

THE GIANTS FALL

ELIMINATING FANNIE MAE & FREDDIE MAC

Raj Date

In the three full years since the first emergence of the credit crisis, market participants and policymakers have offered a variety of competing narratives regarding its genesis. The commonsense perspective of nearly all those competing narratives is that the U.S. residential mortgage market was at the center of global financial market turbulence.

Despite that seeming consensus, policymakers remain undecided as to the fate of the largest (and to taxpayers, the most costly) participants in the U.S. mortgage business: the government sponsored enterprises, Fannie Mae and Freddie Mac (together, the “GSEs”).¹

Fannie and Freddie’s central function, guarantying mortgage credit through government-sponsored private firms, is fatally flawed. Although they arguably provide other systemic benefits beyond credit guaranties (liquidity support, interest rate risk absorption), those benefits could be more transparently and efficiently delivered through other means. As a result, there is no logically defensible reason for the GSEs’ survival. They should be eliminated.

EVALUATING GSE FUNCTIONS

The GSEs’ mandated mission is to provide liquidity, stability, and affordability to the U.S. residential mortgage market.² In practical terms, that mission has been executed through two business lines: guaranteeing MBS issues; and holding mortgage and MBS portfolios. Those lines of business, in turn, serve three broad functions: (1) the extension of credit; (2) the provision of liquidity; and (3) the absorption of interest rate risk. (See Figure 1)

EXTEND CREDIT

The first of the GSE functions, the extension of credit guarantees on mortgage pools, is at the very core of the GSEs’ purpose and strategy. And that core activity is irretrievably flawed.

In concept, Fannie and Freddie are meant to enable, through their secondary market operations, primary market credit extension to borrowers that otherwise would not qualify.³ Of course, the GSEs do not intend to lose money through credit operations, so they can only logically achieve their credit goals if at least one of two conditions are true: (1) the GSEs can make otherwise non-economic credit risks viable because they enjoy a lower cost of capital, or (2) the GSEs, owing to scale, longevity, and sophistication, are superior to the private market as underwriters of credit risk. (See Figure 2)

FIGURE 1

GSE LINES OF BUSINESS AND FUNCTIONS

GUARANTY BUSINESS

- What is it?
 - The “core” business
 - Providing guaranty of principal and interest payments
- How do they make money?
 - Guarantee fee (‘G fee’) in excess of net credit losses
- What could go wrong?
 - Credit risk



**EXTEND
CREDIT**

PORTFOLIO BUSINESS

- What is it?
 - The “growth” business
 - Borrowing in capital markets to buy loans, GSE MBS, or private label MBS
- How do they make money?
 - Spread between asset yield and GSE funding costs
- What could go wrong?
 - Credit risk
 - Rate risk (prepayment, extension)
 - Liquidity risk
 - Counter-party risk (derivatives counter-parties)



**STABILIZE
LIQUIDITY**



**ABSORB
RATE
RISK**



Source: Fannie Mae; Freddie Mac; Cambridge Winter Center

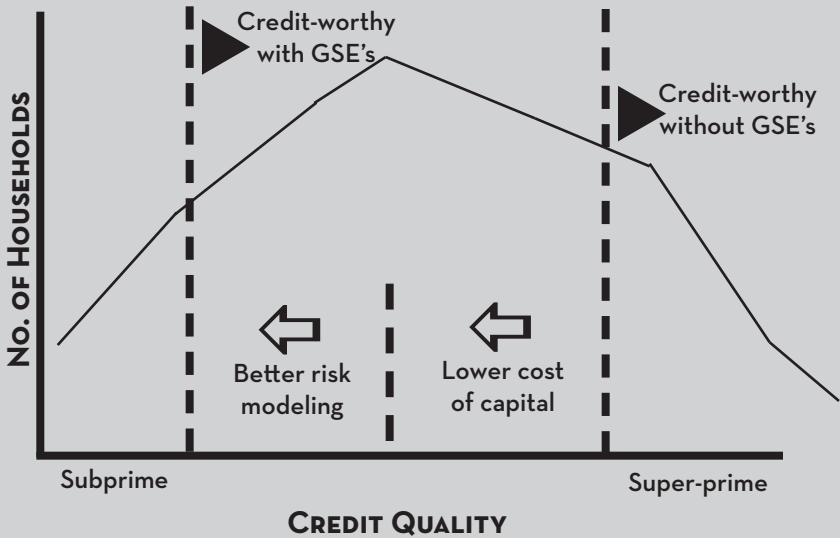
The first of those conditions is almost certainly true, but the second has proved false – so false, in fact, that the waywardness of the GSEs’ poor credit decisions has overwhelmed the advantage of their low cost of capital. It would appear that Fannie and Freddie’s realized losses on credit extended at the end of the housing boom (particularly 2006 and 2007) will be some 10 to 20 times worse than they had originally forecasted.

