

US Mortgage Market Regulation and the Sub-prime Mortgage Crisis

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Introduction

The world financial system is in the midst of the greatest crisis since the Great Depression. The United States (US) mortgage market, and in particular the subprime mortgage market, stand at the epicenter of the crisis. The collapse of the subprime market revealed numerous flaws in the financing of home mortgages in the US. Many borrowers over-reached in their desire for larger homes – and many were pure speculators. At the other end of the spectrum were borrowers who were taken advantage of by predatory lenders. Many borrowers casually accepted loan offers without adequately understanding the implication of the terms and likely consequences in an environment of rising interest rates and falling real estate prices. Lenders and brokers became increasingly fee and volume driven, lowering standards to grow and gain market share. The securitization process fed the bubble and bust in the mortgage market by providing a ready outlet for lightly scrutinized loans. The investment banks furthered the securitization process by creating complex and opaque securities which were sold to yield seeking investors. The credit rating agencies, drawn to the fees associated with providing ratings, gave unduly generous ratings on structured mortgage backed securities without adequate analysis under true stress scenarios. Private mortgage insurers guaranteed high risk subprime loans, and poor risk management contributed to the downgrade and failure of key insurers which impacted structured credit markets.

Where were the mortgage market regulators as this crisis developed? The US has one of the most sophisticated financial and mortgage markets in the world, with many regulators and a great deal of experience in regulation and supervision. However it is clear that regulation failed to slow or stop a massive mortgage market bubble and bust. Furthermore, there was a clear lack of appreciation of how a contraction in real estate lending could impair the liquidity of other sectors of the financial markets, both domestic and international.

In this paper we focus on mortgage market regulation and its role in the mortgage market crisis. We review the rationale for regulation, the means by which the US regulates its mortgage markets, and assess how well the markets have been regulated in recent years with a focus on sub-prime lending. We conclude with some thoughts about the future direction of mortgage market regulation in the US.

Regulatory Rationales

In order to achieve its housing policy objectives, the US government intervenes in the housing finance system in a number of important ways. It intervenes through the provision of certain financial services such as mortgage insurance and the timely payment guarantee of certain mortgage backed securities. The government backs major institutions that enhance the flow of funds to the market and ensure the safety and soundness of the system. It intervenes through the regulation of major providers of housing finance and their business practices.

There are a number of reasons why the US government intervenes in the housing finance system. Homeownership has been a major priority of the US government since the 1930s when the Federal Housing Administration was created, and much of the government support system is designed to increase the proportion of households who are homeowners. A key objective of regulation and support is to expand the supply of funds to housing. This objective is in part due to the historical development of the housing finance system. A number of key institutions were created during the Great Depression. The objective was to restart the flow of funds to housing which had been interrupted by the collapse of the saving and loan industry and by weakness in and aversion to mortgage lending by commercial banks. This rationale continued to be prominent through the 1980s when the main lenders, savings and loans, again collapsed and policy makers saw the need to expand the supply of funds beyond a housing finance depository-based system. As a result government-backed institutions are major contributors to the supply of funds and indirectly regulate the market through their guidelines and activities.

Government involvement goes beyond augmenting the supply of funds to housing. Since the 1970s there has been considerable focus on expanding access to credit for disadvantaged households. These regulations are designed to provide incentives or mandates to lend more "down market", to lower income and minority households. The focus on minorities grew out of a legacy of discrimination in the 1950s and 1960s which included such practices as red lining (refusing to lend in a certain geographic area) and arbitrary and disproportionate denials of certain classes of borrowers (minorities, women).

In addition to expanding access and the supply of credit there are numerous US regulations that attempt to protect and inform consumers in their mortgage decision making. The motivation behind these regulations is to improve the efficiency of the market by helping consumers make better decisions and to protect borrowers from predatory lenders. Investors in the secondary mortgage market are also the focus of regulation through Securities and Exchange Commission (SEC) standards for disclosure of information and oversight of the rating agencies.

Finally US government regulations attempt to ensure the stability of the housing finance system. Regulations cover the safety and soundness of depository institutions and GSEs both through maintenance of capital adequacy and through proper risk management. A stable housing finance system should be less prone to institution failure and financial market cycles, reducing risk (and risk premiums) and enhancing consumer and investor confidence in the system.

