



## FEEDING THE BEAST

The GSEs play an extraordinarily successful double game . . . [telling] Congress and the news media, “Don’t worry, the government is not on the hook”—and then turn around and tell Wall Street, “Don’t worry, the government really is on the hook.”

—Richard Carnell (*Fordham University Law Professor and former Assistant Secretary of the Treasury*),  
*Senate testimony, February 10, 2004*

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In 1818, a nineteen-year-old English girl, Mary Shelley, published her first novel. The novel tells the story of a young, talented scientist who discovers how to create life from the inanimate. Collecting old human bones and tissue, the scientist constructs a man from scratch and brings him to life, only to be disgusted by his appearance and shape, calling him the Monster. The scientist deserts the monster, and, left to its own devices, his creation causes havoc and mayhem. In the finale of the story, as the scientist confronts the monster, the monster eventually destroys its creator and, stricken with grief, takes its own life. Shelley decided that the name of the talented scientist should be the title for the novel: *Frankenstein*.

Former executives of Fannie and Freddie, members of Congress, and past administration officials all talk about the good work of the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac; and, they will add, if it were not for the equivalent of an economic asteroid hitting the markets, all would be fine. They will point to affordable housing goals and the benefits to the underprivileged.

We are skeptics.

If the government was Doctor Frankenstein, surely the GSEs were its monster. Born of a well-intentioned and economically efficient goal of creating liquidity in the secondary mortgage market, these institutions morphed into typical profit-taking firms with an important exception—the government served as the backstop for the majority of their risks. While the government subsidies went primarily to CEOs, shareholders, and wealthier homeowners, the costs were borne by society as a whole. As of 1970, when Fannie Mae had been recently privatized and Freddie Mac was newly created, they represented 4.4% of the mortgage market; by 1991, they captured 28.4%; by the time of the financial crisis, they held 41.3%, with a combined \$1.43 trillion mortgage portfolio and \$3.50 trillion in mortgage-backed security (MBS) guarantees; and, as of August 2010, they had left the U.S. taxpayers with a hit of close to \$150 billion, with some projections anticipating that this figure will more than double in years to come, with substantial downside risk.

We start by describing what the GSEs do—what roles they play in the mortgage markets. We then trace the origins of Fannie Mae and Freddie Mac, what special features of these enterprises caused the financial markets to treat them specially, and what allowed them to register their staggering growth.

## 1.1 THE ESSENCE OF THE GSES

What exactly do Fannie and Freddie do? The GSEs are engaged in two somewhat related businesses: residential mortgage securi-

tization (currently about \$3.5 trillion) and residential mortgage investment (currently about \$1.7 trillion).

In the securitization business, the GSEs buy mortgages from originators (mostly fixed-rate, single-family home mortgages, although they also buy some adjustable-rate mortgages and some mortgages in the multifamily market); they form pools of these mortgages (so that the “law of large numbers” reduces the variability in outcomes that might arise from a single mortgage); and they issue (sell) “pass-through” mortgage-backed securities that are formed from these pools to investors. These MBS represent claims on the interest and principal repayments that are “passed through” from the pool of mortgage borrowers to the securities investors (minus various fees).<sup>1</sup>

Because the investors have no direct knowledge of the credit-worthiness of the mortgage borrower, they need to be reassured that they will receive the promised interest and principal repayments. Both Fannie Mae and Freddie Mac provide guarantees to investors in their MBS against the risk of default by borrowers of the underlying mortgages. In return, both charge a “guarantee fee.”

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Although the GSE guarantee (so long as it can be honored) removes the credit risk from the securities, the MBS investor is still subject to interest rate risk. Any long-lived fixed-rate debt instrument carries interest rate risk. When interest rates for new securities are higher than the interest rate on an existing (but otherwise comparable) security, the value of the latter decreases; when interest rates for new securities are lower, the value of the existing security increases. However, for fixed-rate mortgages (and the MBS that are formed from them), the interest rate risk for the investor is heightened, because mortgage borrowers are usually able to prepay their mortgage (and, in the United States, do so without paying any fee or penalty).<sup>2</sup>

