GDP and per-capita



economic growth. Arcand et. al. estimate a ratio of around 90 percent private credit to GDP to be the turning point; furthermore, they estimate the loss in economic growth associated with levels above this 90 percent threshold. Much work by others has confirmed this inverted U-shaped relationship and shown that it did not exist prior to the 1980s or so, suggesting that this negative impact is likely due to the characteristics of modern finance (Sturn and Epstein, 2014, and see below for more discussion).

An important issue is where these costs of too much finance come from. Cecchetti and Kharroubi (2015) argues that the link is related to a point made long ago by James Tobin (1984):

I confess to an uneasy Physiocratic suspicion, perhaps unbecoming in an academic, that we are throwing more and more of our resources, including the cream of our youth, into financial activities remote from the production of goods and services, into activities that generate high private rewards disproportionate to their social productivity.

These authors develop a model and provide some empirical evidence that an over-allocation of highly skilled workers in finance reduces R&D and productivity growth in non-financial sectors.

Other channels could also help explain the empirical finding that, after a certain size, a higher ratio of private credit to GDP reduces economic growth. Larger private financial systems might be associated with more "speculative finance," greater trading, and a sector less associated with providing credit to the "real economy." As Stiglitz (2015a) argued, these financial systems might be oriented to extract resources from the real economy rather than putting more resources into the real economy (also see Mason, 2015). This type of financial system might well be oriented toward much shorter-term investments (Haldane, 2011) and employ what William Lazonick calls a strategy of "divest and distribute" rather than "retain and reinvest," meaning more resources are extracted from non-financial companies. This orientation is also likely to lower productivity growth and investment and therefore economic growth.

These very large private financial systems might also be associated with what economists George Akerlof and Paul Roemer refer to as "looting," John Kay as "bezzle," and William Black as fraud. These activities can lead to high costs and, if widespread enough, lower economic growth.

The estimates by Arcand et. al. and Cecchetti and Kharroubi are, of course, subject to all the caveats that one must bring to bear when discussing such econometric exercises. Nonetheless, with these caveats in mind, we can use the estimates as one method to assess the allocation costs of speculative finance.

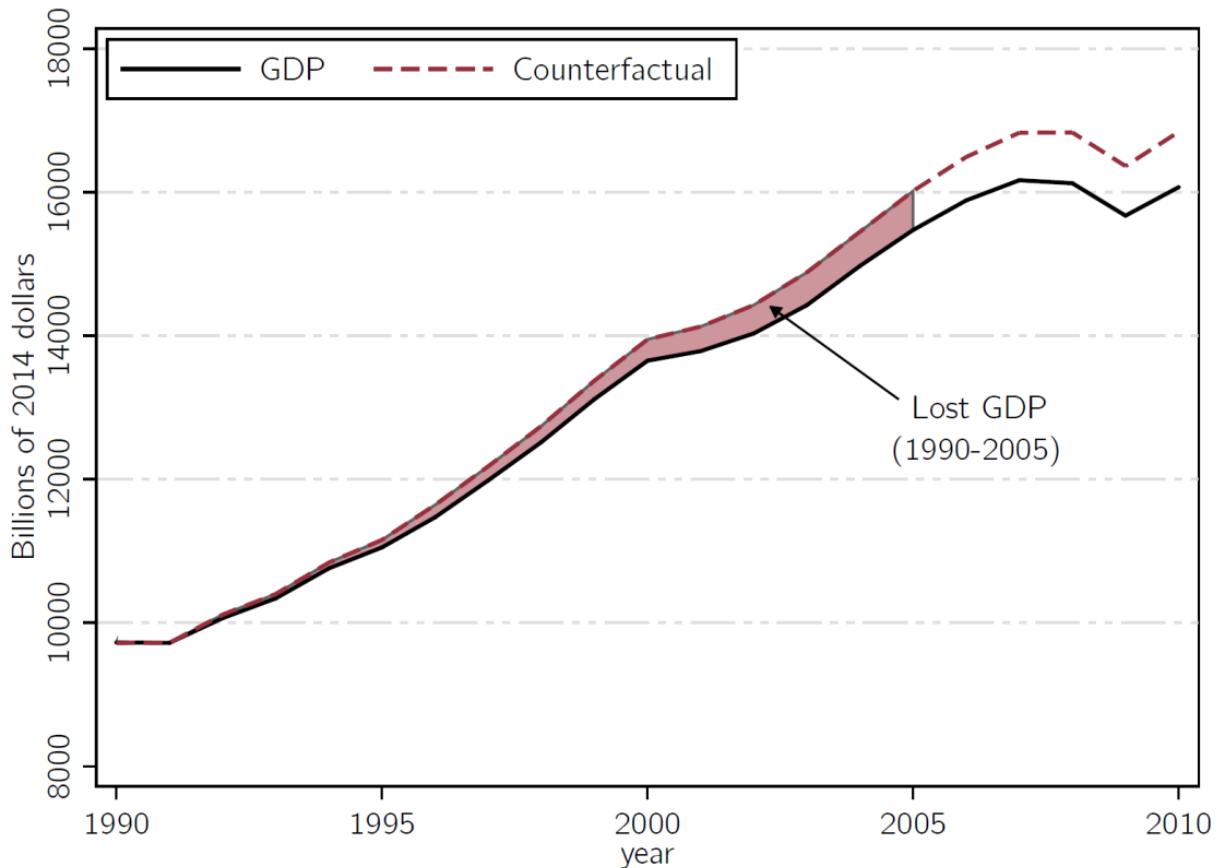
Over the period 1990–2005, the U.S. financial system was, on average, well over the private credit threshold that these authors identify for maximum economic growth. Indeed, the average ratio of U.S. private credit to GDP was 130 percent, well above the 90 percent level. For our estimates, we took this figure and applied the estimates in the literature to estimate the negative impacts of this excessive "size" of finance on the rate of economic growth over this time period.

We then estimated how much higher economic growth would have been over this period if there had not been too much finance and accumulated the cost of forgone growth as before. Figure 13 shows the estimated gap using the Cecchetti and Kharroubi estimates.²⁷

²⁷ See the appendix for more details.



Figure 13
Cost of “Too Much Finance”



Authors' estimates based on Cecchetti and Kharroubi (2012). See Appendix A for details.
For the compounded total cost associated with the shaded area, see Table 2, row 2, column 2.

Using these estimates, we calculated the cost of misallocation of resources over this period as between \$2.6 trillion and almost \$4 trillion (see Table 2, row 2, columns 1 and 2).

Note that we use the term “too much finance” due to its popularity in the literature, but the issue is not simply the size of finance. Probably more important is what finance does. With these gross figures we cannot distinguish between these two problems, but in the more detailed industry discussions below we will discuss many of the practices that contribute to the misallocation of resources and slower growth.

The Cost of the Crisis

The final big-picture cost is the cost of the financial crisis, which started in 2007–2008. Few doubt that the major precipitating cause of the crisis was the destructive and often illegal activities of the financial sector in the run-up to the great financial crisis (see Wolfson and Epstein, 2013; Stiglitz, 2015a). If one believes that our financial system is the only or predominant cause of the financial crisis, we should include the overall costs of the financial crisis when we consider the high cost of finance. But as discussed earlier, there is a debate about how much the financial sector can be blamed for the crisis. So, our strategy here is first to identify the overall cost of the GFC and then to discuss the portion of these costs it is very safe to ascribe to the broken financial system that existed in the run-up to the crisis. As we will see, by any measure these costs have been enormous. These costs include lost output due to the recession, lost human and physical capital due to wastage and obsolescence, lost wealth due to decline in asset values, and significant health and social costs resulting from unemployment, increased stress, and disruption.



First Pass

Many economists have analyzed the costs of the crisis and presented a range of estimates. The most conservative estimates measure the economic costs as the forgone output resulting from lower economic production due to the recession associated with the crisis. Hence, these estimates do not include loss of financial wealth or social or psychological costs associated with unemployment. The reason for excluding the former is that asset bubbles associated with increased wealth go up and down; since the increased wealth is often ephemeral, the changes roughly net out overall—though because of inequality, the ups and downs are often not symmetrical by group or by region. As for the psychological, social, and emotional costs, these are very difficult to measure in comparison to economic costs, though, to be sure, they are very important.²⁸

Even taking into account a limited range of costs—those associated with lost output from the severe recession—the estimated costs are extremely high. There has been a range of estimates of these more limited costs (e.g. Better Markets, 2012; Haldane, 2010; GAO, 2010). Better Markets estimated the cost at \$12.8 trillion; the GAO conducted a literature survey and found a range of estimates from a few trillion dollars to as much as \$10 trillion.