Ultimately all these regulations seek to enhance the efficiency and equity of the US housing finance system. An efficient housing finance system will provide consumers with a stable supply of credit (no queues or non-price rationing), at relatively low interest rates (measured by the spread between borrowing and lending rates of housing finance providers as well as the spread between mortgages and government securities), with choice of contract but protection against predatory products and practices. An equitable housing finance system will provide credit to all types of consumers at rates and terms commensurate with their individual credit-worthiness.

Forms of Regulation

Supply of Mortgage Funds

Government involvement to increase the supply of funds originated in the Great Depression with the creation of institutions designed to facilitate greater lending by existing institutions. The Federal Housing Administration (FHA) provided 100 percent loss coverage, virtually eliminating credit risk which was extraordinarily high at the time. The Federal Home Loan Banks (FHLBs) were created to provide liquidity and expand access to funds for savings and loans which had been funded by deposits and bank loans. Fannie Mae was created in 1938 to develop a secondary market in mortgage loans and became the major investor in FHA loans funded by issuance of government debt.

These housing finance institutions took on added importance after World War II as the country sought to house its returning veterans and the move to suburbia began. Through the insurance of high loan-to-value (LTV) loans, the FHA expanded access to homeownership by reducing downpayments for households with funding through Fannie Mae and the government debt markets. The FHA was a significant force for standardization in the mortgage industry, in particular the adoption of the long term, fixed rate self amortizing instrument. Ginnie Mae and Freddie Mac were created in the 1970s to augment the flow of funds to housing, the lending to which was still dominated by the savings and loan system. The savings and loans were supported by deposit insurance and tax incentives but subject to potentially destabilizing regulation in the form of concentration rules (80 percent of assets in mortgages, government securities or cash equivalents, no lending more than 100 miles from the head office) and product limitation (federally chartered institutions could only make long term fixed rate mortgages). Ginnie Mae was initially created to liquidate Fannie Mae's subsidized portfolio after it was "privatized" in 1968.¹ Fannie Mae's reduced investments in FHA mortgages led Ginnie Mae to create the first mortgage-backed security. This innovation led to the creation of a parallel funding channel through the capital markets, augmenting the traditional depository channel. With the success of the Ginnie Mae pass-through security, the savings and loans decided they wanted access to the capital markets through the sale of assets which led to the creation of Freddie Mac.

These institutions owe their origins in part to regulation (in particular, regulation of the savings and loans which resulted in a segmented and unstable funding source). As they developed, they also became de facto regulators of the market. FHA, and later Fannie Mae and Freddie Mac guidelines became the industry norms, defining documentation, underwriting and loan term standards.

The importance of the secondary market institutions increased in the 1980s with the deregulation and ultimate collapse of the savings and loan industry. Mortgage funding

1 Privatization meant moving Fannie Mae off the federal budget by selling equity in the company, initially to its customers and eventually to the general public. The effect of privatization was to loosen government control of the company, with regulation replacing ownership.

through the secondary markets grew significantly while that from savings and loans fell precipitously. Fannie Mae and Freddie Mac ("The GSEs") provided liquidity for the savings and loans by purchasing (or lending against) their fixed rate loans and provided new funding to commercial and mortgage banks that became the dominant originators. The importance of the FHLBs declined with that of the savings and loans but was revived in 1989 when FIRREA allowed commercial banks to join the FHLB system. That Act also "privatized" Freddie Mac, placing it on a par with Fannie Mae.

The 1990s saw continued growth in funding through the secondary market, but with two important changes. The first was the decision by Fannie Mae and Freddie Mac to expand their business model from mainly guaranteeing timely payment of principal and interest on their securities to portfolio investment in whole loans and securities. This change may have marginally boosted the supply of funds for US housing as the GSEs were increasingly able to tap foreign investors for funding. The portfolio activity increased the influence of the GSEs as a funding source as the volume of mortgages they purchased or guaranteed increased. The risk profile of the GSEs also rose as they had to manage the mismatched risk profile of the funds they raised vs. the mortgages purchased.

The second change in the market was the creation and growth of the sub-prime market. This was initially a private market phenomenon as sub-prime loans were made by non-depository lenders funded through private label (non-government backed) securitization. As the market grew, depository institutions entered the market, primarily funded through securitization. The growth of the sub-prime market expanded the supply of credit to households with past credit problems. It also began to displace the FHA which had traditionally served a lower income market. The GSE's portfolio activity eventually became a source of funding for subprime mortgages through substantial purchases of AAA rated tranches of subprime backed securities, although the GSEs purchases grew more slowly than the overall subprime market.