The second business for the GSEs is mortgage investment. They buy and hold residential mortgages (or, more often, their own MBS). The funding for these investments comes overwhelmingly from issuing debt. They earn net income on the “spread”: the difference between the interest yield on the mortgages that

they hold and the interest rate on the debt that they have issued. Because their debt is implicitly guaranteed by the U.S. government, GSE debt is relatively risk insensitive. Further, the GSE shareholders do not pay a premium for these government guarantees or bear the full cost of their failure. Hence, from the GSEs' standpoint, the cost of issuing debt is less than the costs of issuing equity, and they have a strong incentive to try to leverage themselves as much as possible—to issue as much debt and as little equity—to the extent that their creditors and regulators will permit.<sup>3</sup> By owning these on-balance-sheet mortgages, the GSEs are exposed to interest rate risk as well as credit risk.

14 The timeline in the appendix lays out the key reforms and events punctuating the evolution of U.S. housing finance policy from its inception in the 1930s all the way to the current state of affairs. There have been three somewhat distinct phases: the early phase, in the Depression era, helps us to understand how and why the federal government established a foothold in mortgage finance; the privatization phase, starting in the late 1960s, paved the way for the GSEs' expansion on the back of government guarantees; and the debt phase, starting in 1992, mandated the GSEs to serve "mission" goals while simultaneously being accorded highly favorable regulatory treatment with regard to their leverage. The end result is the present debacle of Fannie Mae, Freddie Mac, and U.S. housing finance.

## 1 . 2 B E G I N N I N G S

The origins of Fannie Mae and Freddie Mac go back to the era of the Great Depression. The stock market crash of 1929–33, and the failures of more than 8,000 commercial banks, as well as thousands of savings and loan (S&L) institutions (which are frequently described as "thrifts") inflicted widespread economic misery across the United States.

Among the victims of this trauma was the residential mortgage lending system. Before the mid-1930s, the standard mortgage

loan had a five-year term, with interim interest payments and a required balloon payment for the full amount at the end of five years. The expectation was that the mortgage would be refinanced at that time. Banks and S&Ls were the primary originators and holders of mortgages, although life insurance companies also were significant holders of mortgages (especially of multifamily mortgages). The economic implosion of the early 1930s, however, meant that many lenders were unwilling to refinance, and many borrowers could not repay. Home foreclosures were widespread; and the losses on the foreclosed loans contributed to the failures of thousands of banks and S&Ls.

The first piece of legislation that made any effort to address these issues preceded the Roosevelt administration's "New Deal." In 1932, during the final year of the Hoover administration, the Congress created the Federal Home Loan Bank System: 12 regional Federal Home Loan Banks (FHLBs) that were owned by the S&L institutions and a few life insurance companies in the regional territories of the FHLBs and that were regulated by a new federal agency: the Federal Home Loan Bank Board (which would soon also be the national regulator of S&Ls). The FHLB System could borrow funds in the capital markets, and the individual FHLBs could turn around and lend the funds to their member-owners, who were the primary originators of mortgages at the time. Because the FHLB System was a creation of the federal government, it could borrow at favorable rates, and the FHLBs could pass those favorable rates on to their member-owners.

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In an important sense, the FHLB System was an early "government-sponsored enterprise" (although that term was not used until decades later). It reflected for the first time what was to become a distinguishing feature of the U.S. housing finance for next eight decades: borrowing in the name of the government (explicitly or implicitly) to promote household borrowing in the form of mortgages.

With the New Deal came a flurry of legislation that affected the financial system, with some of the legislation leaving a lasting

impact on residential mortgage finance. This included the creation of the Federal Housing Administration (FHA) in 1934 to offer mortgage insurance to lenders on qualified mortgages and of the Federal National Mortgage Association (FNMA) in 1938 to purchase FHA-insured mortgages. Funding for these purchases came through the FHA's issuance of bonds in the capital markets. The FNMA subsequently acquired the nickname "Fannie Mae" from the bond traders who dealt in those bonds, and the nickname stuck.