AFFORDABILITY MISSION

The GSEs, by charter, are intended to facilitate mortgage finance to lower-income homeowners, and to traditionally under-served communities. Given that, it is tempting to ascribe the GSEs’ disastrous credit performance to that “affordability” aspect of their mission. After all, the GSEs’ large-scale purchases of subprime private-label MBS were motivated in large measure by a Congressional mandate to promote homeownership rates. Even now, between them, Fannie and Freddie hold roughly \$100 billion in private-label subprime securities in their portfolios.⁴

FIGURE 2

CONCEPTUAL IMPACT OF GSEs ON CREDIT AVAILABILITY



Source: Cambridge Winter Center

But the affordability mission does not explain the vast majority of the GSEs' credit woes. (See Figure 3)

The \$100 billion of subprime securities in portfolio, while astonishing in nominal terms, is roughly 2% of the combined firms' \$5 trillion credit exposure. And within the guaranty business, subprime exposure is actually quite modest. At Freddie, for example, only 4% of the single-family mortgage credit book is tied to borrowers with FICO scores below 620.

Moreover, the very worst performing GSE loans (that is, the loans where losses are the greatest multiple of original forecasts) were made to prime borrowers, not subprime. Again using Freddie as an example, both the "Alt-A" and "Interest Only" portfolios are already facing serious delinquencies of 11% and 16%, respectively, despite having solidly prime average borrower FICO scores of 722 and 720.⁵ These were market share-driven loans made to people with good credit; they were not mission-driven loans made to people with bad credit.

Put simply, the subprime fraction of the GSEs' credit exposure is too small, and the GSEs' overall credit deterioration too large, to pin their woes on the affordability mission alone. Merely tweaking that mission, therefore, will not remedy the GSEs' ills. The problem is more fundamental.

LACK OF DEBT MARKET DISCIPLINE

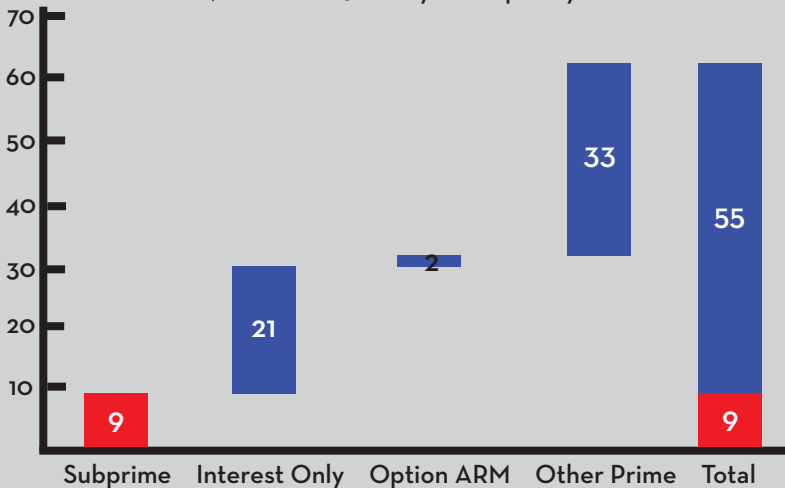
Fannie and Freddie's credit-decisioning processes, in large measure, rest on quantitative credit models. Such models have real benefits: they are reliably free of the primary market's sometimes checkered fair lending practices; they are efficient and scalable; and they take advantage of the GSEs' size and ability to gather loan-level performance data across the market.