Here we utilize one of the most careful and conservative studies, done by economists at the Federal Reserve Bank of Dallas (Atkinson et. al., 2013; Luttrell et. al., 2013). They first look at the costs of the crisis measured as the gap in output between what actually happened and what would have happened had there not been a crisis. Like others, they present a range of estimates.

In terms of measuring the economic costs of the recession, there are two key issues. First, will the economy return to its long-term growth path, or has the crisis created permanent damage so that long-term growth is permanently lower? Second, what is the long-term growth path? Is it the path that was prevailing prior to the crisis, or have other factors, such as changes in demographics, lowered long-term growth? These issues are the subject of much debate and uncertainty and hence help to explain why there is such a range of estimates of the cost of the crisis.

In their first set of estimates of the costs of the crisis, the Dallas Federal Reserve assumed the U.S. economy would return to its long-term growth path by 2023. But they provide a range of estimates depending on whether one uses the pre-crisis growth path or one that is lower due to the aging of the population and other factors that will reduce long-term growth. Under this range of assumptions, Atkinson et. al. find that the cost of the crisis ranges from 40 percent to 90 percent of 2007 output. Measured in 2014 dollars, this amounts to \$6.6 trillion–\$14 trillion over the period between 2008 and 2023 (when the economy is assumed to return to its long-term growth path). We took their estimates and applied them to the level of GDP in 2007, on the eve of the crisis. Row 3 of Table 2 shows the results. The costs of the crisis range from \$6.6 trillion (lower bound, column 1) to more than \$14.5 trillion (column 2). The higher figure assumes (among other factors) that the economy's potential is higher, so the output lost each year due to the poorly performing economy is greater.

Considering Complications

Long-term damage to the economy Note that this estimate is almost certainly an underestimate. Importantly, as Ball (2014) and others have shown, the U.S. macroeconomy is likely to suffer permanent losses as a result of the crisis. So-called hysteresis—lost worker skills, obsolescent capital equipment, diverted careers, destroyed homes—means that the economy might never revert to its pre-crisis long-term growth path. As mentioned, these estimates assume that the economy returns to its pre-crisis path by 2023. But a number of economists have estimated that the crisis reduced the permanent potential of the economy by somewhere between 1.5 percent and 2.4 percent (see, for example, Furceri and Mourougane, 2012; CBO, 2013; Bosworth, 2015).

²⁸ For example, U.S. household net worth plunged \$16 trillion or 24 percent from the third quarter of 2007 through 2009. As is well known, this led to massive dislocation, evictions, and other tragic problems for many households. (Atkinson et. al., 2013; Mian and Sufi, 2011; Desmond, 2016).



If we take the mean between these two estimates and assume that potential output is permanently lowered by about 2 percent as a result of the crisis, then apply that estimate to the 2007 level of output measured in 2014 dollars, this permanent cost would amount to an additional cost of about \$10 trillion.²⁹

How Much of This Cost is Due to the Financial Crisis Itself? Now we ask the tricky question: How much of this cost is due to the crisis induced by the speculative financial system, as opposed to other factors that could have caused the recession and slower economic growth, such as oil price increases in 2008, underlying forces of secular stagnation, globalization, and profitability problems? As we mentioned earlier, there is a large body of research that shows that economic recessions associated with financial crisis are deeper, last longer, and are more costly than normal crises (e.g. Reinhart and Rogoff, 2009, 2014; Jorda, Schularick, and Taylor, 2013; Fatas and Mihov, 2013).³⁰ This suggests that, even if the crisis of 2007–2008 was not “caused” by the financial system, the fact that the crisis was exacerbated by the financial system made it much more severe.

How much more severe? Estimates by two of the most careful studies (Fatas and Mihov, 2013; Jorda, Schularick, and Taylor, 2013) indicate that recessions associated with severe financial crises could be twice as costly as those not associated with financial crises.³¹ Focusing on the postwar United States, Fatas and Mihov show that the cost of the 2007–2008 crisis is twice as great as the next most costly cycle (1981) and three to four times as great as the average postwar recession. And, as the authors note at the time of writing, the U.S. economy has still not returned to its pre-crisis growth path.³²

By this measure, and consistent with most of the other research in this area, we can estimate that a minimum of 50 percent of the cost of the crisis is due to the financial nature of the crisis. If, in Table 2, row 3, column 1, we apply this 50 percent estimate to the \$6.5 trillion estimated cost, we get our lower-bound estimate of roughly \$3 trillion for which the financial sector is responsible. We then estimate, as mentioned above, that a permanent decline of 2 percent of initial GDP would cost an additional \$10 trillion. Adding up these costs, the upper-bound estimated cost is more than \$13 trillion. In other words, it is hard to get a cost of the financial crisis that is lower than the upper-bound estimate of Table 2, taken from Atkinson et. al. So in using the Atkinson et. al. numbers, we are still being very conservative.³³

Are we ignoring the role of finance in creating the boom? Some might argue that we have counted the costs of finance in generating the bust but have not counted the boom in output generated by finance prior to the crisis. To get an accurate accounting, one might argue, we would need to subtract the extra output during the boom from the lost output of the bust.

The problem with this argument is that economic growth prior to the crisis was not on average greater than the average U.S. postwar economic expansion (Atkinson et. al., 2013). So we do not need to net out the “boom” from the costs of the crisis.

This might be surprising, but, in fact, it is what one would expect considering the headwinds created by our financial system and related economic forces and policies prevalent since the 1980s. As is now well understood, the U.S. has experienced a massive increase in inequality, partly associated with the particular forms and practices of our current financial system (see, for example, Stiglitz, 2015a). Higher inequality puts downward pressure on consumption because, among other reasons, the marginal propensity to consume of the rich is much less than that of the poor (e.g. Cynamon and Fazzari, 2015). This means that the dis-equalizing practices of our current financial system would have contributed, by themselves, to slower economic growth. The debt-led boom generated by

²⁹ We assume that the potential output falls by 2 percent (which is between the 1.5 percent and 2.4 percent estimates of Furceri and Mourougane. As in the Atkinson et. al. study, we use a 3.5 percent discount rate to discount future income. See also Moore et. al. (2004). We calculate the cost based on the 2007 level of output, which is \$16.9 trillion in 2014 dollars.

³⁰ For a dissenting voice see Howard et. al., 2011. We discuss Romer and Romer (2015) presently.

³¹ See, for example, Jorda et. al. (2013), figure 4, p. 24.

³² See Fatas and Mihov (2013), p. 29, Table 3.

³³ Romer and Romer (2015) argue that, in general, financial crises are not more severe than normal crises. But they show that the GFC is unusually severe, and say that this is probably due to the extreme financial characteristics of this crisis. See also Reinhart and Rogoff (2014).



finance simply brought the economy up to an average postwar economic expansion. In other words, in the lead-up to the crisis, the finance and debt-led economic "boom" that ended in bust simply compensated for the inequality-induced headwinds partly generated by the financial sector itself.³⁴

The Bottom Line: How Much Does Finance Overcharge?

What is the big-picture bottom-line cost of high finance? Here we present conservatively estimated lower-bound (left-hand column) and higher-bound (right-hand column) costs. (We do not say upper-bound because we believe even the higher-bound cost is likely to be an underestimate.) We calculate these costs for the period of 1990–2005. As just explained, in the case of the costs of the crisis, we include the likely costs moving forward to 2023.³⁵

Table 2
The Cumulative Costs of Finance, 1990–2005
Billions of 2014 dollars

	Lower bound	Higher bound
(1) Excess Income & Rents (1990-2005)	3,680.5	4,235.2
<i>Excess wages</i>	1,397.2	—
<i>Excess profits</i>	2,283.3	—
(2) Growth costs from misallocation (1990-2005)	2,658.6	3,981.0
(3) Recession Costs	6,566.5	14,549.7
Grand Total	12,905.6	22,765.9

Note: The excess income & rents calculations (row 1) are based on estimates reported in Philippon and Reshev (2012) and Philippon (2015). Excess wages are calculated as the difference between average wages in finance and a competitive benchmark based on relative human capital levels between the financial and non-financial sector. Excess profits assumes that half of all financial sector profits reflect non-productive activities. The higher bound of excess income was calculated based on figures on the user-cost of finance reported by Philippon (2015). Row 2 reports the cumulative costs due to slower growth as a result of having "too much finance." Estimates are based on the results reported in Arcand et al (2012) and Cecchetti and Kharroubi (2012). The lower bound figure is based on specification 1 of Table 1 in Cecchetti and Kharroubi, while the higher bound figure is based on specification 2 of Table 2 in Arcand et al. The cumulative sums in rows 1 and 2 assume a rate of return 2 percent. Row 3 reports the cumulative output loss due to the 2007-9 financial crisis based on Atkinson et al (2013).