Over the next two decades, Fannie Mae's scope was expanded. First, it gained the authority to buy the mortgages insured by the Veterans Administration (VA), another creation of the Congress, the powers of which included the guaranteeing of qualifying mortgages—in this case, the mortgages of veterans. Then, Fannie Mae's status as a government agency was confirmed, and it was made exempt from state and local income taxes, which was (and is) a substantial competitive advantage relative to private financial firms. As another advantage, the Federal Reserve Banks were required to perform various services for Fannie Mae. And Fannie Mae was to provide "special assistance" for certain kinds of mortgages, a precursor to the "mission" regulation of the GSEs in the 1990s and 2000s. The debt that Fannie Mae issued came to be known as "agency" debt, or just as "Agencies" (a label that persisted through the subsequent morphing of Fannie Mae, and which has applied to Freddie Mac's debt as well).

Through these steps, the government's foothold in mortgage finance was born.

From its chartering in 1938 through the middle of the 1960s, Fannie Mae was a relatively minor presence in the overall residential market—more symbolic than substantive. The major institutional holders of residential mortgages during this period were S&Ls, commercial banks, and life insurance companies. Somewhat paradoxically, Fannie Mae grew the most on the back of the U.S. government only when the government began to "disown" it, though never fully.

## 1.3 PRIVATIZATION OF THE GSEs

By far, the most important legislation affecting Fannie Mae was its conversion into a private company in 1968. It was primarily for accounting purposes. The Johnson administration wanted Fannie Mae privatized, so as to remove its debt from the federal government's books, thereby reducing the size of the national debt. In addition, a change in federal budgeting procedures at the time would have counted Fannie Mae's net purchases of mortgages as current government expenditures, which would have meant that those net purchases would have added to recorded federal budget deficits—something that any presidential administration would want to avoid doing during its own term.

The privatization meant that Fannie Mae was spun off to the private sector and became a publicly traded company, with its shares listed on the New York Stock Exchange (NYSE). However, Fannie Mae retained its federal charter and the special status and privileges that went with it. Fannie Mae also had its own special regulator: the Department of Housing and Urban Development (HUD), which had been created as a cabinet-level department in 1965 and retained some regulatory powers over Fannie Mae. Another prominent indicator of the specialness of Fannie Mae, despite its apparent structure as just another private (publicly traded) company, was the power of the president of the United States to appoint five board members to the Fannie Mae board of directors. No other company that was listed on the NYSE had presidential appointees on its board.

Simultaneously with the spinning off of Fannie Mae into the private sector, the same 1968 legislation created the Government National Mortgage Association (GNMA, which was subsequently dubbed "Ginnie Mae") within HUD as an agency that would securitize FHA- and VA-insured mortgages. And next to arrive on the scene was Freddie Mac in 1970. Ownership of Freddie Mac was placed with the Federal Home Loan Bank System, which was owned by the S&L industry.<sup>4</sup> The three

board members of the Federal Home Loan Bank Board became the board members and de facto regulators of Freddie Mac. (Shares of Freddie Mac would be made available to the general public almost two decades later.) Freddie Mac was expected to buy mortgage loans from the S&L industry and securitize them, although it was not restricted from buying mortgage loans from other originators. Because Freddie Mac (like Fannie Mae) was the creature of Congress, it too was a GSE.

Fannie Mae, too, received authorization to expand its mortgage purchases to encompass mortgages that were not insured by FHA or VA. However, both Fannie Mae and Freddie Mac were restricted (by HUD and the Bank Board, respectively) in the size of mortgage loan that they could purchase, either for securitization or for holding in their portfolios. This maximum loan size came to be known as the “conforming loan” limit. Mortgages that exceeded the conforming limit came to be known as “jumbos.” From 1975 to 1977, for example, the conforming loan limit was \$55,000; from 1977 to 1979 the conforming loan limit was \$75,000. In 1980 the limit was raised to \$93,750 and was subsequently linked to an index of housing prices. For comparison purposes, the median price of the sale of an existing house was \$35,300 in 1975 and was \$62,200 in 1980; the median price of a new house was \$39,300 and \$64,600 in those two years, respectively. Thus, the conforming loan limit was substantially above median prices, whether measured by sales of existing homes or new homes; this pattern has continued to prevail to the present day, explaining the reach of the GSEs in affecting housing finance of a substantial proportion of the U.S. households.