But, as the crisis has made painfully clear, model-based credit decisioning has its drawbacks. Most importantly, backwards-looking, data-driven credit models are subject to a pro-cyclical bias. In other words, because most credit models rely primarily on historical performance data, they will tend to generate the most optimistic predictions at precisely the wrong time – at the end of a long period of low credit losses. That bias, combined with the asymmetric risk bias of the management and board of any privately owned, highly leveraged firm, inevitably creates an outsized risk appetite during benign parts of the credit cycle.⁶

In an ideal market, that risk appetite would be checked by fixed income investors, who stand to lose if management is too aggressive over time. Such debt market discipline is crucial: in any highly leveraged system of credit allocation, debt markets serve as the most important line of defense against the positive risk biases of customers, management teams, and boards of directors. As the experience of this financial crisis indicates, the ability of regulators alone – that is, without debt investor assistance – to hold back credit bubbles is debatable at best. (See Figure 4)

FIGURE 3

FREDDIE MAC SERIOUS DELINQUENCY, 3Q09 \$ Billions of 90+ Day Delinquency UPB



Note: UPB is 'unpaid principal balance'; subprime is all FICO<620; I/O, Option ARM, and Other Prime include estimated FICO>620 components only.

prime subprime

Source: Cambridge Winter Center

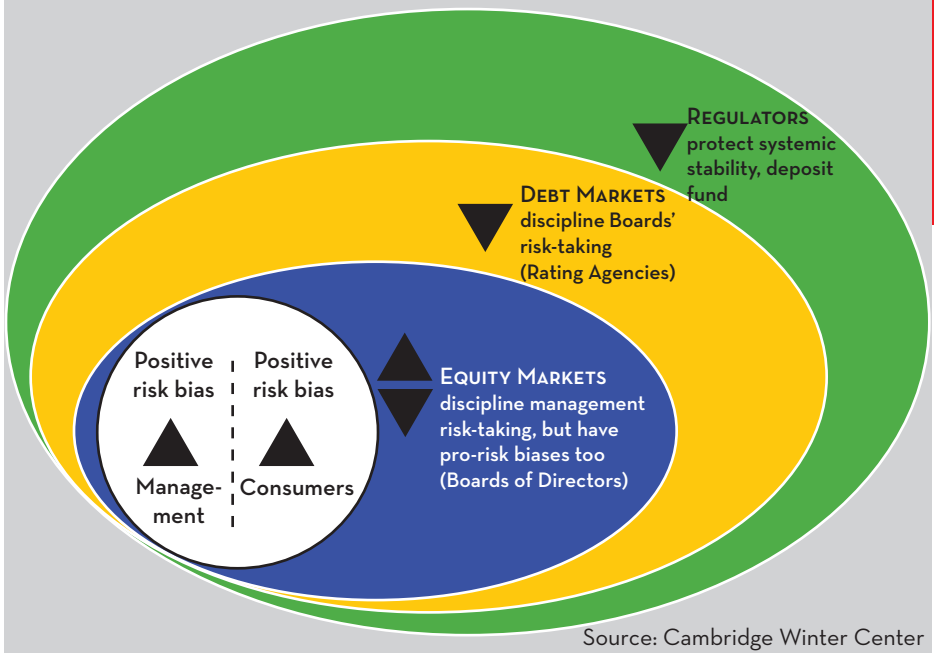
But the very nature of the government sponsored enterprises meant that this debt market check was absent. The GSEs' MBS and unsecured fixed income investors, secure in the (quite sensible, it turns out) knowledge that the taxpayer would ultimately back GSE debt, continued to fund Fannie and Freddie throughout the credit bubble and even after the bubble had begun to burst.

Of course, the wide-ranging failure of private sector mortgage markets demonstrates that the existence of non-taxpayer supported debt investors is a necessary, but by no means a sufficient, condition for sound credit allocation. The private credit markets had their own well-publicized structural shortcomings. For example, debt market discipline was diluted by the migration of capital into ABS-funded vehicles, and ABS investors, in turn, appear to have imprudently relied on the fallible judgments of credit rating agencies. At the same time, some large banks and broker dealers seem to have been viewed (correctly) as "too big to fail," so creditors sustained their asset growth despite increasingly untenable credit exposures.