Access

The tumultuous 1960s brought a new emphasis on expanding access to housing, in particular for lower income and minority households many of whom had been subjected to discrimination in the past. Government regulation of the mortgage market to create greater access began in 1968 with the passage of the Fair Housing Act, and the Equal Credit Opportunity Act (ECOA), Community Reinvestment Act (CRA) and Home Mortgage Disclosure Act (HMDA) were passed in the 1970s. These laws and their accompanying regulations are focused on eliminating discrimination in both housing and mortgage lending and expanding the flow of funds to disadvantaged households and communities. In adopting the CRA, the Congress affirmed the principle that depository institutions have an obligation under their charters to serve "the convenience and needs" of their communities by extending credit to all parts of those communities.

While Fair Housing and ECOA cover all lenders, CRA and HMDA mainly cover depository institutions and are enforced through examinations conducted by the federal agencies that are responsible for supervising them. Fair Housing and ECOA prohibit discrimination and are

enforced through the legal system. HMDA and CRA mandate reporting of lending activities within their community. While these regulations do not directly require lenders to provide loans to disadvantaged groups, they are effective since they require public reports that regulators take into account when considering unrelated institution requests (e.g., branch or merger applications). Community groups also use the reports to exert public relations pressure on lenders. As such, the regulations provide incentives for lenders to provide credit to underserved portions of the market.

More recent access legislation, aimed at the GSEs, goes further than CRA by requiring investment in loans to underserved populations and areas. The FHLBs were subject to an affordable housing "tax" in the 1989 legislation, requiring them to invest a portion of their profits in affordable housing projects (typically multi-family rental). Fannie Mae and Freddie Mac were made subject to affordable housing goals (set by HUD) in 1992, requiring them to purchase certain percentages of loans to households at or below median area income and in distressed areas. The housing goals have been periodically increased – the last increase in 2004 has been alleged to have contributed to the downfall of the GSEs.

Stability

The US has numerous institutions charged with regulation and supervision of various institutions involved in the housing finance system. For the most part, safety and soundness regulation is institutional rather than functional in orientation. The different types of depository institutions (commercial bank, savings and loan, credit union, state chartered bank, bank holding company) have their specific regulators (OCC, OTS, CUNA, FDIC, FED).² Banking institutions can be chartered at the state or federal level. If state chartered, they are subject to oversight by both their state regulator and the FDIC. Bank holding companies are subject to oversight by both the Federal Reserve and the OCC. Overall federal regulation is coordinated by the Federal Financial Institutions Examination Council (FFIEC), but significant differences in approach remain. There have been numerous calls for consolidation of depository institution regulators which may gain some traction in the aftermath of the financial crisis (see the Paulson, Steel, and Nason (2008) Treasury Blueprint, for example).

The GSEs have a specialized regulator, the Federal Housing Finance Agency (FHFA) which was created in July 2008 with responsibilities for Fannie Mae, Freddie Mac and the FHLBs. It is the result of a merger between specialized regulators for Fannie and Freddie (OFHEO) and the FHLBs (FHFB). A separate office in HUD regulates FHA and Ginnie Mae. The GSEs (particularly Fannie Mae and Freddie Mac) have been de facto regulators of the primary mortgage market through the standards they set for sellers and servicers.

² The Office of the Comptroller of the Currency (OCC) regulates national chartered banks; the Office of Thrift Supervision (OTS) regulates savings and loans and savings banks; the National Credit Union Administration (NCUA) regulates credit unions; the Federal Deposit Insurance Corporation (FDIC) regulates state chartered banks; and the Federal Reserve (FED) regulates bank holding companies.

Lenders require most homebuyers who obtain loans that are more than 80 percent of the home's value to obtain private mortgage insurance. Private Mortgage Insurers (PMIs) have written over \$800 billion in coverage since 1998. The industry is regulated directly at the state level, but the industry is also influenced by regulation of federal mortgage related entities. For example, the GSEs purchase a large percentage of the mortgages insured by PMI companies, so the ability of lenders to sell loans is closely tied to GSE policies regarding the loan products and insurers they will accept in their portfolios.

