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The Subprime Lending Debacle Competitive Private Markets Are the Solution, Not the Problem

by Patric H. Hendershott and Kevin Villani

Executive Summary

The United States' market-government hybrid mortgage system is unique in the world. No other nation has such heavy government intervention in housing finance. This hybrid system nurtured the excessively risky loans, financed with too much leverage, that fueled the U.S. housing bubble of the last decade and resulted in the systemic collapse of the global financial system.

The responsibility for the massive failures of the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac, at the center of American housing finance and the private securitization system that supports housing finance, falls directly on regulators and indirectly on their political overseers. Private and GSE prudential regulators were given politically determined social lending goals that ultimately trumped prudential regulation, forcing the GSEs to fund subprime lending in competition with private label securitizers. The

result was the extension of lower and lower quality loans, creating a race-to-the-bottom between the GSEs and private mortgage providers, all while regulators and politicians looked on approvingly. The financial crisis resulted when many of those loans turned sour in the latter part of the last decade.

We find no evidence that the United States housing market has unique characteristics requiring a hybrid GSE system, thus we conclude that the system and the political risks it is subject to are unnecessary. Any U.S. housing finance policy that does not safeguard prudential regulation from political influence by separating housing subsidy from finance and eliminating government-induced distortions will result in another systemic failure. To re-privatize the GSEs while maintaining their political goals, or to create new, specially chartered enterprises that pursue those goals, would exacerbate systemic risk.

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Introduction

In the last decade, much of the developed world experienced large increases in housing prices. The subsequent collapse of this housing bubble sparked the 2007–2008 financial crisis and ensuing recession.

Though the bubble was worldwide, it played out differently in the United States than elsewhere. Many of the mortgages underlying the U.S. bubble were “subprime”—that is, they went to homebuyers with shaky credit histories or homebuyers who were borrowing more money than they could easily repay over the course of the mortgage. The reason so many subprime loans were issued in the last decade is that the United States’ more liberal down payment requirements and underwriting standards, facilitated for decades by federal housing policies, had long ago accommodated more qualified buyers, and lenders turned to the less-qualified in order to continue their business. So from mid-2004 through mid-2007, over a million borrowers sat across the table from lending officers, signing loan documents and accepting over a trillion dollars in loans that neither the borrower nor the lender expected to be repaid.

In 2009 Congress created the Financial Crisis Inquiry Commission (FCIC) to investigate the causes of the crisis. Congress modeled the FCIC after the Pecora Commission of 1933 and, like its predecessor, Congress intended for the FCIC to find that “Wall Street greed” was to blame. The commission dutifully reached that conclusion in its final report, claiming that borrowers were victimized by irresponsible lenders. But because that did not result in an actionable policy agenda, the FCIC also promoted the narrative that other independent and complex causes contributed to the crisis, all of which are amenable to mitigation through more government intervention in housing markets.

Disappointingly, the FCIC report gave little attention to one independent cause that really did contribute heavily to the financial crisis: decades of government policies to increase homeownership rates. Included in those policies is the creation and direction of the government-sponsored enterprises (GSEs) Fannie Mae and

Freddie Mac, the home-finance giants at the center of the U.S. mortgage system. The report did acknowledge that the behavior of the GSEs was one of many independent market and regulatory failures, but it went on to extol the supposed virtues of the GSEs instead of questioning their necessity. There was not much new in this discussion, and three of the four Republican appointees to the FCIC dissented to the commission’s final report, putting less emphasis on the greed narrative and narrowing somewhat the list of complex causes of the financial crisis.

The Obama administration’s own report to Congress on the crisis, entitled “Reforming America’s Housing Finance Market,” offers much the same narrative as the FCIC report, blaming the subprime lending crisis on poor consumer regulation, inadequate financial institutions, complex securitization, inadequate capital, and inadequate loan servicing. The report is a frustrating mélange of promising ideas for reform and discouraging calls to repeat the policy mistakes of the past. It implicitly rejects the notion that social housing goals played a role in the financial crisis and does not specifically recommend their elimination, but it supports greater transparency and targeting of affordable housing support. It makes no mention of reforming the U.S. Department of Housing and Urban Development (HUD), which oversees U.S. housing policy, and it implicitly rejects the notion that housing finance regulation has become politicized and recommends a doubling-down on the regulatory regime with no change in political oversight, but it supports a robust private market for housing finance. While it supports a winding down of Fannie Mae and Freddie Mac, it proposes alternative guarantee mechanisms in times of “crisis” and for “targeted” borrowers that go well beyond the government backing and social mission initially conferred on Fannie and Freddie. It argues that government insurance programs to support “affordable housing” and “catastrophic” protection should be actuarially sound and priced to market, but it does not say how the subsidies necessary to make insurance affordable will be funded.

Why does the United States even have GSEs, when no other market economy has them? Their existence is grounded in a “third-way” eco-

conomic theory—a theory that supports neither a relatively unfettered market in housing finance nor heavy government involvement in the form of broad, explicit on-budget subsidies for housing. This third-way theory asserts that housing finance markets do not function well without extensive, pervasive prudential regulation. Further, government-imposed social lending goals are needed to meet the shortage of “affordable” housing loans, mitigate racial discrimination by lenders against prospective borrowers, and boost the availability of cheap fixed-rate mortgage credit. The FCIC and Obama administration reports implicitly support this narrative, attributing systemic regulatory failure to ideological bias and implying that lenders and investors are systemically racially biased, incompetent, ignorant, irrational, and panicky.

The FCIC report spends only 10 of its 662 pages addressing social lending mandates, concluding that “these (housing) goals only contributed marginally to Fannie’s and Freddie’s participation in those (risky) mortgages.”¹ The Obama administration report also finds no fault with these goals, only shareholders’ reckless pursuit of profit in meeting them. But not all FCIC members agreed. Peter Wallison wrote an independent dissent to the FCIC report, arguing that these goals alone explain why the GSEs would reduce and virtually eliminate down payments—bypassing private mortgage insurance—and weaken underwriting guidelines.

Private-label mortgage-backed securitization financed many of the subprime loans. Most of these were securitized by large investment banks—which, in the wake of the financial crisis, all merged to become more stable universal banks—that most believe are “too big to fail.” The political distortions enabling private-label securitization were quite similar to those of GSEs, but this market would likely not have gotten started without GSE leadership in laxity and massive support of the housing price bubble.

If the third-way narrative is correct, then government intervention promotes competition among actuarially sound firms. But excessive protection reduces competition. If social lending quotas are just an attempt to deliver off-budget cross-subsidies from lower-risk mortgage borrow-

ers (who pay their implicit mortgage insurance premiums and seldom default) to higher-risk borrowers, then competition from unconstrained providers must be suppressed or else it will result in too much money being lent to too many high-risk borrowers. This leads to politically manipulated and protected crony capitalist enterprises and/or government monopolies. Moreover, the implications go well beyond mortgage finance to other mandatory government-run financial programs, e.g., Social Security “pensions” and Medicare “health insurance.”