Viewed in this light, the GSEs' credit allocation decisions suffered from the same general kind of structural difficulties as private-label mortgage markets during the bubble: primary market origination by banks and brokers with little economic stake in the outcome; inherently backwards-looking credit modeling techniques; and, crucially, debt market investors who were not especially interested in, or capable of, creating a substantive check on underwriting.⁷

FIGURE 4

CREDIT SYSTEMS AND RISK BIASES



Absent any meaningful counterbalance to the natural pro-risk and pro-cyclical credit biases faced by all financial firms, the GSEs' credit guaranty function was doomed to fail.

STABILIZE LIQUIDITY

Beyond their credit allocation function, the GSEs are intended to provide a stable source of liquidity in what can otherwise be a volatile market for residential mortgage finance. And, indeed, the GSEs provided one of the only sources of liquidity for new mortgages during the course of the credit crisis.

Unfortunately, the power of this liquidity backstop stems from two sources, neither of which seems necessary or prudent.

The first source is the implicit taxpayer backing of the GSEs' credit guaranty business. To the extent that investors believe that the United States stands behind a Fannie or Freddie credit guaranty, then an investor should be willing to invest in GSE-guaranteed MBS even in an otherwise full-blown credit crisis. But, as seen above, the credit guaranty business, precisely because of its implicit government backing, is not viable. It cannot be expected to make good risk-adjusted credit decisions without a substantive debt market check. To the extent that the GSEs' powers to backstop liquidity, then, are dependent on their credit decision-making, they rest on an irreparably shaky foundation.⁸

The second source of the GSEs' power to backstop liquidity is their portfolios. Because the GSEs are able to obtain debt financing from investors who fully expect a taxpayer bailout in a crisis, their ability to maintain, and even grow, an investment portfolio of mortgages and MBS can defy free-market gravity: their assets can climb as others sink.

This is a real benefit. But it is not additive to what the government can already accomplish, through the "official" lender of last resort, the Federal Reserve. During this financial crisis, for example, the Fed opened its funding to an unprecedented range of financial institutions, and both purchased and advanced loans against a wide range of assets – including GSE and private-label MBS.⁹ And when the Fed puts taxpayers at risk through such liquidity mechanisms, it is, ultimately, taxpayers that benefit if circumstances turn out well. With the GSEs, by contrast, considerable upside is captured by a number of private parties aside from taxpayers – GSE equity holders, GSE management, and GSE bondholders.

So it is true that the GSEs have served as important sources of liquidity to the markets. But their ability to do so has been entirely contingent on the government; and the government has better mechanisms to achieve precisely the same ends.

ABSORB RATE RISK

American homeownership rates are markedly higher than those of most other developed nations. Although a cultural predilection might contribute, elevated homeownership is also the consequence of a number of artificial economic subsidies – which extend from niche programs (e.g. the VA credit guaranty program) to large, expensive features of the tax code (e.g. the mortgage interest deduction, the exemption from income tax of certain gains from home sales). One of those subsidies is the widespread availability of long-term, fixed-rate mortgages.

For most banks, the conventional 30-year fixed rate mortgage is an awkward asset to hold on balance sheet, because of its inherent interest rate risk.¹⁰ Given this risk profile, a subsidy-free market should gravitate towards a higher share of adjustable rate mortgages (to better match asset yields with funding costs), shorter fixed rate periods on hybrid mortgages, and high pre-payment penalties (to mitigate prepayment risk). Other developed countries, like Canada, feature mortgage markets with combinations of precisely these characteristics.¹¹

The principal difference, in the US, is the existence of the GSEs. The GSEs' guaranty business does not, directly, make the interest rate risk associated with fixed rate mortgages more palatable, because the GSE guaranty compensates MBS investors for credit losses, but not prepayment or extension risk caused by changes in the rate environment. By contrast, the GSEs' portfolio business does absorb some amount of interest rate risk, and thereby might arguably increase the availability of fixed rate mortgages.