The rows indicate the category of cost: The first rows (1) are the banker rents and excessive profits. These are calculated in two ways. In the left-hand column we show the estimates based on rent estimates and profit estimates separately as described above. In the right-hand column, our estimate is based on Philippon's estimates of user cost of finance for the period 1990–2005, compared with the lower estimated costs in the period of regulated finance (1960–1980). These costs are estimated to be in the range of \$3.6 trillion–\$4.2 trillion (row 1).

In the second main row, we estimate the costs from misallocation of capital and costly finance practices in terms of lost economic growth, as estimated from the work of Cecchetti and Kharroubi and Arcand et. al. These costs are estimated to range from \$2.6 trillion to almost \$4 trillion. Finally, we use results from the Dallas Federal Reserve Bank to estimate the costs of the GFC to the economy. Based on their results, we estimate the costs to be from \$6.5 trillion to \$14.5 trillion (row 3).

³⁴ In fact, a large literature has suggested that the recent financial crisis was created precisely by a "required debt-led asset bubble" to overcome the force of stagnation caused by increased inequality. On net, then, one would expect to see what we saw: "average growth," and then a debt-induced crash that followed.

³⁵ There is an issue of timing in adding up these different estimates. The estimates of rents (line 1) and growth costs from misallocation (2) refer to the period 1990–2005. The recession costs are measured to 2023 in order to account for the longer-term costs of the speculative financial system. In adding these together, we are implicitly measuring the costs through 2023 and assuming that the rents and growth misallocation costs from 2006 to 2023 are zero. Once again, this is obviously a very large underestimate of the true costs since, in the absence of major financial reform, the rents and misallocation costs will not simply disappear.



The bottom-line total is this: The accumulated amount of “overcharging” of finance from 1990 to 2005 is somewhere in the range of \$12.9 trillion to almost \$23 trillion. These are startling figures, representing as much as \$184,000 for the average household in the U.S.

Notice how inefficient this system is: The higher-bound level of rents and excessive profits going to the financial sector as a whole is estimated to be about \$4.2 trillion. Yet it costs society as much as \$23 trillion—more than \$5 for every \$1 transferred—to deliver that excess income to finance. This is the very high cost of high finance.

IV. Drilling Down: Who Pays, How, and Why?

The previous sections identified some very high overall costs of high finance that are paid by workers, customers, taxpayers, and society as a whole.

In this section, we drill down to look at the institutions, processes, and practices that have led to these costs. There are two aspects of this ground-up view: First, we focus on the sources of the rents and excessively high incomes of financial institutions. How did finance pay itself more than \$3.6 trillion in excess income (or rents) over the period 1990–2005 (Table 2, line 1)? What allowed finance to overcharge by so much? Who paid these excessive costs?

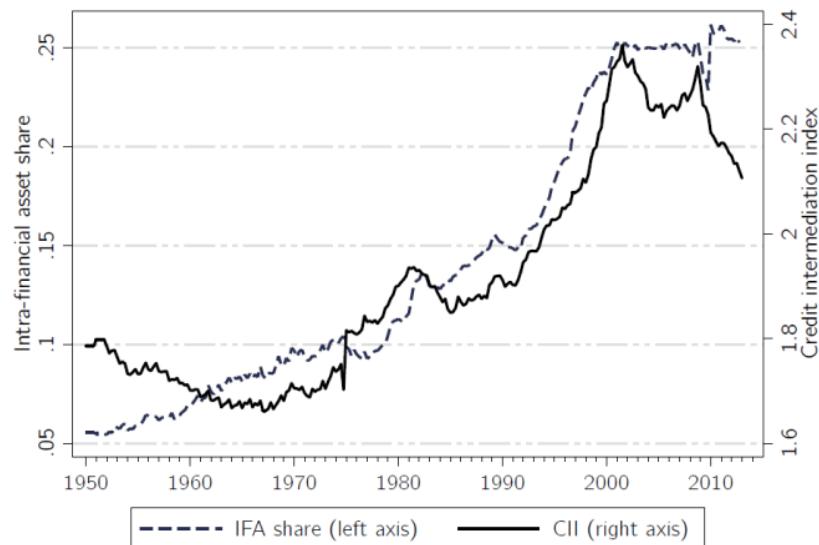
Second, we look more deeply at some of finance’s inefficient, inequitable, and destructive practices. These observations help us understand how, during their normal operations, some financial institutions misallocate financial and human resources and contribute to a lower level of economic prosperity than we could have otherwise achieved. This issue will particularly arise when we discuss some of the practices of private equity (PE) firms and, in particular, how they sometimes lead to excessive short-termism, disinvestment, and poor labor practices in non-financial companies they control. This discussion will help to reveal the sources of the more than \$2.6 trillion in mis-allocation costs associated with speculative finance (Table 2, line 2).

Getting the Rents

We start with this question: Where do these incomes and rents come from and who pays for them? A first answer is that there are a lot of “middle-men and women” along the chain of finance that take a cut. That is, as the financial system has become more complex and convoluted, the path between the initial provider of services and final user is often long and convoluted. Each intermediary takes a cut, and the cost is passed on down the chain. Indeed, as Figure 14 (below) shows, much of financial activity takes place between and among financial institutions, rather than with non-financial businesses and households (left axis) (Montecino, Epstein, and Levina, 2015; D’Arista and Epstein, 2011; Stiglitz, 2015a; Kay, 2015). It also shows that the number of links in the credit chain have been growing over time (CII,right axis) (Greenwood and Scharfstein, 2013).



Figure 14
Intra-Financial Sector Lending
(Intra-Financial Sector Assets/Total Assets; Credit Intermediation Index (CII))



Source: Montecino et al. (2015) and Greenwood and Scharfstein (2013).

The Credit Intermediation Index (CII) measures the number of links a dollar goes through from initial investment to final user.

Even though a good deal of this activity takes place between financiers, that does not mean that only wealthy traders and financiers bear the costs. Many of these intra-finance costs get passed on to workers who have pensions, and to middle-class and poor families who need to save and borrow money.

In this section we start with a focus on the \$3 trillion–\$4 trillion estimated in row 1 of Table 2. How does the financial sector manage to accumulate this amount of excess profits and excess wages? There are a number of key practices that create this money machine for finance. Among the most important enabling institutions is the government and the taxpayers who are required to foot the bill. There is financial deregulation, as we discussed earlier, but there are also the tax breaks and subsidies that the government provides to financial institutions. These include the carried interest tax break as well as the too-big-to-fail subsidies that allow large financial companies, which generate the highest rents, to be larger and more profitable than they otherwise would be (e.g. Better Markets, 2012; Kane, 2012). Thus, the government and therefore taxpayers, directly contributes to the after-tax income of financiers and profits of financial institutions.

The next question is: How do financiers create and appropriate the benefits that government policies underwrite? In the following parts of this section, we show how finance is able to appropriate these high returns through concrete practices in particular activities. We start with the asset management business because of its great importance and spectacular growth.

Asset Management

Asset management activities have been a source of major growth of the financial sector in the United States during the last several decades (Greenwood and Scharfstein, 2013). These services include investment advisory services, creating and providing investment vehicles such as mutual funds and other investment products, managing public and private pension plans, and managing individual retirement accounts (IRAs), 401(k)s, and other vehicles. Asset management services have grown from \$4 billion in assets managed by 51 firms in 1940 to more than \$63 trillion in assets with more than 11,000 advisors and almost 10,000 mutual funds registered with the SEC in 2014. The



industry is still growing, with assets under management doubling for most of the largest firms since 2004 (White, 2014). These financial services are sold and provided by a vast array of financial institutions: mutual fund companies such as Fidelity and Vanguard; insurance companies; traditional and investment banks that provide investment and custodial services. And they also include hedge funds and private equity firms that provide so-called "alternative" investments.

As Table 3 shows, the fees charged by asset managers and the returns they have acquired in the U.S. over the period 1990–2005 have been very large.

Table 3
Accumulated Asset Management Fees and Returns in the U.S.
1990–2005

Type of Income	1990–2005 (Accumulated and Compounded) (2014 dollars)*
Asset Management Revenues	\$2 trillion
Commissions and Fees	\$1.5 trillion
Total	\$3.5 trillion

*We use a 2 percent rate for compounding over the 1990–2005 period.

Source: Authors' calculations from Greenwood and Scharfstein (2013).

These incomes are substantial. Note that the commissions and fees alone can account for almost half of the rents identified in Table 2. A big question is: How much of this income is rent, that is, excessive payments for the services provided? To gain insight into this question, it is necessary to look more closely into the particular industries and markets where these services are provided and look at the practices of finance there.