Mortgage insurers provide primary mortgage insurance and/or pool insurance as a credit enhancement on private label securities and/or mortgage-backed bonds, and the insurance enhances the credit ratings of these securities. The PMIs informally regulate the mortgage market as their requirements for eligibility set standards for lenders. They also perform an oversight function through their periodic reviews of lenders and insured loans. The rating agencies are de facto regulators of the PMI industry, and the GSEs also regularly assess the quality of PMI providers.

The 1998 Homeowners' Protection Act and RESPA are two federal statutes that impose significant restrictions on the operations of PMI companies. Both acts seek to reduce transaction costs of homeowners who mortgage their homes, either at the time of purchase or later. The 1998 Homeowners Protection Act requires lenders or servicers to provide certain disclosures concerning PMI and has provisions for borrower-requested cancellation and automatic termination of PMI. In 2006, Congress approved a federal tax deduction allowing low and moderate income homeowners with low down payment mortgages to deduct the cost of their government or private mortgage insurance premiums. It originally applied only to the 2007 tax year, but the Mortgage Forgiveness Debt Relief Act of 2007 extended the deduction through the end of 2010.

The role of rating agencies has become increasingly important in the capital markets, and in particular in the secondary mortgage markets. Ratings of the GSEs, PMIs, loan servicers, mortgage-backed securities, and structured credit products that contain mortgage portfolios have been essential in providing investors with third-party opinions on the credit-worthiness of these mortgage related entities. The evolution of their role began in 1975 when the Securities and Exchange Commission (SEC) adopted the uniform net capital rule that stated that if broker-dealers' proprietary positions in various securities were rated investment grade by at least two Nationally Recognized Statistical Rating Organizations (NRSROs, i.e. credit rating agencies), the securities received preferential treatment for capital requirements. The term NRSRO was never defined, but other areas of federal securities laws gradually incorporated the NRSRO concept, and it was used to distinguish among grades of creditworthiness in federal and state legislation, and in rules issued by financial and other regulators, and even some foreign regulations.

Ratings-based criteria became increasingly important in recent years to regulators, banks, insurance companies, hedge funds, pension fund trustees, and money managers as straightforward ways to control or trigger certain actions or constrain investment decisions. As a result, the influence of ratings agencies has grown, particularly in the structured credit markets that played such an important role in the recent subprime crisis.

As a result of their central role in the capital markets, there has been greater call for regulatory oversight. In June 2007, the Credit Rating Agency Reform Act was implemented. The Rating Agency Act defined the term NRSRO, and provided authority for the SEC to implement registration, recordkeeping, financial reporting, and oversight rules with respect to registered credit rating agencies.

The SEC oversees and enforces the laws and rules that govern the securities industry in the United States. The SEC requires public companies to disclose meaningful financial and other information to the public. In addition, the SEC provides standards for the disclosure of information on publicly traded securities and oversees issuance. The SEC oversees the inspection of securities firms, brokers, investment advisers, and ratings agencies, oversees private regulatory organizations in the securities, accounting, and auditing fields, and coordinates US securities regulation with federal, state, and foreign authorities.

Consumer Protection

The United States has many rules designed to improve consumer understanding of mortgage transactions and to protect American mortgage borrowers from unjust and abusive lending practices. Both financial institution regulators and the Federal Trade Commission have a broad mandate to oversee and enforce consumer protection and oversee the Truth in Lending Act (TILA) and the Fair Credit Reporting Act, among many others. These Acts and the Real Estate Settlement and Procedures Act (RESPA), overseen by HUD, focus broadly, aiming to protect Americans from all sorts of inadequate disclosure and unfair lending practices. Other rules such as the Home Ownership and Equity Protection Act (HOEPA) and statutes related to predatory lending focus more narrowly, aiming to protect Americans from abusive lending practices. Considerable state regulation preceded HOEPA, usually with a focus on prohibiting specific loan features such as prepayment penalties, and many states have adopted “mini-HOEPA” laws based on the HOEPA rules.³

³ In enacting HOEPA, Congress legislated that states can take actions above and beyond federal standards; i.e., federal laws should serve as a floor, not a ceiling. Since then, concerned that HOEPA wasn't adequate to address current abusive lending practices, more than 20 states have supplemented HOEPA with additional protections. Both the OCC and the OTS have adopted rules that state laws that regulate the terms of credit are preempted (and thus do not apply to nationally chartered banks and savings and loans).