What is not commonly known is the financial difficulty that was experienced by Fannie Mae in the early 1980s. Like the savings and loan industry that it resembled (because, like the S&L industry, it was borrowing from the public and holding fixed-rate mortgages in its portfolio), Fannie Mae was squeezed by the high interest rates of the late 1970s and early 1980s. Holding a portfolio of long-lived fixed-rate mortgages that had been originated

at lower interest rates than were prevailing in the early 1980s, it ran net losses in the early 1980s. Although Fannie Mae remained solvent on a book-value basis, there was widespread recognition that it was insolvent on a market-value basis. It survived the experience, however, and lower interest rates after 1982 eventually provided financial relief.

The savings and loan industry was not so fortunate. It was a preview of the financial storm that would crush the financial system some 25 years later. The interest rate squeeze and a poorly structured deregulation of the industry in the early 1980s led to rapid growth in nontraditional investments in the mid-1980s and the eventual insolvencies of hundreds of S&Ls by the late 1980s and early 1990s. The federal government, through yet another agency (the Federal Savings and Loan Insurance Corporation, or the FSLIC), was guaranteeing the deposit liabilities of the insolvent S&Ls. Hence, as in the financial crisis of 2007–9, it was the federal government that bore the net losses of these insolvencies. The bill at the time came to about \$150 billion.

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In response to the interest rate squeeze of the late 1970s and early 1980s, the President's Commission on Housing issued a report on April 29, 1982, calling for greater deregulation of mortgage banking and an increased role for capital markets in the secondary market for mortgages. It had been just over a decade earlier in 1970 and 1971, respectively, that Ginnie Mae and Freddie Mac had first issued MBS; Fannie Mae had issued its first MBS in 1981. Together, these GSEs had given birth to the U.S. mortgage securitization market. The dizzying heights that this securitization market eventually scaled played a central role in the financial crisis of 2007–9. However, in 1982 this market was a fledgling one. It was widely noted that the secondary market for mortgages was so illiquid that financial firms were stuck holding mortgage loans, creating huge dislocations as conditions worsened.

As such, the idea behind MBS was financial innovation at its best: the banking sector did not have enough capital (or risk appetite) to hold all of the mortgage loans, yet these individual

loans were too illiquid to be sold easily to investors. By pooling the loans into MBS and selling the MBS to investors in the capital market at large—including pension funds, insurance companies, and the emerging mutual fund sector—the mortgage market would become much more liquid. This would simultaneously allow this market to expand and improve mortgage loan pricing, resulting in lower mortgage interest rates for homeowners.

It was not until the early 1980s that the Wall Street firm Salomon Brothers created a mortgage trading operation. With this operation, the firm created and tapped into a new class of interested investors that focused on the MBS market. The operation, run by Lewis Ranieri and made famous (some would argue infamous) in Michael Lewis's book *Liar's Poker*, just needed a kick-start, and the deregulation of mortgage finance took off. Ironically, one of the conclusions of the commission was that this deregulation would put an end to the government-sponsored enterprises (GSEs) such as Fannie Mae and Freddie Mac: "Eventually, the Commission believes, both FNMA [Fannie Mae] and FHLMC [Freddie Mac] should become entirely private corporations, without special access to the deep pockets of the Treasury."

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The commission was just a *tad* off in its prediction. At the end of 1981, when the commission was starting its work, Fannie and Freddie represented just 7.1% of the residential mortgage market and held \$64.8 billion worth of mortgages in their portfolios and guaranteed an additional \$20.6 billion. A decade later, their market share had grown to an extraordinary 28.4%, with corresponding portfolio holdings of \$153.4 billion and guarantees of \$714.5 billion. By 2002, they held \$1.21 trillion and guaranteed \$1.52 trillion, equivalent to a 44.7% share of the residential mortgage market. This growth of Fannie and Freddie is depicted in figure 1.1. The left-hand side provides the total dollar value of Fannie's and Freddie's commitments to the mortgage market through their portfolios and their net MBS issuances, while the right-hand side represents their overall share of the mortgage market.