This massive increase in asset management returns, fees, and commissions has resulted, in part, from a revolution in the ways in which retirement income has been created by and for American households. Today, Americans' retirement income is derived from many sources, including Social Security, traditional pensions, employer-based retirement savings such as 401(k)s, and IRAs. This contrasts dramatically with 40 years ago, when 70 percent of retirement assets were provided by government or private traditional pensions (defined contribution plans). In 1978, IRAs barely existed and defined contribution plans, such as 401(k)s, accounted for less than 30 percent of assets. By 2013, IRAs and defined contribution plans accounted for more than 60 percent of assets, with IRAs accounting for one-fifth of the total (Council of Economic Advisors, 2015, pp. 1–6). Defined contribution plans and IRAs are closely linked since most of the money flowing into IRAs comes from rollovers from an employer-based retirement plan, not direct contributions. In 2013, more than 40 million families have more than \$7 trillion in IRAs. More than 75 million families have an employer-based retirement plan, own an IRA, or both, totaling about \$12.4 trillion (Hiltonsmith, 2015). In addition, public pension funds hold trillions of dollars of assets for workers that are managed by financial managers.

In recent years there has been a good deal of research looking at the performance of these financial services institutions (see, for example, Davis et. al. 2016; Appelbaum and Batt, 2014; Schultz, 2011), and an enormous number of articles, some of them discussed below. The upshot of all this research is that many asset managers of various types significantly "overcharge" American households through excessive costs and fees and subpar performance.



Overcharged in the Asset Management Business

The ways in which different asset managers and advisors overcharge may vary, but generally comprise one or more of the following techniques: high fees, high trading costs (high per-trade costs and/or excess trading), poor market timing that enhances the manager's income but not the investor's, and increased risk exposure without increased returns (CEA, 2015, p. 17). This overcharging stems from the fact that there is often a conflict of interest between the asset manager/advisor and the investor: In a zero-sum world, the higher the manager's income per dollar invested, the lower the investor's return, unless the advisor puts the investor in higher-return assets, which does not generally appear to be the case. This creates an incentive on the part of the manager to benefit at the expense of the investor, especially if the manager is not subject to significant competition from other managers who deliver more genuine benefits.

For this overcharging to work and be sustained in the long run, there need to be structural problems in the asset management business that prevent many investors from voting with their feet—as the theory of perfectly competitive markets would suggest—and moving their money to better-performing investments. The factors that inhibit this useful competition are: contrived complexity and opacity that make it difficult if not impossible for investors to understand the true costs or risks; lack of enforcement of fiduciary duty on the part of managers; and common anti-competitive and costly practices within the asset management business that are not challenged by regulators.

In general, there are two major mechanisms that asset managers use to overcharge customers: One is charging excessive fees while in many cases generating returns that are no better or even inferior to lower-cost investments; the second, more extreme mechanism, is actually expropriating the assets of the investor while generating returns for the asset manager. There are many ways asset managers do this, from placing investors in inappropriately risky investments to outright theft.

A small bang for the buck

Charging excessive fees while delivering mediocre returns is the most common form of overcharging customers. The mechanisms and costs vary somewhat depending on the type of saving product, but these mechanisms almost always result from conflicts of interest between the agent (the investment advisor of the manager) and the principal (the investor/saver). Table 4 below lists the conflicts that can arise in the case of investment advice.



Table 4
Conflicts of Interest and Conflicted Advice in the Mutual Fund Industry

Type of Payment	Description of Adviser's Monetary Interest	Potential Consequences
<i>Ongoing revenue-sharing arrangements, including 12b-1 fees</i>	Mutual funds may make ongoing annual payments to advisers based on the adviser's clients' investments, often specified as a percentage of assets. Known by the SEC rule that created them, 12b-1 fees are one example of ongoing revenue-sharing payments.	Creates a financial incentive to direct clients to funds with higher revenue-sharing payments.
<i>Front-end sales load, back-end sales load</i>	Mutual funds may charge investors a fee when an investor buy shares (a front-end load) or sells shares (a back-end load). Most or all of this charge is generally passed on the advisers selling the product.	Create a financial incentive to steer investors into funds with higher loads and that pass on a larger of that load to advisers. Loads also encourage excessive trading as more trades increase load payments.
<i>Sales Targets, payouts</i>	Advisers may receive payouts when they achieve certain sales targets. The payout can vary by asset class and product. In some cases, proprietary products receive higher payouts.	Creates a financial incentive to recommend trading and selling specific products over others based on the schedule of payouts.
<i>Variable commissions</i>	Advisers may receive compensation through commissions for selling individual stocks, insurance products, and other financial products. The amount of the commission can vary across products and asset classes.	Creates a financial incentive to recommend products that generate higher commissions and can encourage excessive trading.

Source: Council of Economic Advisors, 2015.

What is the bottom line here? There has been a good deal of academic research that strongly indicates that these conflicts of interest lead to highly costly, advice and mis-direction of investments. The Council of Economic Advisors, in a conservative estimate, suggests that these conflicts lead to an overcharging of at least 1 percent a year. On a \$100,000 nest egg, this cost amounts to almost \$150,000 in lost income over 40 years, most of which goes to rents and profits for the asset management firm.

Mutual Funds

What are the sources of these costs? We can break them down further. The Council of Economic Advisors has estimated that the cost is at least a 1 percent reduction in the return on retirement savings (CEA, 2015, p. 17). Suppose the investment recommended by the asset management company and an alternative low-cost investment both earn a gross return of 6.5 percent (see Table 5 below). This is likely an underestimate of the cost because it assumes that the portfolio's returns are the same.

The two columns compare the costs associated with an inexpensive investment option (left-hand column) and the typical IRA recommended by an average advisor/manager. The left-hand trading costs reflect typical index funds that do not engage in excessive trading: .05 percent versus .20 percent. Mutual fund expenses are typically .20 percent versus 1.30 percent. And 401(k) plans have administrative costs that typically reduce returns by .25 percent. In other cases (not shown in this table), the cost for the alternative is .5 percent versus 1.5 percent for a typical fund.



Table 5
Portfolio Costs of Conflicted Advice

	401(k)	Recommended IRA
Portfolio's gross return	6.50%	6.50%
-Trading Costs	0.05%	0.20%
-Mutual Fund Expenses	0.20%	1.30%
-401(k) plan expenses	0.25%	0.00%
Saver's net return	6.00%	5.00%

Source: CEA, 2015

These costs add up. The CEA estimates that these losses could mean that, for the typical saver, over the course of their lives and retirement, their retirement savings could be 25 percent lower than would be possible with a lower-cost investment plan.

Even these high costs could be an underestimate. John C. Bogle, founder of Vanguard Investments and advocate for lower-cost investments, recently published a study of costs of actively traded investments versus low-cost index fund investments for households (Bogle, 2014).

Table 6
Costs of Actively Managed Stock Portfolio vs. Passively Managed Portfolio

	Actively Managed	Index Funds	Index Advantage
Expense Ratio	1.12%	.06%	1.06%
Transactions Costs	0.50	0.00	0.50
Cash drag	0.15	0.00	0.15
Sales Charge/fees	0.50	0.00	0.50
All-in investment expenses (total)	2.27%	0.06%	2.21%

Source: Bogle, 2014.

In this case, the advantage of the low-cost investment is more than 2 percentage points.

Again, this cost difference accumulates significantly over time. As the table below shows, the difference in wealth accumulated after 10 years is 13 percent; after 40 years it is a full 65 percent.



Table 7
Accumulated Wealth Loss of Actively Managed Funds

Accumulated Wealth Accumulation by Retirement Plan Investors, Assuming a 7% Nominal Annual Return on Equities

	Actively Managed	Index Fund	Index Enhancement	
Gross Annual Return	7.00%	7.00%	-	
All-in costs	2.27	0.06	-2.21%	
Net annual return	4.73	6.94	+2.21	
Accumulation Period				% Increase
After 10 Years	\$44,000	\$50,000	\$6,000	13%
After 20 Years	130,000	164,500	34,500	27
After 30 Years	286,000	412,000	126,000	44
After 40 Years	561,000	927,000	366,000	65

Source: Bogle, 2014.

Another estimate is based on the work of Robert Hiltonsmith at Demos, who looked at an estimate somewhere between these two studies. His work suggested that the excess cost of these mutual funds over a low-cost alternative, for a given rate of return on assets, is 1.5 percent (Hiltonsmith, 2014). Hiltonsmith found that high fees from bad investments translate into a nest egg that is nearly 30 percent lower for the typical retiree.