The main regulations designed to improve consumer understanding and shopping are RESPA and TILA. The Truth in Lending Act, Title I of the Consumer Credit Protection Act, is aimed at promoting the informed use of consumer credit by requiring disclosures about its terms and costs. TILA requires lenders to disclose information to borrowers about the terms, conditions and consequences of the mortgage loan. The law is implemented by the Federal Reserve Board's Regulation Z. The Good Faith Estimate provisions of RESPA aim to inform homebuyers about the costs associated with home purchase (including mortgage related costs) in order that they can become better shoppers for settlement services. These regulations attempt to improve the efficiency of the market.

Other regulations aim to protect consumers from unfair practices in real estate (the anti-kick-back provisions of RESPA), lending (HOEPA and state predatory lending laws) and credit reporting (Fair Credit Reporting Act). The Home Owners Protection Act requires cancellation of a private mortgage insurance policy after the loan-to-value ratio is reduced to a certain threshold. The aim is to both improve the efficiency and equity of mortgage lending.

Regulatory Performance

Supply of Mortgage Funds

Until recently government efforts to expand the supply of funds were viewed as highly successful. The development and growth of the secondary mortgage market brought new investors and new funding to the housing finance system. The Mortgage debt-to-GDP grew from 44 percent in 1994 to 77 percent in 2007. There was increased competition, in particular from non-traditional, wholesale funded lenders. Option adjusted spreads between mortgage and government bond yields generally fell reflecting competition and improved liquidity in the mortgage market.⁴ Efficiency improved with greater specialization and competition.

Not everyone viewed the expansion of mortgage debt as positive. Critics of the GSEs as well as those of sub-prime lending noted the rising level of household indebtedness and questioned the sustainability of market growth.⁵ However, for the most part regulators and policy makers focused on the positive aspects of the increase in homeownership and improved access to mortgage credit. In hindsight, however, it is clear that the expansion in the supply of funds was unsustainable and probably expanded the housing bubble for several years.

The mortgage and financial market crisis has severely undermined this progress. The jumbo, Alt-A and subprime sections of the market have virtually disappeared (green and yellow bars in Figure 1). Bank mortgage lending has fallen as guidelines become tighter.

⁴ Option adjusted spreads net out the value of the prepayment option in US fixed rate mortgages. The resultant spread reflects the cost of intermediation, credit risk and liquidity of mortgages and mortgage-backed securities.

⁵ See for example various articles and interviews by Noriel Roubini at www.rgemonitor.com

Funding by Fannie Mae and Freddie Mac became volatile reflecting uncertainty over their financial condition and extent of government support. Mortgage-to-Treasury spreads have widened dramatically (Figure 1) and private label securitization has disappeared. The only funding sources that have been increasing are loans from the FHLBs (which increased 36 percent in 2007 and 4.4 percent through October 2008) and through Ginnie Mae securitization of FHA and VA insured loans which doubled its market share through the first half of 2008.

Figure 1: Mortgage Market Distress



Source: Lipsky, IMF 2008

The problems in the sub-prime market have directly impacted the supply of funds in other sectors of the market. The major impact is the disappearance of private label securitization which funded 33 to 40 percent of the market between 2004 and 2006. The losses on sub-prime and Alt-A loans suffered by banks and investors have directly led to the tightening of guidelines, not only eliminating higher risk loans but also prime jumbo mortgages (over the purchase limits of Fannie Mae and Freddie Mac).

While government-backed institutions contributed to the mortgage boom and bust, paradoxically they are at the forefront of efforts to stabilize the market. Despite the problems with subprime lending mortgage funding has not disappeared completely and government backing has proven to be an essential backstop. The Mortgage Bankers Association (MBA) forecasts \$1.9 trillion in originations for 2009, which is higher than any year prior to 2002 though 25 percent lower than 2007. The federal government now backs nearly all the funding in the market, through its guarantees (explicit or near-explicit) of GSE and Ginnie Mae securities and through expanded deposit insurance for banks.⁶ A major