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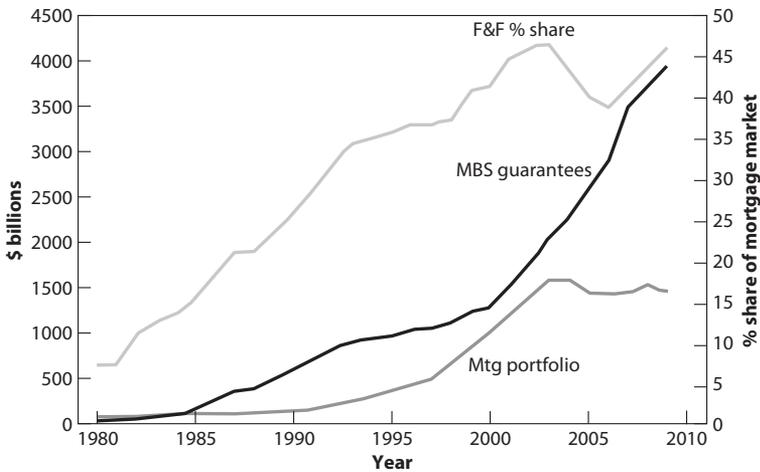


Figure 1.1: Growth of the GSEs from 1980 until 2009. Source: Federal Housing Finance Agency and Federal Reserve

How did the commission get its prediction so wrong? When mortgage markets were deregulated, Fannie and Freddie were not meant to be the winners. The Reagan administration at the time thought the opposite. It argued that deregulation—the act of lessening government’s control in favor of a free market—would lead to a race to the top as private-sector firms would enter the sector and compete openly. Free markets generally work well, with capital flowing to its most efficient use, ending up with better-run firms. So the theory goes.

But there was nothing free about these markets. As we have already highlighted, Fannie and Freddie had a special status, which meant that the financial markets believed that there were implicit government guarantees on any debt that they issued and on the mortgage guarantees that they provided. No firm could compete with Fannie and Freddie under these circumstances: they paid less taxes, could borrow at cheaper rates, and were lightly regulated in that they faced low capital requirements for

holding similar risks compared to private-sector counterparts. Opening up mortgage markets without restraining Fannie and Freddie was like bringing a knife to a gun fight.

It is, of course, intriguing how Fannie and Freddie managed to get away with it for decade after decade. In 1999 and 2000, the conservative think tank, the American Enterprise Institute, ran a series of conferences on these firms, the end product being a book titled *Serving Two Masters, Yet Out of Control: Fannie Mae and Freddie Mac*. The book refers to the two masters—their shareholders and their public mission of encouraging greater home ownership—and the collision of the two as the government subsidy that is provided for one (i.e., the public mission) gets exploited by the other (i.e., the shareholders). The conference brought together individuals of quite different ideologies who reached similar conclusions.

One fascinating piece was written by Ralph Nader, the consumer advocate, political activist, and left-wing ideologue, who outlines in detail the interconnections between successive presidential administrations and the payroll of Fannie and Freddie, documenting the heavy (and aggressive) lobbying by these firms:

Fannie Mae and Freddie Mac are fast learners. Born of the federal bureaucracy, these enterprises have swiftly and skillfully managed to pick up the roughshod tactics of the private corporate world and at the same time cling tightly to one of the federal government's deepest and most lucrative welfare troughs. . . . The combination has produced two GSEs that are not only too big to be allowed to fail but perhaps too influential and too politically connected to be regulated or shaped effectively in the public interest. Any suggestion that their power be limited or that subsidies be reduced triggers an immediate no-holds-barred counterattack from Fannie and Freddie. As John Buckley, Fannie Mae's vice president for communications, bluntly told the *Wall Street Journal*, "We're not casual about managing our political risk."<sup>5</sup>

Some members of Congress and the leadership at the GSEs' regulator did attempt to rein in the GSEs, but the inadequate numbers of the former and the inadequate regulatory powers of the latter hindered these efforts—a condition that the GSEs lobbied strenuously to perpetuate. In response to a 2004 congressional bill that was aimed at enhanced regulation of Fannie and Freddie, for example, Fannie, with remarkable bravado, ran a television advertisement the day before the Senate Banking Committee was to work on the bill.<sup>6</sup> The advertisement shows a concerned Hispanic man. He says “Uh-oh,” and the wife responds, “What?” “It looks like Congress is talking about new regulations for Fannie Mae,” the man states. “Will that keep us from getting that lower mortgage rate?” the woman replies. “Some economists say rates may go up,” he says. “But that could mean we won’t be able to afford the new house,” says the woman. “I know,” the husband concludes.