In terms of just fees, Hiltonsmith found that in 2013 retirement savers paid a total of \$73 billion in fees, an average of .6 percent of their total assets. If they paid lower fees closer to those of index funds, say .4 percent, this alone would translate into a savings each year of nearly \$25 billion. It would also translate into higher returns; index funds have in fact often outperformed actively managed funds. Hiltonsmith (2015) suggests that taking these higher returns into account could lead to an additional \$60 billion a year in income.

As we indicated earlier, even these large estimates might underestimate the costs. The reason is that we have compared these costs with the costs associated with other defined contribution (DC) plans with lower fees and less trading. But we could compare these costs and returns with defined benefit (DB) plans. According to the National Institute on Retirement Security, DB plans have 50 percent lower costs, on average, than DC plans. These superior net returns result from superior "longevity risk-pooling," better asset allocation, and lower fees. The former two result from the fact that the assets structure and risks are pooled across many participants at various ages and other relevant demographic characteristics. With respect to longevity risk, individuals do not have to pay extra to insure against a long length of life because this risk is being offset by those whose lives will not be so long. Similarly, when individuals do live longer, they can still remain invested in equities (which have higher returns), because there are others in the pool who are younger. The improved net benefits of DB plans compared with DC plans stem



from superior investment returns (26 percent), better longevity risk-pooling (15 percent) and better maintenance of portfolio diversification (5 percent) (B. Almeida and W.B. Fornia, 2008).³⁶

An updated version of the study shows similar results, with cost savings allocated somewhat differently. (The results are shown in Table 8 below.) As in the earlier study, the net benefit advantages are still about 50 percent. Note that the fee advantage is quite significant and even somewhat higher (27 percent).

Table 8
Defined Benefit vs. Defined Contribution Plans

Tallying DB Plan Cost Savings Compared to Individually Directed DC Plan

Source	Savings
<i>Longevity risk pooling</i>	10%
<i>Maintenance of portfolio diversification (staying invested in equities)</i>	11%
<i>Lower fees and professional management</i>	27%
<i>All-in cost savings in DB plan</i>	48%

Source: Fornia and Rhee, 2014

Why are fees so high? As with much of finance, the keys to excessive rents obtained by financial firms and traders are: (1) opaqueness, often deliberately created, by excess complexity, lack of disclosure, and outright misleading information facilitated by light regulation; (2) high market concentration within specific lines of business leading to low competition; (3) government subsidies of various types, including bailouts, tax subsidies, accounting rule enabling, and legal advantages created by legislative, administrative, or legal engineering; (4) withdrawal of public provision that makes a ready market for finance and makes people vulnerable to all of these channels for excess income and returns and 5) weak fiduciary rules that allow conflicts of interest to flourish

Most of these mechanisms apply in the case of asset management. There is enormous complexity in the provision of asset management services. There are many intermediaries that stand between ultimate savers and the investments made. In fact, the number of "middle-men" is astonishing (Hiltonsmith, 2014). Each of them—stockbrokers, record-keepers, plan sponsors, investment salespeople, and the list goes on—gets a cut that lowers the income flowing to a household. This is enabled by the faux diversity—what economists call product differentiation—typical of oligopolistic market structures, where firms that sell similar products try to distinguish themselves by superficial yet sometimes costly differences.

The complexity and lack of transparency ensures that employees' and other savers' knowledge is not sufficient to assess the true costs and benefits of different investments. The employer, on the other hand, lacks an incentive to learn more about the true net benefits since employers often do not share in the benefits. It is easier for employers to hire consultants to choose the investment package and believe their responsibilities have been fulfilled. These consultants are often in cozy, symbiotic relationships with asset management companies, and their fees are primarily paid by the employees. According to a survey by the Investment Company Institute, employees currently pay about 91 percent of all fees, an increase from several years ago when they reportedly paid 78 percent (as quoted in Hiltonsmith, 2014).

³⁶ Unfortunately, according to a brilliant book by Ellen E. Schultz, defined benefit plans are no panacea. She details the ways in which some corporations raided these employee funds to bolster company returns and fund large payouts to their top executives (Schultz, 2011).



Academic studies using careful econometric controls support these basic findings on the impacts of conflicts of interest of asset managers and advisors. Bergstresser et. al. (2009) show that funds sold through intermediaries that have distorted incentives have lower risk-adjusted returns versus those sold directly to savers. Del Guercio and Reuter (2014) confirm Bergstresser's results and in addition estimate that directly sold funds with low rates of trading and therefore lower transaction costs generate returns that are 1.12–1.32 percentage points higher. Some studies find underperformance is almost 3 percent higher among investments made by firms with these conflicts of interest (Chalmers and Reuter 2014).

In addition, households receive false and costly information from advisors who have an incentive to mislead and are able to do so because of a relatively lax legal and regulatory environment. There is substantial evidence that this is significant and even commonplace. For example, some economists recently reported on an "audit exercise" in which trained auditors met with financial advisors and presented them with two possible portfolios: one that would have relatively high fees and produce lower returns to the "clients," and another that would do the opposite. The study showed that the advisors, perhaps not surprisingly, tended to promote the higher-cost, lower-return portfolios to the clients (Mullainathan, Noeth, and Schoar, 2012). Chalmers and Reuter (2014) find that flows directed by asset managers respond to the fees those funds pay asset managers. When these fees go up by .5 percent, flows to those funds increase on average by 17.2 percent.

Facilitating this overcharging is an uncompetitive and inefficient market structure that makes it very difficult for savers to improve their returns and lower their costs. In this market, the more than \$10 trillion households had invested in IRAs and 401(k)-like plans are divided among thousands of "different" mutual funds, which, in fact, are not all that different. This division prevents investors from benefiting from the lower costs that come from pooling and economies of scale; instead, it simply increases the number of intermediaries taking a cut of the profits (Hiltonsmith, 2014).

It is difficult to add up these excessive fees and excessive rents accruing to asset managers into one number to compare with Table 2 figures on rents. Using the estimates of excess costs discussed above, such as that of John Bogle in Tables 6 and 7, it appears that more than 90 percent of these costs represent excessive fees. From Table 3, this is \$1.35 trillion of the \$1.5 trillion of asset management fees accumulated between 1990 and 2005.

Help is on the Way?

The Dodd-Frank financial reform law passed in 2010 called on regulators to study and issue new regulations to protect investors from conflicted advice. In spring, 2016, the Obama Administration's department of labor instituted new rules requiring financial advisers and brokers handling retirement and 401(k) accounts to act in the "best interests" of their clients. (Department of Labor Fact Sheet). The rule only applies to tax-advantaged accounts and therefore is limited, but even here, the financial industry has battled these rules with great vigor and has brought law suits and lobbied Congress to block it. If allowed to be implemented, the rule should help, but it is far from a "done deal".

Private Equity

These high costs of high finance have gotten even higher in recent years because of the turn by some private and public pension funds to so-called alternative investments, including private equity and hedge funds. In *Private Equity at Work*, a path-breaking study of the private equity industry, Eileen Appelbaum and Rosemary Batt identify the multiple costs that the industry imposes on savers and on the economy. PE has profound implications not only for the returns that investors receive, or for the rents acquired by financiers, but for the very ways in which corporations are managed and the pay and jobs of millions of workers. From the perspective of this report, PE firms not only have a large impact on the amount of rents generated for the financial sector (line 1 in Table 2), but also account for some of the resource misallocation and growth of our speculative financial system (estimated in line 2 of Table 2).³⁷

³⁷ Given the state of our data and knowledge, it will not be possible to estimate a precise figure for these overall costs from PE or hedge funds.



According to the data in Appelbaum and Batt (2014), PE firms emerged, "re-branded" from the hostile takeover movement of the 1980s and financed by junk bonds and other financial "innovations" spearheaded by Michael Milken and Drexel Burnham. The size and impact of the PE firms have grown significantly since then. The same study shows that, since 2000, nearly 11,500 companies—representing almost 8 million employees—have been purchased by PE equity firms. Appelbaum and Batt argue that private equity firms' financial strategies are designed to extract maximum value from the companies they buy and sell, often to the detriment of those companies and their employees and suppliers." They show that PE firms' activities include buying companies and extracting dividends by loading them with high levels of debt and selling assets. These actions often lead to financial distress and a disproportionate focus on cost-cutting, outsourcing, and wage and benefit losses for workers, especially if they are unionized.³⁸

The reach of PE firms is wide. According to Appelbaum and Batt, in 2013, 2,797 private equity firms were headquartered in the United States, with investments in 17,744 U.S. companies. Appelbaum and Batt note that roughly 35 percent of PE investments come from U.S. pension funds, especially public pension funds. Thus, the actions of private equity partners affect not only the employees in the companies they own and the suppliers with whom they do business, but also the retirement income of millions of working and retired Americans.