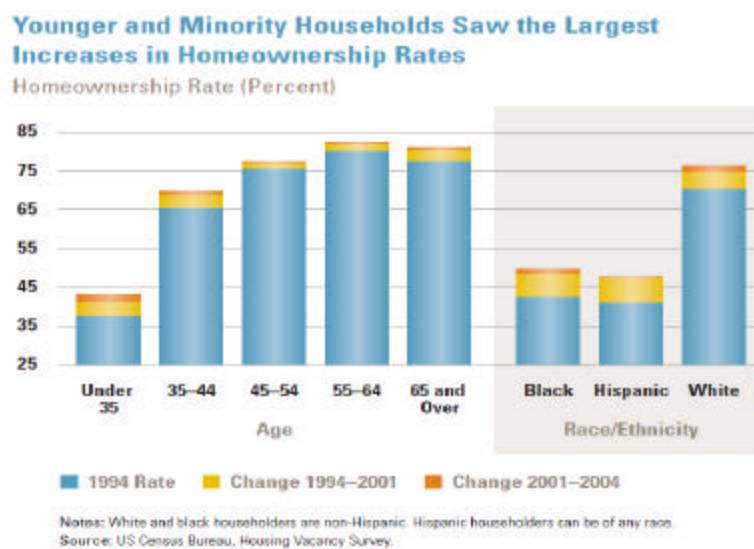
⁶ Deposit insurance was increased from \$100,000 to \$250,000 per account through 2009. All non-interest bearing accounts are 100% insured. Although the US Treasury now effectively owns Fannie Mae and Freddie Mac they have been reluctant to explicitly guarantee the debt, ostensibly because it would expand the US overall debt (and require a legislative increase in the debt ceiling). This has caused mortgage spreads to remain relatively high despite the government intervention.

reason for putting Fannie and Freddie in conservatorship was the desire to maintain access to a steady flow of funds from the capital markets.

Access

Until recently, government policies designed to improve access have been viewed as successful as evidenced by the increase in the homeownership rate from 64 percent in 1995 to 69 percent by 2005. Growth was particularly evident among minority (reaching a record 51 percent in 2004), younger and lower income households. Figure 2 shows the significant gains in homeownership between 1994 and 2004. Joint Center for Housing research concluded that CRA has expanded the supply of credit to lower income people and neighborhoods. Supporters of CRA have called for an expansion to non-depository lenders.

Figure 2: Gains in Homeownership



Source: Joint Center for Housing⁷

FHA has an access component (as well as expansion of the supply of funds). FHA borrowers were traditionally somewhat lower income and greater percentage minority than prime borrowers. FHA's market share declined with the sub-prime boom. Sub-prime loans were disproportionately present in lower income and minority neighborhoods. In 2006, more than 40 percent of loans on one- to four-unit properties originated in low-income census tracts were high cost, as were 45 percent of such loans originated in low-income minority communities. By comparison, high-cost loans accounted for only 23 percent of originations in middle-income white areas and 15 percent in high-income white areas. FHA's market share dropped 25 percentage points (from 32 to 7 percent) among minority borrowers and 16 percentage points (from 26 to 10 percent) among low- and moderate-income borrowers. FHA has made a strong come back in the recent crisis.

⁷ Joint Center for Housing, State of the Nation's Housing, 2008.

Although GSE housing goals were introduced in 1992, it was not until the early 2000 period that they were viewed as having a significant impact on lending to low income borrowers. Research on GSE goals suggests mixed results. Many researchers have found that the affordable housing goals had a positive impact on GSE behavior. For example, Bunce and Scheessele (1996), Bunce (2002) and Manchester (1998, 2008) show that the GSEs increased the proportion of their loan purchases to targeted populations in the years following the enactment of the GSE Act. GSEs also enhanced their product offerings allowing higher risk than industry norms to facilitate more purchases of loans from targeted communities [Listokin and Wyly (2000) and Temkin, et al. (2001)]. However, according to HUD, both Fannie and Freddie have historically lagged the primary market in providing affordable home purchase mortgage loans to low-income borrowers and underserved neighborhoods. For example, Williams and Bond (2003) conclude that the GSEs did not purchase relatively more underserved market loans than the primary market makers. Many of the gains they made may have come from the purchase of loans that have limited impact on underserved markets.

The GSEs increased the proportion of their loan purchases to targeted populations in the years following the enactment of the GSE Act. GSEs also enhanced their product offerings allowing higher risk than industry norms to facilitate more purchases of loans from targeted communities. The housing goals were tightened in 2001 and 2004 making them more binding on GSE purchases. However, studies of their impact present puzzling evidence. The GSEs increased their purchase activities to targeted groups under the affordable housing goals, which should result in increased access to credit and improved housing market outcomes. However, higher homeownership rates, lower vacancy rates, higher house prices, and elevated sales volumes did not reliably occur for targeted groups.