The implicit third-way conclusion that U.S. mortgage markets work so much worse than those in all other market economies as to warrant a higher level of government control and legal mandates is shocking. This paper examines that government intervention, explaining how it increased over the last quarter-century in pursuit of high-minded homeownership goals. This paper argues that policymakers, in pursuit of those goals, pushed the GSEs to extend riskier and riskier loans, and that private-label lenders also turned to risky mortgages after the pool of qualified prospective borrowers became extremely shallow as a result of previous government efforts to broaden homeownership. The result was a housing finance market heavily slanted toward making poor-quality, actuarially unsound loans—a situation that would inevitably end in a financial crisis.

Social Lending Goals and the Antecedents of the Crash

Social lending goals for housing in the United States date back at least to the Home Mortgage Disclosure Act (HMDA) of 1975 and the Community Reinvestment Act (CRA) of 1977. The HMDA and CRA purportedly reflected a concern that bankers were not lending enough in the local communities or neighborhoods, which were typically characterized by ethnic and/or racial concentrations. Lending goals for Fannie Mae were introduced about the same time and for the same purpose.

The theory behind these goals was that there was a sufficient supply of creditworthy borrowers

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in those areas, but that lenders were blinded by prejudice and would not extend credit. Of course, policymakers understood that it might not be prejudice at all, but a sound appraisal of risks that limited such lending. If the latter was the case and the banks were nonetheless forced to lend at rates below actuarially sound levels, then someone had to subsidize the losses. Mandating lending meant that banks' more qualified customers would provide that subsidy, hidden in higher deposit insurance premiums, artificially low deposit rates, taxpayer bailouts, or by other means of opaquely providing subsidies that would cover the banks' losses on the mandated loans.

Because older inner city neighborhoods often had a much higher percentage of African Americans—and later other racial minorities—the implicit concern of the HMDA and CRA was with illegal racial discrimination. But as incomes were also generally much lower in such neighborhoods and the risk of a systemic decline in property values much greater, it was difficult to distinguish illegal racial profiling from legal credit discrimination. Pricing additional credit risk was both politically problematic and actuarially difficult, as adverse selection was a major obstacle to raising borrower rates to cover the extra risk.

Housing policy goals grew in 1978, when Housing and Urban Development secretary Patricia Harris proposed that 30 percent of Fannie Mae loans go to low-income and central-city households. This proposal met with sharp opposition—1,217 comments were filed against it as opposed to only 16 for—so much weaker, non-binding goals were ultimately put into effect² and no such goals were adopted for the then-public Freddie Mac or for the public Federal Housing Administration (FHA) insurance fund.

As late as 1992 the Boston Federal Reserve Bank argued that discrimination persisted, and this produced political pressure for compensatory credit allocation to minorities. Deputy attorney general of the Department of Justice Deval Patrick argued that whenever the final lending distribution contained racial disparities relative to population (the only kind of disparity he was interested in), this was a violation of federal law unless the lender could prove otherwise. Such proof is problematic as the result itself is con-

sidered proof of racial prejudice not subject to analysis, and the cost of a legal defense is generally crippling. The alternative to litigation is to err on the side of leniency and sign Justice Department quota agreements when required to do so.

Housing policy goals grew further in 1992 with the adoption of the (ironically named) Federal Housing Enterprises Financial Safety and Soundness Act. Part 2, Subpart B of the act required Fannie and Freddie “to provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate-income families involving a reasonable economic return that may be less than the return earned on other activities).” The act established three specific housing policy goals:

1. the Low- and Moderate-Income Housing Goal, to assist households with income at or below a geographic area's median income,
2. the Special Affordable Goal, to assist households with incomes at or below 60 percent of the area's median income, and
3. the Underserved Areas Goal, to benefit households in low-income census tracts.

Implicit in the legislation's “may be less than the return earned on other activities” language is the acknowledgement of higher credit losses not actuarially paid for with higher mortgage coupons, especially for the second and third goals.

A major change came in 1994 when President Bill Clinton directed HUD to boost the homeownership rate to an “all-time high by the end of the century.” HUD responded by requiring that the GSEs direct at least 30 percent of their loan financing to at- or below-area median income households. HUD secretary Henry Cisneros, in the National Homeownership Strategy of 1995, further set a goal that the federal government pursue a homeownership rate of 70 percent. The U.S. homeownership rate had increased from about 45 percent after World War II to about 65 percent by 1975, where it stabilized for two decades in spite of the tremendous expansion of the GSEs. That is, even with mortgage credit generally available with a low or

no down payment and often underwritten at a below-market teaser interest rate and with no evidence of qualified borrowers systematically being denied credit, the homeownership rate had not risen. Hence, reaching Cisneros's 70 percent target would seem to require major outreach and presumably large subsidies.

By 2000 HUD had increased the portion of GSE financing required to go to households at or below an area's median income from 30 to 42 percent, supporting the Low- and Moderate-Income Housing Goal. HUD further required that one-third of that money be directed to those households with less than 60 percent of the area's median income, supporting the Special Affordable Goal.

The social lending goals made explicit for the GSEs what was implicit in the goals for other originators. Contrary to the 1970s theory that prejudice was to blame for limited credit for lower-income households, the fact is that credit was constrained because too many of these borrowers defaulted, reducing the profitability of this lending. Policymakers wanted this lending to continue nonetheless, but would not budget subsidies to cover the losses or to make home buying more affordable for these borrowers. Thus the implication was that the subsidy cost was to be financed out of the franchise value of lenders.

There is conceptual merit for imposing binding quotas on banks and the GSEs (and by extension their more creditworthy mortgage borrowers) in exchange for the enhanced franchise value that banks receive from federal deposit insurance and that Fannie and Freddie receive from their quasi-agency status (now no longer "quasi"). But there are numerous pitfalls as well. For one thing, franchise value is created at public expense by restricting competition. For another, the cost of binding quotas is difficult to determine and monitor. Shareholders have an incentive to press politicians for as big a franchise value as possible while passing through as little assistance to borrowers as possible, while politicians have the opposite incentive, which creates an unstable dynamic.

Commercial banks have special government charters and deposit insurance because of their key role in the payments mechanism, which

enhances their franchise value. But their franchise value began eroding with the phased deregulation of deposit rates in the early 1980s and was further eroded by the 1989 federal banking reform that permitted interstate branching. Large banks were viewed as "too big to fail" (TBTF) and hence had greater franchise value, which prudential regulators could tax by withholding approval for branching applications in return for meeting credit quotas, shifting the cost of risky lending to depositors and other borrowers. By the end of the century, TBTF banks were able to partially shift this risk off their balance sheets and partially to others using private-label mortgage-backed securities (MBS) due to the regulatory arbitrage enabled by differences in risk-based capital rules and Securities and Exchange Commission regulations between on-balance sheet and off-balance sheet securitization-funding mechanisms. The Federal Reserve Board was well aware of the potential for this regulatory arbitrage³ but apparently did nothing to prevent it.