The basic structure of PE firms is as follows: General partners (GPs) own and control the PE firms with an equity investment of only 1–2 percent. They get equity investments from limited partners (LPs) such as pension funds, which have virtually no say in the decisions of the PE firm and pay fees to the GPs based on the so-called 2-and-20 rule: 2 percent of invested capital and 20 percent of profits over and above a minimum threshold, usually an 8 percent return. Based on this capital, the PE firm then borrows heavily from banks and other investors to buy target firms (portfolio companies), extracts other fees and profits from these companies, and typically loads them up with significant amounts of the debt used by the PE firms to purchase them.

Appelbaum and Batt note:

The structure of these deals allows the GPs to take high risks using other people's money. Their goal is to sell the portfolio company in three to five years at a higher price than they paid to acquire it. The downside of the extensive use of debt is that it increases the risk that the portfolio company will experience financial distress. On the upside, however, debt magnifies the returns to the private equity fund. The general partner, who has put up 2 percent or less of the equity, has little at stake if debt drives the acquired company into bankruptcy, but much to gain from a successful exit from the investment. This is a classic case of what economists call "moral hazard."

Key to these high-risk strategies and the returns for the PE firm are "financial engineering strategies such as the substantial use of debt, junk bonds, and other high-risk financial tools; asset sales for profit; and dividend recapitalizations" (Appelbaum and Batt, 2014).

Private equity companies are thus able to extract enormous rents because of several related factors: (1) their enormous use of leverage; (2) their application of financial engineering to enhance profits; (3) their ability to shift risks to the companies they own and to their outside investors; and (4) the lack of transparency and oversight facilitated by the lack of regulations, including strong fiduciary responsibility laws, that govern their behavior (Appelbaum and Batt, 2014, 2016). In addition, (5) private equity owners use a tax dodge ("carried interest") that allows them to earn income that is taxed at a lower rate as if it were capital gains. As a result, taxpayers substantially subsidize PE rents and costly activities.

While econometric studies differ on the employment impacts, Appelbaum and Batt show that PE's impact on employment may be adverse. This is particularly true when the PE companies take over large firms. The PE firms

³⁸ As we mention below, the empirical research on the job and productivity impacts of PE is somewhat mixed. See Davis et. al. (2011; 2013).



have little expertise for managing and restructuring such firms; their main goal is to use financial engineering to extract maximum short-run returns for the GPs of the PE firms. This is particularly ironic considering the fact that a significant amount of worker pension funds is invested in private equity. Approximately one-fifth of PE funding comes from public pension funds. (For contrasting studies of the effects on employment, see Davis et. al, 2011; 2013.) These costs can be substantial and can help explain the costs identified in Table 2 related to misallocation and lower growth from short-termism and destructive financial behavior.

One reason why PE firms can have such a negative impact on the fortunes of the companies they control is that PE firms are able to avoid significant labor regulations of these activities because they are seen as investors rather than employers. In terms of financial activities, prior to the passage of the Dodd-Frank Act of 2010, PE firms were subject to virtually no financial regulation whatsoever. Since then, PE firms must register with the Securities and Exchange Commission (SEC), but serious questions remain as to whether the SEC has the capacity or the will to subject their financial dealings to serious scrutiny (Appelbaum and Batt, 2016).

Research on the returns to investors indicates that PE fails to provide significant returns to pension funds and other investors relative to other, safer, and more liquid investments. Appelbaum and Batt review the academic research and find that the median private equity fund does not beat the stock market, and others show that returns for the median fund are only slightly above the market. The most positive academic findings for private equity compare its performance to the S&P 500: They report that the median fund outperforms the Standard & Poor's 500 by about 1 percent per year, and the average fund by 2 to 2.5 percent. The higher average performance is driven almost entirely by the top quartile of funds—and particularly the top decile. With the exception of the top-performing funds, returns do not cover the roughly 3 percent additional return above the stock market that is required to compensate investors for the illiquidity of PE investments. When PE funds are compared to indices of smaller publicly traded companies whose size is comparable to most PE-owned portfolio companies (the S&P 500 comprises much larger corporations), then the average PE fund barely performs better, and the median fund just matches stock market returns. (Appelbaum and Batt, 2014).

There are many studies that support Appelbaum and Batt's findings on the returns to investors such as pension funds, but a particular source of concern for the accuracy of these studies has been the refusal of PE firms to reveal all their fees to limited partners or to the authorities (see, for example, Pahlippou, Rauch, and Umber, 2015; Smith, 2015/2016). Some estimates suggest that these hidden fees amount to as much as 6 percent of equity invested on behalf of limited partners.

In a series of important reports on the California Public Employee Retirement System's public pension fund (CalPERS), Yves Smith at the Naked Capitalism blog has revealed key reasons why these excessive costs and poor investments are so persistent: Managers who run the public pension funds often have an interest in investing in these funds, even though they often earn poor returns for the fund itself. These funds may appear to deliver high returns, which helps them meet their benchmarks, but the problem is that the hidden fees and costs undermine the returns to the funds themselves. This is another example of conflicts of interest.

Hedge Funds

Public pension funds have invested not only in private equity but also in hedge funds. Like private equity, hedge funds represent another "alternative investment" that appears to have high costs and relatively low returns for investors. As a result, as in the case of private equity, this overcharging leads to potentially significant losses for investors and large rents for hedge fund managers (Parisian and Bhatti, 2015; Cassidy, 2014; Lack, 2012). By some estimates, hedge funds managed \$2.7 trillion in assets in 2015 (BarclayHedge.com). It is difficult to get precise data on hedge funds and their performance because of their lack of transparency and regulation. This makes it very difficult to assess their net benefits. Nonetheless, those who have looked carefully at hedge funds find that they



charge high fees and have provided evidence that the risk-adjusted returns they provide are not high enough to justify these costs.³⁹

One might think that this is not really a problem from a societal point of view: It is just one group of wealthy people ripping off another group of wealthy people. But in fact, in recent years, many pension funds that manage savings for workers and non-wealthy households have invested heavily in hedge funds. In fact, as of mid-2014, \$450 billion in U.S. public pension assets was invested in hedge funds, and one-fifth of institutional investor capital in hedge funds came from public pension funds (Smith, 2015/2016).

We first focus on the generation of excessive incomes for hedge fund managers at the expense of hedge fund investors. The standard set of fees paid by investors to hedge fund managers highlights simply and starkly the high costs of this investment product. Hedge funds, like many private equity firms, use a 2-and-20 fee structure, as explained above. Some pension funds and other investors are able to bargain down these costs to some extent, but, as far as the data allow one to tell, the management costs are still significantly higher than for any other pension fund investments (Parisian and Bhatti, 2015; Lack, 2012a; Cassidy, 2014). In fact, the average fees that the typical pension fund pays for other kinds of investments amount to less than half a percentage point.

In addition, these are not the only fees investors pay to hedge funds. Significant evidence suggests that hedge funds charge large hidden fees for administrative, trading, and legal costs that are charged directly back to the investor and are often not disclosed. In fact, it is not uncommon for hedge funds to require pension funds to sign contracts stipulating that hedge funds do not have to disclose these fees, and that pension funds do not have the right to demand disclosure (Parisian and Bhatti, 2015).

In light of these dramatically high costs, the only possible justification for investing in hedge funds is that their returns are significantly higher than other investments for a given risk level. Or, to put it differently, that for a given return, their risk levels are significantly lower.

Hedge funds have naturally claimed that their returns are higher and their risk levels are lower. But numerous rigorous studies indicate that this is simply not the case. Simon Lack, an analyst and hedge fund operator offers this stark assessment: "In my research, I found that if all the money that has ever been put in hedge funds had been put in Treasury bills instead, the results for investors would have been twice as good as they have been in reality" (2012b).

In addition, hedge fund operators claim that owning hedge funds makes an investor's portfolio less risky because hedge funds have a low correlation with other investments (i.e., the overall market). If true, this means that when other investments tank, hedge fund investments will retain their value or even go up. But the evidence does not support this claim. Instead, Lack presents evidence that, in recent years especially, hedge funds returns are highly correlated with the general market. Some might doubt Lack's evidence, since he has become known as a strong critic of hedge funds, but he is not alone in arriving at this conclusion. For example, Roger Ibbotson, a Yale finance professor whose results are often cited by hedge fund defenders, found that most of the hedge fund returns are due to the "beta" of being correlated with market returns rather than the "alpha" of superior performance independent of the general market (Cassidy, 2014; Ibbotson, Chen, and Zhu, 2010).