One explanation is that the GSEs do not influence mortgage interest rates and, by extension, mortgage markets very much. There is a substantial literature that estimates the size of the funding advantage of the GSEs and attempts to estimate the pass-through of the funding advantage to consumers through lower mortgage rates. The earliest literature concluded that a reduction in yields did exist, but this was when the market was relatively new and thus relatively illiquid and inefficient. The relevance of GSE funding appears to have dissipated over time. A CBO (2004) study that uses data through May 2003 concluded that approximately 16 percent of the estimated funding advantage was passed through to borrowers. The range of estimates of the funding advantage is from 24 to 41 basis points, with approximately 7 basis points (or 16%) of that advantage passed through to borrowers (Passmore, Sherlund, and Burgess (2005), Miller and Pearce (2006)). All estimates are well below 100% despite the high level of competitiveness of the US primary mortgage markets.

The housing goals have been cited by both past management and critics of the GSEs as both contributors to the subprime crisis and as having a role in the demise of the institutions. The housing goals were substantially increased in 2004. Fannie Mae and Freddie Mac responded by increasing their purchases of sub-prime and Alt-A securities. Their purchases (of the AAA-rated securities) accounted for between one third and one half

of the sub-prime issues in 2004 - 2006, adding fuel to the growing fire.⁸ The poor performance of these securities was a major contributor to the erosion of capital of the institutions that led to their conservatorship. However, the consensus view is the GSEs were late to the subprime party – contributors but not causal agents.

There have been numerous accusations that CRA triggered the subprime crisis. Conservative commentators in particular have leveled this charge [Perlstein (2008)]. Closer review suggests a more tenuous connection. Most subprime loans are made by lenders not covered by CRA. Furthermore, research suggests that CRA lenders are typically less involved in risky lending Yellen (2008). According to recent research by the Federal Reserve [Kroznier (December 3, 2008)] CRA “. . . has not pushed lenders to undertake high-risk lending . . . [or] contributed to the erosion of safe and sound lending practices.”⁹ Engle and McCoy (2002) point out that between 1993 and 1998, there was a tremendous surge in lending to LMI borrowers. CRA-covered institutions accounted for eighty-three percent of the growth in prime loans to these borrowers. In contrast, CRA covered institutions were responsible for only fifteen percent of the increase in subprime loans during the same period.

A Traiger & Hinckley LLP study of 2006 mortgage loan data suggests that the CRA deterred banks from engaging in the kinds of risky lending practices that are provoking the foreclosure crisis. Compared to other lenders in their communities, banks making loans in their CRA assessment areas (CRA Banks) were less likely to make a high cost loan, charged less for the high cost loans they did make, and were substantially more likely to eschew the secondary market and retain high cost and other loans in portfolio. Foreclosure rates were also lower in metropolitan areas with proportionately greater numbers of bank branches.

A Fed study [Canner et al. (2002)] found that CRA-eligible loans at CRA-affected institutions do carry lower mortgage spreads compared with other loans at the same institution. However, once risk and other factors are controlled for the differences in mortgage spreads become economically and statistically insignificant. In the view of the GSEs, many CRA-eligible loans are not purchased due to their low prices. A CRA trade group, the National Association of Affordable Housing Lenders contends that the GSEs preferred to purchase AAA tranches of subprime loans to satisfy their housing goals because they carried higher yields than CRA loans.

In their study for HUD, Williams and Bond (2003) compared the characteristics of GSE purchases with loans made by insured depositories. They conclude that the GSEs do not lead, but follow. Historically their percentage of low and moderate income purchases was less than lending institutions, but HMDA suggest they were “catching up” after 1998.

⁸ <http://www.washingtonpost.com/wp-dyn/content/graphic/2008/06/10/GR2008061000059.html>

⁹ <http://www.federalreserve.gov/newsevents/speech/kroznier20081203a.htm>

Engle and McCoy (2002) point to a relationship between CRA and predatory lending. Although most predatory loans are made by non-CRA lenders, federal subsidies to regulated lenders can inadvertently facilitate predatory lending. Therefore, it is appropriate to harness CRA to curtail predatory lending. Similarly, CRA, as it currently is administered, fails to penalize banks that engage in predatory lending, directly or indirectly.

Gunther (1999) points out the relationship between CRA and financial safety and soundness or prudential regulation. His research on banks in the Dallas Federal Reserve region suggests that there is a conflict between safety and soundness, as evidenced by bank CAMELS ratings, and CRA lending.¹⁰ A higher lending rate under CRA is related to lower CAMELS ratings, holding relevant factors constant.