Policymakers came to believe the "special charters" for GSEs were justified on the grounds that they compete with the special charters granted to commercial banks.⁴ It is true that modern bank charters introduce substantial moral hazard risk: since banks are required to purchase deposit insurance, the banks are more inclined to take risks because, if those risks turn sour, then insurance will bail out the banks. Policymakers chose to deal with that advantage to banks by extending moral hazard to the GSEs, with the implicit (and now explicit) promise of a government bailout if the GSEs got into trouble. But there was never much of a duel between the banks and the GSEs because regulatory and tax arbitrage drives activity to the highest-risk and -leverage/lowest-taxed strategy. Just as fellow GSE Ginnie Mae's franchise value dominated the GSEs and gave it a monopoly funding advantage for FHA loans, Fannie and Freddie's franchise value gave them a monopoly funding advantage for any mortgage that qualified for GSE backing, i.e., conforming loans.⁵ As a result, banks—and later, private-label securitizers—that wanted to fund mortgages had to focus on nonconforming loans or loans that were defective. The implicit subsidies needed to finance high-risk lending at TBTF commercial

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banks paled in comparison to those that would be needed to fund the much broader and deeper GSE affordable housing goals.

The original GSE franchise value relating to political expediency—bypassing politically problematic state and local investment laws and federal tax laws—had been eliminated by the time of the 1992 legislation mandating social lending goals.⁶ The GSEs were still exempt from various fees and regulatory costs imposed on private issuers and from state and local taxes.⁷ But by the end of the decade these were all relatively small sources of franchise value compared to the required implicit subsidies. That left only regulatory arbitrage—the setting of minimum capital requirements well below what debt investors would otherwise require. As discussed below, that is exactly what happened, with the government providing the missing capital in the form of the implicit guarantee.

Moreover, assuming markets price risk correctly over time, there is no free lunch to regulatory arbitrage. Any excess GSE contributions to shareholders, management, and/or borrowers are paid for first by the government foregoing the normal return on equity—the Congressional Budget Office calls this the “opportunity cost” to the government—and when the return is negative, a direct taxpayer bailout is required. To avoid systemic failure, politicians would have to limit the cost of social mandates to a carefully calibrated determination of the available subsidy. Prudential regulators would simultaneously have to not only mitigate moral hazard risk at both banks and TBTF GSEs, but also prevent competition in regulatory arbitrage between them and private-label securitization. This is highly unlikely, as combining subsidy with finance makes political oversight of prudential regulation an oxymoron.

The Subprime Lending Bubble

The new millennium began with a strong housing market. Though the popping of the dot-com bubble and the 9/11 terrorist attacks produced a minor recession right as the millennium began, people showed increasing confi-

dence in investing in real estate—specifically, in their homes.

This boom appeared to be ending by mid-2004, as there seemed to be few prospective U.S. borrowers left who had not already purchased a home but who had sufficient cash for a down payment (or were privately insurable) and who met normal underwriting criteria. As a result, U.S. housing prices should have peaked and production declined. Instead, lending quality collapsed as lenders turned their attention to providing credit to less worthy borrowers while relaxing or eliminating down payment requirements.⁸ A subprime lending bubble developed, fueling a further 25 percent rise in real U.S. housing prices and continued housing production. Losses on these loans were the source of the subsequent systemic collapse of the global financial system, so the key questions are, what happened? And why?

Mortgage insurers had been the traditional gatekeepers preventing excessive lending, particularly during a boom. Private mortgage insurance was historically required on all GSE loans with less than the required 20 percent cash down payment, and generally was used on loans purchased by non-GSE investors as well. Subprime loans represented a huge potential business for private mortgage insurers, who would agree to cover defaults in exchange for homebuyers paying the insurers actuarially fair premiums. But the insurers and their state regulators likely knew that there was no actuarially sound price at which the risks of the subprime loans being originated in the early to middle part of the last decade could be insured. In addition, they seemed to recognize that the housing price surge after early 2004 represented an uninsurable systemic risk. Having previously been burned by widespread defaults in the 1930s and 1980s, the mortgage insurers were extremely reluctant to continue to insure.

So if mortgage insurance was not available, how were borrowers able to secure subprime loans? One answer is “purchase money” second mortgages that provided cash for a down payment to secure the primary mortgage and had a secondary benefit in the form of tax-deductible interest (*vis-à-vis* mortgage insurance premiums). That is, insured, low-down-payment first mortgages were largely replaced by qualified first mort-

gages with piggy-backed purchase money seconds.⁹ The seconds' share of originations more than doubled from the 2001–2003 time period to the 2004–2007 time period. About 28 percent of subprime loans and 42 percent of Alt-A loans had piggyback seconds in 2006 that were reported to the first lien holder.¹⁰ (Alt-A loans are considered to be of higher quality than subprime, but the borrowers lack complete documentation of income and assets, employment, and/or appraisals on refinancing.) Including unrecorded “silent” seconds could easily double those percentages.

First liens, with a second mortgage, have both a higher frequency of loss and a greater severity of loss relative to loans secured with private mortgage insurance. First, private mortgage insurers cover the investor down to 75 percent, meaning that the insurance remains in place at least until the outstanding principal is one-quarter less than the value of the property. Second, the insurers maintain rigorous underwriting guidelines that also attempt to avoid correlated risks. Third, the insurers strictly monitor appraisals, whereas second mortgages often fund phantom equity. Cash-out refinancing would again subject the appraisal to the scrutiny of the mortgage insurer, which was particularly important during the housing price boom as the percentage of refinancings with over 5 percent cash take-out doubled from 2002–2004 to 2006–2007.¹¹

A second answer is high loan-to-value first mortgages.¹² Down payments on subprime loans fell from a reported 10 percent in 2003 to zero from 2005 through 2007, and some of those loans could negatively amortize after closing. Reported down payments on Alt-A pools declined from 10 percent to 5 percent during the same time period, meaning these homebuyers had little or none of their own money invested in their homes. Furthermore, many notionally “5 percent down” payments were so-called “3/2 down payments” where borrowers report that a “gift” will appear at closing to cover the 3 percent share, when in fact that money often comes from an unrecorded loan or a loan that was recorded after the mortgage credit check was complete; in effect the borrower only contributed 2 percent. Even with little or no down payment, most subprime and Alt-A borrowers could not afford to

pay the normal principal, interest, insurance, and taxes, let alone a mortgage insurance premium. Instead, they borrowed at a teaser rate typically at least 2 percent less than the fully indexed mortgage rate, expecting to roll over the loan with a new teaser when the teaser expired.