They find that over the period of 1995–2009, average hedge fund returns were 7.63 percent, which is lower than the S&P 500 return of 8.04 percent: "We estimate a pre-fee return of 11.42%, which we split into a fee (3.78%), an alpha (3.01%), and a beta return (4.62%)" (Ibbotson et. al., 2010). This means that most of the return to investors is based on correlation with the general market (beta), and the positive alpha that is due to something specific to the fund accrues entirely to the hedge fund managers in costs and fees.

³⁹ CalPERS decided in 2014 to end its hedge fund investments but is continuing to invest in PE.



Why do so many investors invest in hedge funds despite their lackluster and even poor performance, especially given that these investments are relatively illiquid? Lack attributes the low returns to the fee structure that became a norm throughout the industry, and lack of transparency. Why then are investors, including pension funds, willing to invest in hedge funds? Ultimately, says Lack, investors make the mistake of thinking that if hedge funds make a lot of money, then the investors do too. In fact, it is the hedge fund managers that keep most of the income for themselves (Lack, 2012b).

But as astute critics, such as Smith, John Cassidy, and many others have suggested, there is a profound principal-agent problem here. Pension managers are pressured to meet performance requirements, or benchmarks (Parenteau, 2005; Cassidy, 2014; Smith, 2015/2016). The hedge fund industry has a massive promotion machine designed to convince beleaguered pension managers that hedge funds can deliver superior returns, and lack of transparency and complex analyses makes it easier to fool them (Cassidy, 2014; AFSCME, 2016).

It is impossible given our current state of knowledge and data to determine the overall amount of rents generated by the hedge fund industry or the costs they impose on pension funds and other savers. But from the general discussion above of asset managers and the costs associated with these investments, we know that these are substantial.

Predatory Lending and Other Aspects of “Banking on the Poor”

Financial practices and incomes have contributed greatly to income and wealth inequality in the U.S. in recent decades. In addition, some financial practices contribute to the creation and maintenance of poverty. Nowhere are these connections between finance, inequality, and poverty more apparent than in the provision of banking services for poor and financially stretched households.

The most dramatic and costly recent example of predatory practices in banking service provision has been the subprime lending fiasco, which stripped lower- and lower-middle-income families of millions of dollars of wealth (see above). But massive income- and wealth-stripping occurs in less dramatic but still very damaging ways in the everyday provision—or lack thereof—of banking services to these households.

According to recent estimates, 20–40 percent of the population must rely to some extent on non-traditional financial services, including payday lenders and pawn-brokers, for financial services (Baradaran, 2015). The costs of these non-traditional financial services are extremely high, and the major reason households incur them is that they do not have access to standard financial services. By some calculations, more than 93 million people do most or all of their banking through “fringe” lenders (United For a Fair Economy, 2015; Office of the Inspector General of the Post Office, 2014). Those accessing fringe banking include the unbanked, who do not even have a checking account or savings account, and the underbanked, who have a bank account but also used at least one non-bank financial service during the year. As with other aspects of inequality, some groups are hit harder than others. The ranks of the unbanked or underbanked include 53.6 percent of black households and 46.4 percent of Hispanic households (United for A Fair Economy, 2015).

Non-bank financial services include check cashing, money orders, payday lending, pawnshops, rent-to-own agreements, and other similar products (U.S. Post Office, 2014). In 2013, U.S. households paid \$103 billion in fees and interest for these services, including: \$22 billion for payday lending services; \$22.1 billion for installment credit, \$39.7 billion for subprime auto loans and student loans; \$9.8 billion for check cashing and similar services; and more than \$9 billion for tax preparation, checking accounts, and similar operations. According to the U.S. Postal Service report, the average financially underserved household has an annual income of \$25,500 and spends about \$2,412 of that on alternative financial services and interest. This amounts to about 9.5 percent of their income (see also Baradaran, 2015). This is a huge expense for such families. Some startling figures suggest how much: According to some estimates, people who filed for bankruptcy in 2012 were just \$26 per month short of covering their expenses (U.S. Postal Service, 2014).



Payday lending is among the more egregious types of fringe banking to which poor and lower-middle-class households are subject. Twelve million people use payday loans annually, and the average loan size is \$375 with \$520 in interest (PEW, 2013). The interest rates on payday loans run, according to Baradaran, from 300 to 2,000 percent per annum, with an average just shy of 400 percent. According to the PEW Trusts, this makes payday loans unaffordable. Only 14 percent of borrowers surveyed can afford the typical \$400 needed on average to pay off the lump-sum charges of the loan. Payday lenders cluster in low- to moderate-income neighborhoods, with these lenders being eight times more concentrated in neighborhoods with the largest share of African Americans and Latinos as compared with whites (UFE, 2014).

While payday loans are often thought of as short-term, the truth is that since many borrowers cannot pay off the loans in the short term, they have to roll them over. An average borrower uses eight loans lasting 18 days each, and thus has a payday loan for five months on average each year (PEW, 2013).

Moreover, while many think that these payday loans are used to pay for unexpected expenses, many payday loans are in fact used to cover normal, repeated living costs. According to the PEW Trusts, 69 percent used payday loans to cover a recurring expense such as utilities, credit card bills, rent, or mortgage payments, while 16 percent used them to deal with an unexpected expense, such as a car repair or medical expense (PEW, 2013).

It might seem that payday lending and other "fringe banking" is carried out by small financial institutions on the margins of the financial system, but this is not the case. It is becoming increasingly clear that many of these financial institutions are closely connected to the core banking and financial institutions of the economy (Connor and Skomarovsky, 2013; Baradaran, 2015; Silver-Greenberg, 2013). First, major financial institutions such as JPMorgan Chase, Bank of America, and Wells Fargo enable these high-cost practices to occur. These relationships with the big banks provide "critical links for the lenders, enabling, for example, the banks to withdraw payments automatically from borrowers' bank accounts, even in states where the loans are banned entirely," and "In some cases, the banks allow lenders to tap checking accounts" even after the customers have asked the banks to stop (Silver-Greenberg, 2013).

The major banks have other, more direct connections as well. A study by the Public Accountability Initiative estimates that big banks provide \$1.5 billion in credit to publicly held payday loan companies and an estimated \$2.5 billion–\$5.3 billion to the industry as a whole. Publicly traded payday lenders paid nearly \$70 million in interest to their creditors, such as big banks, in 2009 (Connor and Skomarovsky, 2013). In addition, Bank of America and its subsidiaries own significant stakes (more than 1 percent) in four of the top five publicly held payday lenders.

Some of the ties between payday lenders and the big banks are more subtle. For example, there are links between personnel in the big banks and the payday lenders. According to Connor and Skomarovsky, payday lenders have ties to current or former personnel of Goldman Sachs, Bank of America, Morgan Stanley, and Credit Suisse.

These links, both direct and indirect, between the predatory financial industry and the large banks is representative of a more general phenomenon: The large Wall Street banks sit at the epicenter of the financial system. As a result, virtually all of the major aspects of finance that we have discussed so far—hedge funds, private equity, predatory lending, the mortgage market, and the so-called shadow banking system—are all tied to some extent to the core banks.

In June, 2016, the Consumer Financial Protection Bureau (CFPB) unveiled some new rules to protect those who use payday loans from these egregious practices and excessive costs (New York Times, Editorial Page, June 2, 2016). Under the new guidelines, lenders would have to verify in many cases that borrowers can repay their loans. But the New York Times editorial board called this a "Lame Response to Predatory Loans" because, after lobbying from the industry, the CFPB had watered down a stricter standard to insure that would have limited monthly payments to no more than 5% of the borrower's expected gross income for the same period. Once again, in the case of financial reform, the power of the financial sector in the political process has been a difficult force to reckon with.



That's Not All

This tour of industries, institutions, and practices is far from complete. A full discussion of costly financial practices would have to include student debt, health insurance and other insurance products, car loans, the mortgage market that ended in such disaster for so many (see section II above) and other markets as well. All of these industries have their own dynamics and costs, some more efficient and less problematic than others. Alas, such a complete portrait is beyond the scope of this report.

V. All Roads Lead to the Financial Industry: What Is to Be Done?

In the end, although there are many markets and disparate products and institutions, it is also true that all roads in finance ultimately lead back to the core financial system with the large banks, hedge funds, and private equity firms at the center. Section IV identified the key channels through which the large banks and other financial institution have been able both to acquire such massive rents and excess profits and to create such costly outcomes for the economy as a whole.

In section III, we conservatively estimated that these practices cost Americans between \$13 trillion and \$22 trillion over the period 1990–2005. Unless something serious is done to alter our speculative financial system, these costs will simply continue to mount.