Fannie Mae—created and supported by the government—was now going after the government head-on. The monster was destroying its Frankenstein creator. Needless to say, the bill died.

While Nader’s article makes clear how difficult it was for Washington to put constraints on Fannie Mae and Freddie Mac, the question remains, How did they grow so big?

#### 1 . 4 D R O W N I N G I N D E B T

With the deregulation of the mortgage finance market, the decade of the 1980s was a period of substantial growth for Fannie and Freddie. At the end of the decade, Fannie and Freddie were fundamentally entrenched as parallel GSEs, with similar structures, privileges, responsibilities, and limitations. The last major legislation to impact the GSEs until the financial crisis of 2007–9 was the Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA) of 1992. It produced a number of important rules, one in particular related to capital requirements.

In particular, a risk-based capital regulatory regime was specified for Fannie and Freddie and their two main functions: securitizing and guaranteeing the credit risk of MBS, and investing in MBS or other similar portfolios of mortgages. With respect to the first function, the capital buffer that the GSEs were required to hold against these guarantees was 0.45% (i.e., \$.45 per \$100.00 of guaranteed mortgages), which implied that the Congress believed that residential mortgages were quite safe instruments to guarantee against credit risk—or that the Congress meant to subsidize these guarantees and was (if push came to shove) prepared to cover any losses. With respect to the second function, the GSEs were to hold 2.50% capital against their balance sheet assets (of which mortgages are by far the largest category). Thus, for every \$100 in mortgages held, they could (in principle) fund those mortgages with \$97.50 in debt and only \$2.50 in equity.

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In comparison to any other financial institution, Fannie and Freddie were afforded extraordinarily light capital requirements. For example, the capital requirement for federally insured banks and thrifts to hold residential mortgages was substantially greater: 4%. As a result, Fannie and Freddie had much higher leverage ratios—total assets to shareholder equity—than did comparable banking institutions.

To many fixed-income practitioners and analysts, the GSEs' growth and the expansion of securitization markets for mortgage finance should be considered a success story. But there was a darker side to the interaction between the GSEs and the banking sector: while banks were charged a 4% capital requirement for holding a portfolio of mortgage loans, they were charged only 40% of this, or 1.60%, if they held GSE MBS instead. Within the financial sector, this creates perverse incentives for banks to load up on GSE MBS, thereby increasing leverage all the way around the sector.

To see this, note that if a bank originated \$100 worth of mortgage loans, it would have to hold a minimum \$4.00 of capital to be considered adequately capitalized. If the bank sold these loans

to the GSEs and the GSEs securitized them into MBS, however, it could buy back the GSE MBS and hold only \$1.60 in capital, even though its portfolio holdings would be identical. Because the GSEs are required to hold only \$.45, this means that, for the same level of risk, the capital requirement for the financial sector as a whole now is just \$2.05, or 51% of what it used to be. There is little doubt that the growth in securitization is related to this type of regulatory arbitrage.

In terms of data to support this point, consider the first year of the crisis in 2007. According to *Inside Mortgage Finance*, of the \$5.2 trillion in MBS guarantees by Fannie Mae, Freddie Mac, and Ginnie Mae, approximately 37% was held by the banking sector—\$817 billion by commercial banks, \$790 billion by Fannie and Freddie themselves, \$257 billion by thrifts, and \$91 billion by the FHLBs. And just six firms—Bank of America, Wachovia, JP Morgan Chase, Citigroup, and Wells Fargo—contributed 48% to the commercial bank holdings, and just three thrifts—ING Bank, Washington Mutual, and Hudson City Savings—40% to the thrift portfolios. This is substantive evidence against capital markets' holding the credit risk—that is, the “originate-to-distribute” mode—and much more support for banks' taking on the risk, albeit as a counterparty to the highly levered GSEs.