The subprime bubble was funded almost entirely in the capital market, with both private-label and GSE securities funding the second as well as the first mortgages. By year-end 2008, private-label MBS had funded 7.8 million subprime loans, while Fannie and Freddie funded about 12 million. GSE investors rely on the implicit government backing, so the question is, why did the GSEs and private-label securitizers fund loans almost certain to default?

The Primary Role of the GSEs

The GSEs historically had a tremendous capital advantage over portfolio lenders, which is the reason that the GSEs came to replace them.¹³ Using extreme leverage to purchase low-risk or insured loans was highly profitable. The GSEs' regulator at the time, the Office of Federal Housing Enterprises Oversight (OFHEO), required Fannie and Freddie to hold a mere 2.5 percent capital against their debt-funded portfolio of whole loans and 0.45 percent capital for the MBS-funded portfolio. Moreover, the capital requirement for the GSEs' holdings of investment-grade-rated private-label subprime MBS was only 1.6 percent.¹⁴

The 2.5 percent capital requirement for agency debt is only about a third of the capital required for deposits at banks, and Fannie and Freddie's average capital ratio for combined MBS and debt-funded assets was 1 percent or less during the bubble. Moreover, the GSEs were allowed to hold half their “capital” in the form of preferred stock. The risk-based capital requirements that banks applied to this stock was the same as applied to agency MBS: 1.6 percent. Hence, in the extreme, the government's risk exposure could be almost double the stated book leverage of Fannie and Freddie, as government-insured deposits provided 98.4 percent of the funding for half of GSE capital.

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Early in this century the GSEs increased their leverage¹⁵ while simultaneously abandoning the strategy of avoiding credit risk. They used three charter exceptions to bypass the private mortgage insurers: senior participations, recourse, and (most important) purchase money equity seconds. They also purchased high-loan-to-value whole loans. As early as 1997, Fannie Mae offered a 3 percent down payment loan, and by 2001 it offered zero down payment loans.¹⁶ And both Fannie Mae and Freddie Mac had programs for buying first liens with piggy-back seconds. In 2001, Fannie Mae introduced a program to buy the seconds only, as well as both first and second loans as a package, with the added benefit of counting one household twice toward their affordable housing goals.¹⁷ By 2004, the GSEs were in reality no longer AA/AAA-rated pool insurers, but highly leveraged subprime finance companies.

So why did the GSEs abandon the low-risk strategy? Moral hazard is the obvious answer. These loans still appeared potentially profitable, at least so long as housing prices continued rising, and most of the downside risk would be borne by taxpayers. Management at both GSEs got greedy and attempted to capture a bigger share of the “excess profits” from agency status for themselves by manipulating earnings to increase their bonuses. That resulted, in 2004, in the two biggest generally accepted accounting principles (GAAP) corporate accounting scandals ever.¹⁸ Their prudential regulator, OFHEO, responded after the fact, imposing an additional 30 percent capital requirement in 2004 to restrain them.¹⁹

But why did OFHEO regulators not act earlier? They tried, but “mission regulation” continually trumped prudential regulation. The Bush administration continued the acceleration of GSE housing lending goals started under Clinton: In 2001, the 42 percent mandated for below-median-income borrowers was upped to 50 percent and the 14 percent for under-60-percent-of-median borrowers was raised to 20 percent.²⁰ The administration did support Republican lawmakers’ efforts to simultaneously raise capital levels commensurate with the additional risk, but those efforts were consistently thwarted by Democratic lawmakers.

Housing booms always run out of qualified buyers and turn to bust eventually, and by mid-2004 the shorts had started betting against the housing market.²¹ But this turned into an expensive losing bet against the government, which is immune from such market discipline. The GSEs kept purchasing well after the housing boom was over, funding the subprime lending bubble from mid-2004 to 2008. This kept housing prices rising at least a year longer and delayed the bursting of the price bubble for several years, which kept the private securitization market from crashing. To do this, the GSEs had to attract generally unqualified borrowers.

By mid-2008, 54 percent of Fannie’s portfolio and 51 percent of Freddie’s were to below-median-income households, 26 percent and 23 percent were to households with incomes below 60 percent of median income, and 39 percent and 38 percent counted toward the “underserved areas” goal.²² Subprime lending had grown from a niche market earlier in the decade to almost 40 percent of the stock by 2008, accounting for most new loans written during the bubble years.²³ These loans were uninsurable both because the default risk was extreme—prudent underwriting had to be suspended to qualify these borrowers—and because the systemic risk of falling house prices increased steadily throughout the decade. Low-documentation and no-documentation loans became common, with a stunning 80 percent of Alt-As being low or no-doc. Most of the loans used teaser rates to underwrite borrower income. Common sense suggests that the higher mandated lending goals would require huge public subsidies, but these were never budgeted.²⁴

Why the GSEs Did It

Proponents of the “Wall Street greed” narrative believe that if profits and greed motivated GSE shareholders, then that exculpates politically mandated lending quotas. The FCIC report devotes only one section of Chapter 9, entitled “Fannie Mae and Freddie Mac: ‘Two Stark Choices,’” to the GSE’s role in what happened, concluding, “We determined these [housing] goals only contributed marginally to Fannie’s and Freddie’s par-

ticipation in those mortgages.”²⁵ They and others then spin several narratives supporting the profit and greed narratives.

One profit narrative is that the GSEs increased their accumulation of non-goal-qualifying risky loans as well.²⁶ We do not find this argument persuasive. While the mandated low-income loans had the risk characteristics of “high yield” loans and bonds, they did not have the return characteristics during the subprime lending bubble—as the other risky loans presumably did—and management knew it. The GSEs historically experienced higher credit losses on such loans to creditworthy borrowers even in good times, and numerous internal documents at both Fannie and Freddie show that they recognized the shift in risk as the housing boom turned, and they wanted to tighten standards.

Another narrative supporting the “profits over goals” explanation is that the nonprofit FHA—with similar political goals—ceded market share in subprime.²⁷ The FHA’s share, about 90 percent of which was fixed-rate loans without teaser rates, was in the 10–15 percent range from 1985 through 2001. The FHA is required by charter to remain actuarially sound. It, like the private mortgage insurers, is a monoline insurance company and, as a consequence, cannot cross-subsidize risks like the GSEs with a huge outstanding book of business. Hence, the FHA generally maintained underwriting standards as the quality of loans deteriorated, resulting in a decline in market share to only 3 percent in 2005–2007.