This absorption of rate risk is driven by two features of the GSEs. First, the GSEs would appear to have some level of “natural” hedge to the interest rate risk inherent in fixed rate mortgages. But that is, at best, a partial hedge to the GSEs' rate risk, and it is not different in kind to the natural hedge that would be enjoyed by any bank involved in the origination of mortgages. Thus, it is not clear that the GSEs' natural hedge encourages more fixed rate mortgage production than would exist without them.¹²

Second, given Fannie and Freddie's size and government-sponsored status, the firms might arguably be able to offload interest rate risk in the rate derivatives markets more efficiently than smaller, private firms.¹³ By doing so, though, they become systemically important counterparties within the rates markets, whose failure would create cascading crises across major market participants.

Thus, the GSEs enable fixed rate mortgages only through the introduction of systemic risk, which, in the eventuality of the GSEs' failure, was ultimately borne by the taxpayer. Given that taxpayers bear the systemic risk of the GSEs' rate risk absorption, it would be more straightforward to directly subsidize fixed rate mortgages, rather than through the intermediation of the privately owned and managed GSEs.

IMPLICATIONS

Careful analysis, then, reveals the irredeemable flaws underpinning the GSEs: their putative benefits in the provision of liquidity, and in the subsidization of fixed-rate mortgages, exist solely because they enjoy the implicit backing of taxpayers. But it is precisely that implicit taxpayer backing that destroys the integrity of their credit decision-making processes.

To correct those flaws, housing finance reform, at minimum, must abide by a handful of principles – which together mean eliminating Fannie Mae and Freddie Mac:

1. Privatize the GSEs' credit guaranty business. Taxpayer-supplied subsidies for homeownership cannot be effectively delivered through taxpayer-backed credit extension. The fact of taxpayer backing destroys debt market discipline, which is a necessary ingredient for rational credit allocation.
2. Eliminate the GSEs' portfolio business, thereby nationalizing the emergency liquidity function. There is no benefit provided by the GSEs' portfolio business that is not entirely the consequence of taxpayer backing. The portfolio business achieves that which could be provided through more direct means, but needlessly transfers economic wealth from taxpayers to GSE shareholders, GSE management, and GSE bondholders.
3. Create transparent homeownership subsidies, or none at all. It is an appropriate time to reconsider whether homeownership is a judicious choice for lower and middle-income Americans – or at least whether it is so obviously judicious that it justifies massive taxpayer subsidization. If, after that review, policy-makers decide to continue promoting artificially high levels of homeownership, more straightforward cash subsidies (through refundable low-income tax credits, for example) would be both simpler than GSE intermediation, and less prone to catastrophic error.
4. Create a transparent fixed-rate mortgage subsidy, or none at all. In a similar vein, if policy-makers wish to continue to support the availability of long-term, fixed-rate mortgages, they should consider doing so directly. For example, Congress could authorize a Fed-managed rate swap facility, which would offer subsidized fixed-to-floating interest rate swaps to banks or securitization vehicles that hold fixed-rate mortgages. This would require that rate risk be absorbed by taxpayers, but taxpayers bear that risk today as well, given the systemic risk created by the GSEs' interest rate risk positions.
5. Mandate standards for private-label transparency. Due to both their dominant market share and a certain inflexibility in their IT platforms, the GSEs over time created de facto standards for the sprawling U.S. mortgage business (e.g. loan delivery standards, servicing standards) – standards that have proven alarmingly elusive in the private-label MBS market. As the GSEs are eliminated, regulators should take care

to ensure that necessary market standards are promulgated (by either private sector associations, or if necessary by regulation) in both the primary and secondary mortgage markets.

Fannie and Freddie are needlessly complex and irretrievably flawed; they must be eliminated. The resulting mortgage market will be more structurally sound, less prone to systematic credit misallocation, and less burdensome to taxpayers.