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To document the leverage of the GSEs, figure 1.2 graphs the ratio of total assets on the balance sheet divided by the shareholder equity of the combined Fannie and Freddie (gray line). The figure takes as a starting point the date of the 1992 legislation that set the capital requirements and continues the ratio until the end of 2007. (Of course, by the end of 2008, shareholder equity had gone negative, and the GSEs were taken into conservatorship.) Over this period, the GSE leverage ratios generally ranged between values of 20 to 40 whereas the commercial banking sector had ratios of 10 to 15. The only match to emerge for GSE leverage was in the form of investment banks, especially during 2003–7—a competitive race to the bottom that we will explore in detail in chapter 3.

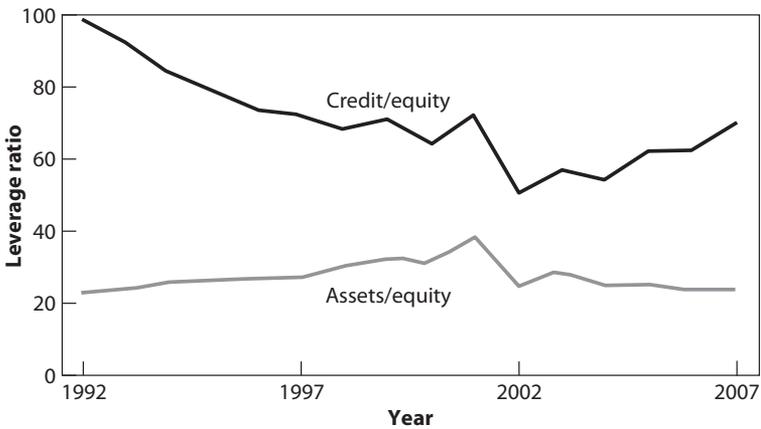


Figure 1.2: Leverage Ratios of GSEs. Source: Federal Housing Finance Agency

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However, these ratios do not tell the entire story. As shown by figure 1.1, most of the credit risk of GSEs is in the form of guarantees of defaults on mortgages sold to MBS investors. These guarantees do not appear on the balance sheet of the GSEs. As a useful exercise, the black line in figure 1.2 sums up all of the credit risk that is contained in both their mortgage portfolios and their credit guarantees of MBS (i.e., the “credit” numerator is the sum of their on-balance-sheet assets plus their outstanding MBS). This is roughly equivalent to what the banking sector does when it holds “whole loan” mortgages (i.e., the mortgages themselves, and not MBS) and hedges the interest rate risk in those mortgages.

The numbers are simply startling. The credit-based leverage ratios now range between levels of 50 to 100 over the period.<sup>7</sup> Even more troublesome was the GSEs’ behavior from 2002 onward. As regulators became more aware of the mere size of the GSEs, coupled with accounting scandals in 2003 and 2004, there was a general recognition that their size and leverage had to be curtailed. And, in fact, there was some apparent success. From the end of 2001 to 2007, the “official” leverage ratio dropped from

38 to 23 and the portfolio stopped growing. But the credit-based leverage ratio that also included the off-balance-sheet guarantees—the total credit risk divided by shareholder equity as shown in figure 1.2—barely budged from 72 to 69. As figure 1.1 shows, the GSEs had simply replaced growth in their mortgage portfolios with growth in guarantees of MBS.

### 1.5 ONE BIG FAT SUBSIDY

The mortgage credit risk of Fannie Mae and Freddie Mac combined grew at an astonishing 16% (11%) annual growth rate from 1980 (1992) through 2007. We saw that this growth was financed using borrowed money and levels of leverage far in excess of other financial institutions. Why would debt investors finance such growth?

Because of the special status and treatment of the GSEs that were described earlier in this chapter, the financial markets have historically treated them specially: the financial markets believed (correctly, as it turned out, or as a self-fulfilling prophesy) that if either company ever experienced financial difficulties, the federal government would likely intercede to make sure that the company's creditors did not suffer any losses. This belief persisted despite the explicit statement on all GSE securities that these securities were not full-faith-and-credit obligations of the U.S. government. The belief seems largely rational given that for most practical purposes, GSE debt is on par with Treasuries as “liquidity” or “risk-free securities” and therefore is held in hoards by financial firms just as Treasuries are (in fact, 50% of GSE debt was held by financial firms in 2008). The “halo” effect of all of the special features of the GSEs was just too strong for them not to be deemed as too big to fail.