John C. Weicher, who as assistant HUD secretary for housing and federal housing commissioner was HUD’s “mission regulator” at the start of the bubble, also argues that GSE management must have been driven by the profit motive because they offered little resistance to the housing goals.²⁸ Weicher, who by his own admission apparently did not see problems with the subprime lending bubble until it was already bursting several years later, accelerated the housing lending goals.²⁹ In 2004, he increased the goals for each subsequent year, driving them to 56, 27, and 39 percent by 2008.³⁰ In addition, he added on the criteria that, beginning January 1, 2005, the GSEs “meet the market,” which he defined as funding

at least 50 percent of total affordable housing-goal-qualified originations. As a consequence, during the bubble years of mid-2004 to mid-2007, the GSEs purchased about 12 million subprime loans that qualified toward these goals.³¹

In fact, there is ample evidence that the senior credit risk officers at both GSEs realized they were entering a new period of much riskier loans in an increasingly risky environment and pressed for restraint. GSE CEOs might have been expected to resist these goals as too risky, but in the wake of the prior accounting scandals politicians took the unprecedented step of having two new politically beholden CEOs installed, neither of whom was inclined to violate the new HUD mandate.³² The FCIC report states: “In 2005, [Freddie Mac] CEO Richard Syron fired Dave Andrukonis, Freddie’s long time chief risk officer. Syron said one of the reasons that Andrukonis was fired was that Andrukonis was concerned about relaxing underwriting standards to meet mission goals.” Moreover, his replacement “repeatedly made the case for increasing capital to compensate for the increasing risk,” but his position was dropped from the senior management team,³³ thus paving the way for Syron, a former public servant with no business experience, to earn a combined \$23.5 million in 2005–2006 and an additional \$18.3 million in 2007 while bankrupting the company. The pattern of ignoring the loud warnings of the chief risk officer—paving the way for similar compensation—was virtually identical at Fannie Mae.

Weicher resists this interpretation, citing Fannie Mae CEO Daniel Mudd’s testimony before the FCIC that profits drove Fannie’s decision-making. But in fact, Mudd testified that “when 50 percent becomes 57 percent [in accordance with Weicher’s housing goals] ultimately, then you have to work harder, pay more attention, and create a preference for those loans.”³⁴ In other words, the goals were now seriously binding. And virtually everyone charged with risk management both inside and outside the GSEs recognized that the greater risk required more capital, which would have made “meeting the market” impossible. James Lockhart, OFHEO’s prudential regulator at the time, continually proposed raising capital requirements, and GSE managers who had risk management respon-

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The subprime lending debacle occurred because politicians saw to it that mission regulation trumped prudential regulation.

sibilities explicitly recommended maintaining credit quality standards even if that meant withdrawing from the market, but all were rebuffed.

The GSEs appeared to initially lag behind private-label subprime lending due to the temporary restraint imposed in response to their accounting scandals, but the GSEs had been leading the way in avoiding private mortgage insurance since 1997. Moreover, their market share quickly rose to the prior level as soon as the audited accounts were finally released in 2006 and the excess capital requirement was lifted. Internal documents show a policy of regaining the market share lost to private securitizers as their mission regulations required.

Politicians introduced the profit motive when they privatized Fannie and Freddie, imposing an enormous burden on prudential regulators to mitigate moral hazard because agency status trumps market discipline. The imposition of lending quotas imposed the additional burden of protecting safety and soundness when meeting the quotas. Shareholders historically understood the political risk of managing the costs of meeting affordable housing goals against the benefits of agency status, and they encouraged management to spend lavishly on politicians to mitigate the risk. Weicher's housing goals would force purchases that fueled the bubble, the inevitable bursting of which caused the subsequent systemic collapse of the financial system, but even prior levels of goals would likely have produced the same result. The housing goals should have been suspended by mid-2004 and the GSEs seriously restrained until the market cooled off.

The subprime lending debacle occurred because politicians saw to it that mission regulation trumped prudential regulation, with the complicity of GSE CEOs conflicted by enormous payoffs. So why did the 662-page FCIC report conclude that the goals were not a cause, and instead devoted their attention to everything but politically induced distortions? Commissioner Wallison, who in dissent reached essentially the same conclusion we do, testified before Congress that—like the Pecora Commission it was modeled after—the FCIC was rigged to yield the conclusions that it reached, ignoring any evidence that conflicted with those conclusions.³⁵

Private-Label Securitization

The political distortions driving private-label securitization were comparable to those driving the GSEs, and the HUD-mandated competition to maintain a 50 percent market share proved suicidal to both. The distortions were numerous. One major distortion was the political pressure to make loans to low-income and minority borrowers, undermining prudential regulation. The role of the CRA and HMDA in the subprime lending debacle has generally been downplayed, as most of the loans were not funded on balance sheet, and the role of the Justice Department quotas, which applied to nonbank lenders as well, has been virtually ignored. But politicians applauded this lending at the time the loans were originated, calling it “predatory” only after borrowers defaulted.

The most important distortion was certainly the bank risk-based capital rules. These determined pricing and funding for all of the investment-grade securities and much of the lower-rated securities based on SEC designations of “Nationally Recognized Credit Rating Agencies.” Investment banks and off-balance-sheet funding mechanisms used by the TBTF commercial banks could finance equity interests at 30 times the leverage of commercial banks, largely with bank funding that enjoyed the functional equivalent of agency status. In addition, SEC present-value accounting rules allowed acceleration of revenues and deferral of losses. The transformation of investment banks from partnerships to corporations—largely driven by the prior trading of GSE securities—created a conflict of interest between traders and owners (often sovereign wealth funds). Finally, the asymmetric incentive structure of many state and local pension funds created a moral hazard, leading them to fund worthless residual interests.

Securitization of both first and second mortgages financed the same high-loss loans in the same way, by bypassing the primary mortgage insurers. Investment-grade securities as defined by the SEC financed most of the first and second loans at yields only modestly above those of GSE securities. Regulatory arbitrage provided opportunities to finance these investment-grade secu-

rities at leverage ratios that were as much as 50 times the limit of an informed market. The dominant buyers were the GSEs (as the investments qualified for their quotas), banks and thrifts (as the investments qualified for an 80 percent reduction in required capital), and off-balance-sheet structured investment vehicles (which held about half as much capital as required of the parent bank). Other money managers invested in these securities based on their high ratings, as the spreads did not warrant independent due diligence. All these investors assumed that sophisticated investors made informed, undistorted analysis when purchasing the below-investment-grade “equity tranches,” and hence mitigated the risk to the senior bondholders.

This was a bad assumption for several reasons. First, issuers were able to negotiate with multiple rating agencies to minimize the equity portion. Second, the equity investors—virtually proprietary traders and hedge funds—were able to use bank debt to leverage their investments, astronomically increasing both their potential return and down-side risk. Third, the traders and hedge fund managers did not bear the downside risk. Whereas investment banking partnerships historically withheld the distribution of bonuses to proprietary traders on earned cash profits until retirement, the stockholder firms distributed noncash unearned profits as cash bonuses annually. The same was true for hedge fund managers, who raised most of their additional funding during this period from state and local government retirement funds that paid retirees an extra month’s retirement for good investment performance, with taxpayers picking up the tab for bad performance.