ENDNOTES

1. For simplicity, this research note does not use the term “GSEs” to include the Federal Home Loan Banks, but only Fannie and Freddie.
2. See, e.g., 12 U.S.C. 1716 et seq.; Fannie Mae, “About Fannie Mae”, available at <http://www.fanniemae.com/kb/index?page=home&c=aboutus>, accessed February 6, 2010.
3. The “primary market” refers to the market for individual mortgage loans themselves; the “secondary market” refers to mechanisms by which loans, once extended to borrowers, are sold, pooled, guaranteed, and securitized. The federal government and a variety of government sponsored enterprises participate in both the primary (the FHA, VA, and USDA) and secondary markets (Fannie, Freddie, Ginnie Mae, and the 12 Federal Home Loan Banks). See Special Inspector General for the Troubled Asset Relief Program, *Quarterly Report to Congress*, pages 111-126 (January 30, 2010).
4. Freddie Mac, Form 10-Q for Quarter Ending September 30, 2009, note 4; Fannie Mae, Form-10Q for Quarter Ending September 30, 2009, note 6. Note that the \$100 billion figure relates to unpaid principal balance; mark-to-market fair value is rather lower.
5. See Freddie Mac, Third Quarter 2009 Financial Results Supplement, pages 18-19 (November 9, 2009). The same general trends hold at Fannie Mae as well. See Fannie Mae, 2009 Third Quarter Credit Supplement, pages 11-12 (November 5, 2009).
6. See generally Lucian A. Bebchuk, Testimony Before the Committee on Financial Services of the U.S. House of Representatives, Hearing on Compensation Structure and Systemic Risk (June 11, 2009), available at http://www.house.gov/apps/list/hearing/financialsvcs_dem/bebchuk.pdf, accessed Jan. 14, 2010.
7. Because both private-market and GSE performance suffered from precisely the same kind of problems, traditional partisan arguments regarding the GSEs tend to ring hollow. The GSEs were neither, strictly speaking, the “cause of” nor the “victim of” private-label mortgage market dysfunction. They were simply examples (albeit, by far, the largest and most costly examples) of the broad structural shortcomings within the mortgage market.
8. In theory, the Federal Home Loan Banks, which themselves enjoy some measure of implicit government backing, should be able to provide advances to member banks to provide liquidity without taking residual credit risk. In practice, though, it appears that many of the FHLBs took rather more credit risk during the bubble than they had perhaps intended.
9. See, e.g. Federal Reserve Bank of New York, Forms of Federal Reserve Lending, available at http://www.newyorkfed.org/markets/Forms_of_Fed_Lending.pdf, accessed February 7, 2010.
10. As interest rates rise, banks’ funding costs also rise, but fixed rate mortgages, definitionally, do not generate more income. The resultant squeeze in net interest margin is compounded by borrowers’ tendency to reduce early prepayments of fixed rate mortgages in a rising rate environment, so the now-less profitable fixed rate mortgages also, unhelpfully, stay on bank balance sheets longer. This “extension risk” has an analog, “prepayment risk”, in a falling rate environment. As rates drop, borrowers quite naturally refinance fixed rate mortgages, leaving banks to reinvest prepaid mortgage balances in a now-lower ambient rate environment.
11. See John Kiff, *Canadian Residential Mortgage Markets: Boring but Effective?*, International Monetary Fund Working Paper WP/09/130 (June 2009).
12. To the extent that GSE revenue is driven, in part, by new mortgage deliveries, then that

revenue should increase as interest rates decline, because lower interest rates typically drive higher delivery volumes. At the same time, declining interest rates should trigger prepayments, and thereby reduce the value of the GSE portfolios of fixed-rate mortgages or MBS. Those opposing influences on profitability (one up, one down) constitute a natural hedge. Because the mortgage origination business typically involves non-trivial front-end fees collected from borrowers, a similar kind of natural hedge would exist for any bank that originates mortgages and holds fixed-rate assets.

13. It is theoretically possible for the GSEs to hedge substantially all of their interest rate risk positions, by using a combination of interest rate derivatives. But in general they have chosen to retain some level of unhedged interest rate risk, to capture incremental value. See generally Dwight M. Jaffee, The Interest Rate Risk of Fannie Mae and Freddie Mac, *Journal of Financial Services Research*, Vol. 24, No. 1, pages 5-29 (2004).

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