With an implicit guarantee on their debt, Fannie and Freddie were able to borrow at interest rates that were below what the financial markets otherwise would have demanded. This meant that it was quite profitable for the GSEs to purchase mortgages

and offer credit default guarantees below fundamental rates, allowing them to vanquish any competition and grow unfettered. Because fixed-income investors—either those holding Fannie and Freddie debt or MBS guaranteed by Fannie and Freddie—believed that there was a government backstop, market discipline went out the window, and there was no one left to restrain Fannie and Freddie.

As described in the preceding section, adding to this subsidy was the fact that Fannie and Freddie had much lower capital requirements than did commercial banks and investment banks, for guaranteeing as well as holding MBS. With such a lack of a level playing field, there was really no free market. Instead of capital flowing to its most efficient use, as the deregulation of mortgage markets in the 1980s had anticipated, capital was in fact flowing to its most *levered* use. There was no one left to restrain Fannie and Freddie, of course, other than the federal government; but in the pursuit of myopic goals of boosting home ownership at all costs, each successive presidential administration turned a blind eye.

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In a seminal study in 1996, the Congressional Budget Office (CBO) provided an estimate of the government subsidy for Fannie and Freddie in 1995. The two main factors that went into their analysis were the reduced cost of financing compared to other highly rated financial institutions (e.g., 0.70% per year lower interest rate), and the lower cost of issuing MBS (e.g., 0.40%). Their estimated annual total subsidy was \$6.9 billion, a very large number fifteen years ago. Moreover, the CBO argued that at least one-third was a complete transfer of wealth from the government to shareholders; that is, only two-thirds trickled down to the mortgage market.

At the time that the study was announced, Fannie and Freddie went into attack mode and criticized the methodology and results. When one looks at the CBO's assumptions, however, one could provide an argument the other way: the CBO underestimated the subsidy. The main assumption was that, without government support, Fannie and Freddie would have had the

same amount of debt and off-balance-sheet guarantees. But their leverage was extraordinary and almost certainly would have commanded a much lower credit rating. Further, no adjustment was made for the added systemic risk that was produced—the steady, unfettered rise of housing-related debt in the United States as part of national wealth—and retained by Fannie and Freddie.

In a May 2001 updated study, the CBO estimated that the annual implicit subsidy had risen to \$13.6 billion by the year 2000. A few years later, Federal Reserve Board economist Wayne Passmore, using a similar methodology and a standard discounted earnings model over a forward-looking 25-year horizon, estimated that the aggregate value of the subsidy ranged somewhere between \$119 billion and \$164 billion, of which shareholders received respectively between \$50 and \$97 billion. Astonishingly, the subsidy was almost equal to the market value of these two GSEs, providing further evidence against the desirability of their existence in their current form.<sup>8</sup>

Year after year, a large number of economists and policy makers questioned the distortions that were being created by this “big fat” subsidy. In what is perhaps one of the more eloquent summaries of subsidy-related distortions, a speech on May 19, 2005, by Federal Reserve Chairman Alan Greenspan explains the growth of GSE balance sheets and their guarantee-driven shareholder value:<sup>9</sup>

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Although prospectuses for GSE debt are required by law to stipulate that such instruments are not backed by the full faith and credit of the U.S. government, investors worldwide have concluded that our government will not allow GSEs to default. . . . Investors have provided Fannie and Freddie with a powerful vehicle for achieving profits that are virtually guaranteed through the rapid growth of their balance sheets, and the resultant scale has given them an advantage that their potential private-sector competitors cannot meet. As a result, their annual return on equity, which has often exceeded 30 percent, is far in excess of

## CHAPTER 1

the average annual return of approximately 15 percent that has been earned by other large financial competitors holding substantially similar assets. Virtually none of the GSE excess return reflects higher yields on assets; it is almost wholly attributable to subsidized borrowing costs. . . . The Federal Reserve Board has been unable to find any credible purpose for the huge balance sheets built by Fannie and Freddie other than the creation of profit through the exploitation of the market-granted subsidy.