As with GSEs, taxpayers bore most of the loss due to the moral hazards of government backing, but state and local taxpayers are paying a greater share of private-label losses. The biggest difference between private-label and GSE subprime securitization is that investors in TBTF GSE securities have been completely bailed out—with the exception of preferred stockholders (largely insured banks)—whereas buyers of private-label MBS issued by TBTF commercial and investment banks generally took significant write-downs. But the costs of the bailout are largely opaque, falling on

depositors, due to artificially low deposit rates, and future consumers, due to a crony capitalist financial system.

Can Private-Label Securitization Work without Government Backing?

The Obama administration report correctly identifies regulatory arbitrage as a contributing factor to the financial crisis and recommends eliminating it prospectively. This has been said before, but with little follow-through owing to the inherent regulatory and political conflicts. Capital was inadequate, but this reflects political meddling in GSE regulation and a failure of bank regulators. The identification of incentive conflicts in private securitization is accurate, but the focus on regulatory failure rather than the lack of market discipline that regulation replaced argues for regulatory doubling-down, where more market discipline is required to mitigate these conflicts.

After the mortgage securitization market shut down and the Treasury Department put Fannie Mae and Freddie Mac into conservatorship in 2008, it issued a white paper suggesting covered bonds as an alternative. Covered bonds are a simpler capital market funding vehicle, not so distorted by taxes and regulations. The Federal Home Loan Banks (FHLBs) have issued trillions of notes and bonds collateralized by their mortgage holdings over the last three quarters of a century without missing a single payment and currently have over \$800 billion debt outstanding. Private-label covered bonds are not necessarily that much different and could evolve into a quite similar structure, but without the implicit federal backing enjoyed by the FHLBs on which their current AAA rating relies.

How do private-label covered bonds compare to securitization? Covered bonds are a method of balance-sheet financing whereas the whole point of securitization and sales to GSEs is to get assets off the balance sheet, with the adverse consequence that originators have little long-run stake in the performance of the loans. As discussed above, the amount of equity in securitizations is not very

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transparent, but because of various capital avoidance strategies available under Basel I and II rules, the required capital for private-label MBS was generally only 40–50 percent of the 4 percent capital required for retained mortgages and only 30 percent for mortgages sold to and retained by Fannie or Freddie. Setting the overcollateralization of the pool of assets for a covered bond equal to the risk-based capital requirement for retained assets eliminates the potential for regulatory arbitrage. The only other legitimate issue for the government is whether the collateral maintenance agreements favor the bondholders over the FDIC in the event of liquidation, a minor issue that can be worked out as it has been for collateral pools backing FHLB advances.

For investors, the uncertain and unpredictable cash flows of MBS are eliminated, replaced by simple debt. In addition, the credit risk is much easier to evaluate. The obligors are mostly regulated banks with transparent balance sheets. In the rare event of an issuer failure and takeover, the bondholder is protected by the collateral pool. Hence the initial credit review is focused on the collateral maintenance agreement and trustee credibility, both of which will quickly become standardized.

For the issuers, any community bank should be able to issue a covered bond, as the collateral cover will be the most important factor in evaluating the default risk and determining the credit rating. This essentially expands a bank's funding source beyond deposit funding and potentially to longer maturities at a much lower issuance cost than private-label securitization, and virtually eliminates the prior concern with excessive MBS credit ratings. Finance companies and mortgage banks can also issue these bonds, but they will have to post the same issuer excess collateral and hence capital as a bank. Intermediate banks may evolve as bond issuers diversify the credit risk of community banks, something like a private FHLB system.

A second option suggested in the Treasury Department white paper—to ensure access to credit “during a housing crisis” and/or “in times of stress” at actuarially sound premiums, is not credible. Policymakers always face political pressure to make both findings (and there are always

academics willing to provide support), and true actuarial premiums are virtually never charged.

A third option presented in the white paper is a virtual rehash of the Fannie and Freddie structure from the beginning to the end of the last century, with private insurers backstopped by a federal “pool insurer.” Again, all claims of coverage limits, capital adequacy, and actuarial pricing are contradicted by the GSE experience of the last decade.

Recommendations

Most economists have long supported politicians in promoting the United States’ “third way” mortgage finance system, so it is not surprising that they, too, would now confuse symptoms with causes in their analyses of the financial crisis. But despite the stories of Wall Street greed and multiple independent causes, there were really only two causes of the subprime bubble, each necessary and together sufficient to virtually assure the debacle and systemic financial system collapse. The first was the Federal Reserve’s loose money policy over the last decade, which allowed a bubble to develop somewhere, and that somewhere ended up being in the housing market. The second cause—the one we address in this paper—was the massive government-induced distortions in housing finance, mostly owing to the moral hazard of excessive depositor/investor protection and federal housing policy, that virtually assured a subprime lending bubble of systemic proportions.

In home mortgage finance, “policy” has always just been an abbreviation for “political expediency,” the initial motivation for all the causal government interventions. Deposit insurance was passed during the Great Depression, after 75 years of rejection, because the ending of state prohibitions against interstate branching—which would have strengthened banks against failure—still was not politically feasible. The FHA and Fannie Mae were originally created to lead the way out of the Depression in a doomed attempt to stimulate housing production off budget. Ginnie Mae securitization was introduced to bypass state laws and regulations, creating the

“originate-to-sell” model with its inherent moral hazards. The GSEs were privatized to minimize budget deficits, leading to the distorted “public-risk-for-private-profit” model. The origins of the current debacle trace back to the implementation of longstanding political agendas during crisis conditions (“a crisis is a terrible thing to waste”) or sheer political expediency.

The conclusion that prudential regulators failed pervasively, chronically (as all of the distortions had precedents), and systemically to mitigate moral hazard at publicly regulated private financial institutions (i.e., banks and GSEs) is unassailable. The FCIC report correctly criticizes the Federal Reserve for its loose monetary and regulatory policy in the early part of the last decade, but wrongly concludes that housing goals did not matter. Fed Chairman Ben Bernanke rejects the first conclusion, but supports the second, bragging in November 2006—just before the bubble burst—of the large gains made in the homeownership rate, particularly among racial minorities.³⁶ The political goals that motivated those gains and the moral hazard they engendered are the only explanation for why homebuyers would take out mortgages they almost certainly knew they could not repay; why loan originators would make such loans; the lack of borrower underwriting, borrower down payments, and primary mortgage insurance characterizing these loans; why GSE creditors and equity investors would fund them; why this could be done on a systemic scale before collapsing and bringing down the global financial system; and why taxpayers got the bill. Public regulation of excessively protected private financial firms proved to be a poor substitute for market discipline.