In light of these very high costs, we now briefly address the important question: What can be done to restructure and reorient the financial system so it performs the functions required of a complex modern economy more efficiently, more equitably, and with fewer destructive outcomes? What can be done to address the three costs we identify here: the inequitable and unfair accumulation of rents and excessive profits by important segments of the financial sector; the costly misallocation of financial and human resources to an industry that is so risky and inefficient; and the massively costly risks imposed on society by a financial system that privatizes benefits and socializes risks, such as occurred in the GFC of 2007–2008?

This is clearly a complex issue. Indeed, there already exists a vast literature on reforms, with numerous excellent ideas (e.g., Crotty and Epstein, 2009; D'Arista, 2009; D'Arista and Epstein, 2011; Stiglitz, 2015a; Lazonick, 2014; AFR and the Roosevelt Institute, 2014; Appelbaum and Batt, 2014; Baradaran, 2015). Here we can do no more than outline some broad approaches to reigning in these costs.

Broadly speaking, to address the issues we raise here concerning the enormous costs of our current financial system, we need three broad, complementary approaches: financial regulation, financial reconstruction, and financial alternatives.

In addressing financial regulation, it is important to recognize that the Dodd-Frank Act includes some important regulations that can help address some of these costs, especially those associated with financial crises. But Dodd-Frank does not go far enough in certain respects, especially with regard to limiting the size, complexity, and interdependency of financial institutions, and in limiting incentives and capacity in finance for short-termism, lack of fiduciary responsibility, and conflicts of interest. Finally, the too-big-to-fail problem, which privatizes returns and socializes costs, has not been solved. Therefore, Dodd-Frank must be significantly strengthened.

Toward this end, it is crucial to bring all financial activities under the purview of regulation, to eliminate the social safety net that allows financiers to take risky activity and impose the costs on society, to bar dangerous and fraudulent financial activities, and to reduce the rewards associated with speculative activities as opposed to socially productive ones. To achieve these goals, we will likely need a new Glass-Steagall law to eliminate the social



safety net for highly speculative financial activity, stricter limits on leverage and bank size to break up the largest and most dangerous financial institutions, and stricter regulation to limit financial pay for highly risky activities. The Consumer Financial Protection Bureau's mandate and enforcement resources should be expanded. It would also be very helpful to implement a financial transactions tax to reduce speculation and short-term orientation (Pollin and Heintz, 2016). Implementing strong transparency and fiduciary responsibility rules for asset managers could help reduce the abuses in the asset management industry. More regulations with respect to limiting stock buybacks may help protect U.S. industry from financial manipulation.

While financial regulations are crucial, they will not be sufficient to effectively transform our financial system. Our financial system needs to be restructured so that it better serves the needs of our communities, small business, households, and public entities, such as municipalities and states. Eliminating subsidies for the too-big-to-fail banks will help level the playing field for smaller and more community-oriented financial institutions; however, this is unlikely to populate the financial system with enough institutions to support the needs of our communities. As a result, we are likely to need many more financial alternatives: public banks, cooperative banks, and specialized banks such as green banks and infrastructure banks.

The government and the Federal Reserve need to play a role in both leveling the playing field for and helping to support the development of these institutions. For example, a U.S. postal savings bank could be a good alternative to help provide financial services for the underbanked, as suggested by Bardaran (2015). A publicly subsidized worker cooperative bank to support the establishment of worker cooperatives is another idea that has been proposed (Gordon, 1996). Public and socially oriented options in finance will be essential to provide competition for traditional private institutions, and to provide financial services that our economy needs (Epstein, 2010).

Financial regulation, financial restructuring, and financial alternatives: All three of these will be required to eliminate or even significantly reduce the high costs that high finance imposes on the rest of us.



Appendix A

Excess Wages Calculations

Philippon and Reshef (2012) estimate how much of financial sector wages is explained by differences in human capital relative to the non-financial sector. Specifically, they divide the average relative wage in finance into a competitive benchmark and an excess relative wage component that can be interpreted as a rent:

$$w = w^B + e$$

where $w = w^F/w^N$ is the relative wage and the superscripts F and N refer, respectively, to the financial and non-financial sectors. The variable w^B denotes the benchmark competitive relative wage and e refers to the excess component. With simple algebra we can obtain the average wage in finance expressed as the sum of the competitive component and the average rent:

$$w^F = \underbrace{w^B w^N}_{\text{competitive}} + \underbrace{ew^N}_{\text{rent}}$$

As a rough approximation, the total rent from excess financial sector wages can be calculated by assuming that all workers employed in finance earn the average wage. Thus, we can obtain:

$$\text{Total Rent} = ew^N \cdot (\# \text{ of workers in finance})$$

To approximate the total rent we use data on average wages and employment from the NIPA. The non-financial wage, w^N , is calculated as total compensation per fulltime-equivalent employee in all non-financial sectors.⁴⁰ The excess relative wage component, e, was obtained from Philippon and Reshev (2012).

Excess Income

An alternative approximation for the total rents extracted by finance can be obtained based on estimates of the user-cost of finance reported by Philippon (2015). Philippon shows that the user-cost of financial intermediation—that is, the cost per dollar of intermediated assets—can be calculated simply as:

$$\psi = \frac{y^F}{A}$$

where y^F is the total income of the financial sector and A denotes total intermediated financial assets. One way to approximate how much of this user-cost is excessive is to simply take the golden age of finance as a benchmark and compare the current costs to those prevailing during the 1960s and 1970s. Let's denote the excess user-cost by ψ^E and the golden age average by $\bar{\psi}$. The total income accruing to finance can be expressed as the sum of the excess income and the “normal” income based on golden age user-costs:

$$y^F = (\psi^E + \bar{\psi})A = \underbrace{\psi^E A}_{\text{excess}} + \underbrace{\bar{\psi}A}_{\text{golden age}}$$

Philippon provides estimates of total intermediated assets A. Therefore, we can calculate the excess income as:

$$\text{excess} = (\psi - \bar{\psi})A$$

⁴⁰ U.S. Bureau of Economic Analysis, Tables 6.2B–6.2D and 6.5B–6.5D.



Growth Effects from Misallocation

In order to calculate the cumulative impacts of forgone GDP resulting from an inefficiently large financial system, we build on Arcand et al. (2012) and Cecchetti and Kharroubi (2012), who investigate the relationship between the size of the financial sector and economic growth. Both studies estimate regressions of the following form:

$$g = \beta_1 C + \beta_2 C^2 + e$$

where g is the real growth rate of GDP per capita and C is the ratio of private credit to GDP and thus stands for the size of the financial sector. The key result in both of these papers is that the coefficient β_1 is positive, indicating that an increase in finance is associated with faster growth, but that the coefficient β_2 is negative, indicating that finance becomes detrimental to growth after a certain point. In other words, there is such a thing as “too much finance.”

To approximate the negative growth effect from having too much finance, we start by calculating the maximum growth rate that could be obtained, holding all else constant, were the financial sector at its optimal size. This maximum growth rate can be obtained by plugging in the growth-maximizing credit-to-GDP ratio, $C_{max} = -\beta_1/2\beta_2$, in the regression equation. We can then calculate the cost to growth from having an inefficiently large financial system as the difference between the growth maximum and the average growth rate that results from the observed size of the financial sector between 1990 and 2005.

According to data from the Federal Reserve Bank of St. Louis, between 1990 and 2005, private credit averaged around 130 percent of GDP.⁴¹ This figure can be used to calculate the average cost to per capita growth, as summarized below in Table 2.

Table 2
Too much finance coefficients and growth estimates

	Arcand et al (2012) Table 2, column (2)	Cecchetti and Kharroubi (2012) Table 1, column (1)
β_1	5.3	3.6
β_2	-2.6	-1.8
C_{max}	101.9	100.0
Growth maximum	2.6	1.8
Average growth with too much finance	2.4	1.6
Growth cost	0.24	0.16

The next step is to define a counterfactual per-capita growth rate:

$$g^{CF} = \text{actual growth} + \text{cost}$$

The counterfactual growth rate is the growth rate that would have prevailed if the financial sector were not inefficiently large. Finally, to arrive at a counterfactual measure of GDP, it is necessary to extrapolate a per-capita income series beginning in 1990 using the counterfactual growth rate and then multiply by the population each year. Series for GDP, GDP per capita, and total population for the United States were obtained from the NIPA.⁴²

⁴¹ Bank for International Settlements, Total Credit to Private Non-Financial Sector, Adjusted For Breaks, for United States© [CRDQUSAPABIS], retrieved from FRED, Federal Reserve Bank of St. Louis

⁴² U.S. Bureau of Economic Analysis, Table 1.1.5 and Table 7.1.



Compounded Cumulative Sums

The figures reported above for the total cumulative excess income and growth costs of the financial sector have been compounded assuming a conservative 2 percent real rate of return.

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