Defenders of the prior public-private GSE system—imposing social lending goals on private enterprises—make two related arguments to shift the blame from politicians to regulators and from the GSEs to private-label securitization. The first argument is that pursuit of profit rather than social goals explains GSE subprime lending. Meeting the social lending quotas—which were ramped up steadily throughout the bubble—required the extension of credit to progressively weaker borrowers with actuarial losses increasingly likely, which both private mortgage

insurers and GSE experts realized. Furthermore, profit-seeking cannot explain the complete regulatory failure among all agencies with the erstwhile responsibility to maintain prudential lending guidelines or for the complete lack of political oversight or accountability for that lapse. But this debate over GSE motivation is a diversion: if goals were the cause, this implies they should not be imposed on private housing banks; if profits were the cause, housing banks should not be private.

The second argument is that the GSEs followed, rather than led, the subprime market. The evidence on this is mixed. Competition in regulatory arbitrage between GSEs and private-label securitization undeniably fueled the bubble. GSEs initially led, were then restrained by a 30 percent capital penalty imposed in response to their earlier accounting scandals, and again led later in the bubble. But this argument is also a diversion. Government-induced distortions caused a subprime lending debacle in the 1990s for nonqualifying loans funded by private-label securities, but the collapse did not cause a systemic crisis. In spite of all the other faults that have since been revealed in the financial system, only GSE political distortions and their market dominance can explain the magnitude and duration of the bubble and the ensuing global systemic collapse.

GSE defenders also argue that they provide numerous positives externalities, for example, market leadership, innovation, countercyclical stability, “liquidity,” and—the most emphasized—fixed-rate mortgage availability. This is mostly GSE propaganda. That the incentive conflicts associated with the securitization process are inherently irresolvable without a government guarantee, be it implicit or provided by the Federal Deposit Insurance Corporation, is false. Both domestic and international experience suggests that these conflicts can be mitigated with better borrower underwriting and cash down payments with mortgage insurance required for loan-to-value ratios greater than 80 percent and with higher risk retention and capital requirements for issuers.³⁷ This concern does not warrant a special housing bank charter with its inherent political conflict between mission and prudential regulation.

That political oversight of banks could undermine rather than reinforce prudential regulation

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The private securitization model also failed, owing not to multiple independent and complex causes, but to government-induced distortions.

was always problematic, especially for those banks that are TBTF. For GSEs, it was inevitable. While shareholders subsidies were historically substantial, they were woefully inadequate to finance the mandates imposed during the last decade. Failure was an inevitable consequence of inherent political meddling. The private securitization model also failed, owing not to multiple independent and complex causes, but to government-induced distortions. But deposit insurance is here to stay and thus bank regulation must be depoliticized and fixed no matter what, and that includes eliminating subsidy mandates and regulatory and tax arbitrage in capital market funding vehicles. The FCIC report and Obama administration report concluded that the GSE model was “fundamentally flawed.” They should also have concluded that their role was unnecessary, a consequence of political expediency and instrumental in the systemic collapse. On the basis of this historical experience, it is certain that the guarantee programs proposed in the Obama report will repeat the GSE experience. The “third-way” policy that the nation has long followed—better known as crony capitalism—magnifies the inefficiency and corruption of government-driven socialism and the instability of market-driven capitalism.

That the Dodd-Frank Act entrenches a crony-capitalist system of TBTF institutions has become increasingly evident. The complete substitution of regulatory fiat over market discipline is perhaps best illustrated by the current debate over the definition of a “qualified residential mortgage” as required by the act. This definition was supposed to apply to loans so safe as to be exempt from the legally mandated but as yet undefined 5 percent capital retention rule for securitization. But liberal groups strongly oppose even a 20 percent down payment requirement to qualify for the exemption.

As further evidence, in a bid to stem taxpayer losses for bad loans guaranteed by the GSEs, Sen. Bob Corker (R-TN) proposed that borrowers be required to make a 5 percent down payment in order to qualify. His proposal was rejected 57–42 on a party-line vote because, as Sen. Chris Dodd (D-CT) explained, “Passage of such a requirement would restrict home ownership to only those who can afford it.”

From 1945 to 1975, before the modern era of

the GSEs, the U.S. homeownership rate rose from a level of about 45 percent to its approximate average level of the next quarter century of 65 percent. This was financed largely by mutually chartered savings and loan, savings bank, and life insurance company intermediaries, which required saving before borrowing and a fair balance of risk and reward between savers and borrowers. Federally sponsored deposit insurance protected deposit-funded lenders from a repeat of the Great Depression policy debacle, but political interference in mortgage lending was otherwise limited. This model worked for centuries, before ultimately succumbing to political risk.

Over the centuries, home mortgage lending to households has proven safer than lending to government and business. While the institutional landscape has changed dramatically since 1975, there is no reason, in principal, why private firms cannot once again fund the U.S. home mortgage market, including fixed-rate mortgages, without federal guarantees. The introduction of interest rate swaps in the 1980s addressed the interest rate maturity mismatch problem, and the extension to banks of access to FHLB advances in 1989 addressed the liquidity problem. Whether private firms will or will not fund these mortgages depends on only one thing: the level of political risk inherent in mortgage lending, as this is the single most important determinant of private mortgage lending across both developed and developing economies. Unfortunately, having blamed private lenders for the subprime lending debacle, politicians have left in place all their prior political distortions while further politicizing the market.

At the micro-level, long established legal and regulatory precedents are being cast aside. Among the many questions lenders should be asking themselves are

- Will home mortgages be subject to a cram-down in bankruptcy, as proposed?
- Is it possible to mitigate concern with the prospective regulations of the Consumer Financial Protection Bureau?
- Will the state attorneys general be successful in extracting ex-post subsidies to borrowers, and, if so, find new excuses to do so?
- Will lenders bear the consequences of ir-

responsible lending practices required to meet federal racial and low-income lending quotas?

- Will lenders be taxed \$20,000 for each foreclosure they pursue as California politicians have proposed?
- Will full recourse be allowed, and if not, can the moral hazard that results from government-encouraged mortgage default without eviction or recourse ever be reversed?

The macro-level political risks are even more daunting. Will inflation be controllable when real government budget deficits are many multiples the levels of the 1970s that resulted in high double-digit fixed-rate mortgage rates? More importantly, will lenders be allowed the flexibility to balance borrower and lender risks when designing mortgages and to price risks to reflect the market cost of hedging and risk management? None of this seems very likely, and these risks are highly correlated.

Lenders and their legitimate concerns are being virtually ignored in the current policy debate, which is largely taking place between consumer advocates, politicians, and regulators. Regulators are once again fashioning regulatory arbitrage rules for mortgage-backed securities, for example, whether 5 percent risk retention refers to “horizontal” (first loss) or “vertical” investments in risk tranches, and proposed capital requirements are different for comparable risk among alternative financing mechanisms: MBSs, covered bonds, Federal Home Loan Bank advances, and bank deposits. HUD is lobbying that mortgage loans with only a 10 percent down payment be exempt from risk-retention rules, that is, treated as risk free. By the time lenders are invited to the table, they will inevitably require a government guarantee of some sort to mitigate political risk, with proponents again arguing that government is needed to ensure the availability of fixed-rate mortgages.

The real problem with fixed-rate mortgages is that state and federal politicians have generally prohibited pre-payment penalties when refinancing. Borrowers have ruthlessly exploited this advantage for decades, refinancing repeatedly in a falling rate market. There is nothing inherently wrong with borrowers speculating at the lenders’

expense, but lenders, including GSEs, face high costs and imperfect strategies hedging prepayment risk as there is no natural other side of the market for this form of speculation. Hence this option has been underpriced at taxpayer expense.

The alternative to a return to competitive private markets and restoration of market discipline is a cycle of politically caused systemic financial crises. When the next systemic failure occurs, people will once again say “nobody saw it coming” and blame the lenders.

Notes

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3. David Jones, “Emerging Problems with the Basel Capital Accord: Regulatory Capital Arbitrage and Related Issues,” *Journal of Banking and Finance* 24 (2000).
4. Robert Van Order, “The US Housing Market: A Model of Dueling Charters,” *Journal of Housing Research* 11 (2000).
5. Patric Hendershott and James Waddell, “Changing Fortunes of FHA’s Mutual Mortgage Insurance Fund and the Legislative Response,” *Journal of Real Estate Finance and Economics* 5 (1992): 119–32.
6. Helen Thompson, “The Political Origins of the Financial Crisis: The Domestic and International Politics of Fannie Mae and Freddie Mac,” *The Political Quarterly* 80 (January–March 2009).
7. Historically, the major competitors—savings and loans—were allowed a “bad debt deduction” from their federal tax liability that was gradually lowered from 80 percent to 40 percent and eventually eliminated. Private mortgage insurers had a similar tax deferral benefit for holding reserves.
8. Between 2001–2003 and 2005–2006, the share of mortgage originations that were “junk” more than tripled from 10 to 33 percent. Patric Hendershott, Robert Hendershott, and James Shilling, “The Mortgage Finance Bubble: Causes and Corrections,” *Journal of Housing Research* 19 (2010): 5.
9. Glenn Seltzer, “PMI Insurers Owe Many Thanks to Piggy Back Mortgages,” *Mortgage News Daily*, November 13, 2007.

10. Christopher Mayer, Karen Pence, and Shane M Sherlund, "The Rise in Mortgage Defaults," *Journal of Economic Perspectives* 21 (2009): 32.
11. Hendershott, Hendershott, and Shilling, p. 5.
12. This narrative is taken from Mayer, Pence and Sherlund. Hendershott, Hendershott, and Shilling have a similar narrative.
13. Patric Hendershott and James Shilling, "The Impact of the Agencies on Conventional Fixed Rate Mortgage Yields," *Journal of Real Estate Finance and Economics* 2 (1989).
14. This explains why the GSEs became the largest investors in private-label subprime securities.
15. The portion of mortgage portfolios funded by debt doubled from 10 percent in 1997 to 20 percent in 2003 (Hendershott, Hendershott, and Shilling, p. 4).
16. Peter J. Wallison and Charles W. Calomiris, "The Last Trillion-Dollar Commitment: The Destruction of Fannie Mae and Freddie Mac," American Enterprise Institute, September 2008, p. 6.
17. Charles A. Calhoun, "The Hidden Risks of Piggyback Lending," Calhoun Consulting, 2005, p. 8.
18. Fannie Mae was alleged to have overstated earnings by \$10 billion to increase current year bonuses. Freddie Mac was alleged to have reduced current year income by \$5 billion, presumably saving to protect future bonuses (Thompson, "The Political Origins of the Financial Crisis," 2009, pp. 8-9).
19. Adrian Blundell-Wignall and Paul Atkinson, "The Subprime Crisis: Causal Distortions and Regulatory Reform," Organisation for Economic Co-operation and Development, 2008, pp. 82-84.
20. John Weicher, "The Affordable Housing Goals, Homeownership and Risk: Some Lessons from Past Efforts to Regulate the GSEs," presented at "Past, Present, and Future of the Government Sponsored Enterprises" conference, Federal Reserve Board, St. Louis, November 2010, Table 1.
21. See Michael Lewis, *The Big Short* (New York: Norton, 2010).
22. Peter J. Wallison and Edward Pinto, "How the Government Is Creating Another Housing Bubble," American Enterprise Institute, November 2010.
23. Peter J. Wallison, "Slaughter of the Innocents: Who Was Taking the Risks That Caused the Financial Crisis?" American Enterprise Institute, October-November 2010, pp. 6-7.
24. The lack of funding has continued to the present, and the necessary funding could be substantial. To illustrate, consider the following: Assume that all 12 million subprime loans made by the government-sponsored enterprises during the lending bubble had 2 percent teaser rates. Furthermore, assume that borrowers could not or would not pay more than the mortgage payment during the term of the teaser financing. With a teaser rate savings of 2 percent on a \$417,000 mortgage, the subsidy required to keep 12 million loans current is \$100 billion annually over the life of the loans.
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26. Dwight Jaffee, "Reforming the US Mortgage Market through Private Incentives," presented at "Past, Present, and Future of the Government Sponsored Enterprises" conference, Federal Reserve Board, St. Louis, November 2010.
27. Adam J. Levitin and Susan M. Wachter, "Explaining the Housing Bubble," University of Pennsylvania Law School Research Paper no. 10-15, 2010, p. 45.
28. Weicher, "The Affordable Housing Goals."
29. "By the beginning of 2007, problems in the housing and mortgage markets were becoming evident" (*ibid.*, p. 16). Actually, Case and Shiller hypothesized a housing price bubble far earlier in the boom. See Karl Case and Robert Shiller, "Is There a Bubble in the Housing Market?" *Brookings Papers on Economic Activity* 2 (2003).
30. Weicher, "The Affordable Housing Goals," Table 1.
31. Wallison, "Slaughter of the Innocents," Table 2, p. 7.
32. Weicher, "The Affordable Housing Goals," p. 10.
33. *Financial Crisis Inquiry Report* (Washington: U.S. Government Printing Office, 2011), pp. 179-180.
34. *Financial Crisis Inquiry Report* (Washington: U.S. Government Printing Office, 2011), p. 184.
35. Peter J. Wallison, "Statement to Senate Committee on Banking, Housing and Urban Affairs," May 10, 2011.
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