Fair lending regulation is designed to reduce or eliminate discrimination in lending. Recent data suggest that it has been fairly successful. For example, recent research [Courchane 2007] looked at pricing differences across groups of households utilizing augmented aggregate HMDA data. The findings reveal that up to 90 percent of the African American annual percentage rate (APR) gap, and 85 percent of the Hispanic APR gap, is attributable to observable differences in underwriting, costing, and market factors that appropriately explain mortgage pricing differentials.

The collection and distribution of HMDA data has vastly improved the analysis and understanding of the mortgage market. HMDA remains an important data source for measuring mortgage activity by geography, by product type, by secondary mortgage market involvement. HMDA remains the only database that allows for the collection of race and ethnicity from borrowers. However the lack of detailed pricing and underwriting information make it difficult to infer discrimination due to the inability to fully control for factors important in pricing and underwriting decisions.

In recent years, research suggests that the influence of CRA and HMDA waned as more minority and low income borrowers were captured by sub-prime lenders.

Stability

Mortgage regulators have had a mixed track record in the past. The Federal Home Loan Bank Board was heavily criticized for ineffectual regulation during the savings and loan crisis. The agency was eliminated in 1989 and its functions transferred to a new department, the Office of Thrift Supervision, within the Department of the Treasury. More recently there has been friction between the OTS and the FDIC over the handling of thrift failures (e.g., Indymac, Washington Mutual (WAMU)). Critics of the GSEs point out that OFHEO was a weak regulator, in part due to interference from Congress which was lobbied by the GSEs [Wallison and Calomiris (2008)]. A key design flaw in the original OFHEO legislation was a requirement that Congress approve the annual OFHEO budget.

¹⁰ CAMELS ratings stands for Capital, Assets management, Earnings, Liquidity and Sensitivity to market risk, calculated on a 1 -5 scale. Used by bank supervisory agencies to evaluate bank condition.

A major factor in the ongoing mortgage crisis was the lack of prudential oversight of non-depository lenders. Brokers and lenders not subject to federal oversight have repeatedly been cited as the source of abusive subprime loans with adverse and profound consequences for consumers, the mortgage markets, and the financial system as a whole. Mortgage brokers and companies are licensed by the states, most of which do not have capital adequacy requirements, risk regulations or conduct periodic supervision. State oversight mainly focuses on ex ante vetting of individuals and companies as qualified to do business.

Unregulated or lightly regulated mortgage lenders, investment banks and hedge funds became important players in mortgage lending from 2004 through 2007. Lax regulation of these capital market participants allowed the explosion in exotic securities and ultimately the failures of major investment banks like Bear Stearns and Lehman Brothers. Excessive leverage, poor disclosure of risks, and lack of oversight of the rating agencies contributed to the debacle.

Depository institution regulation and supervision has hardly been exemplary, as the failures and growing list of problem institutions shows. Regulators allowed large banks to increase leverage and move high risk assets off-balance sheet (e.g., through structured investment vehicles or SIVs) in recent years, contributing to the problems at Citigroup and other large banks. Although depository institutions were not major subprime lenders, they were active in the market adding to its growth. More importantly, depository institutions were major providers of alternative mortgage instruments (e.g., pay option ARMs)¹¹ which ultimately contributed to the demise of major mortgage lenders like WAMU and Wachovia.

Financial institutions have been forced to make significant adjustments as off-balance sheet funding for mortgages and other assets has shrivelled. Most non-bank mortgage lenders have disappeared and the few that remain (GMAC-RFC) are transitioning to bank status. The major US broker-dealers no longer exist in their previous form, due to bankruptcy or by becoming, or being absorbed by, a deposit-taking bank. Confidence in securitization markets is damaged, and regulators, credit rating agencies, and markets are re-evaluating whether and how banks should continue to be restructured to cope with the risks.

The current global crisis has greatly increased market uncertainty about the appropriate measures of banks' capital adequacy. International standards are undergoing revision as the SEC, the Basel Committee on Banking Supervision, the Senior Supervisors Group, the Financial Stability Forum, and the International Organization of Securities Commissions work together to investigate solutions.

¹¹ Pay option ARMs allow the borrower to select the payment they make on a monthly basis. Typically the borrower can choose to make a fully amortizing payment, an interest only payment or a payment based on a lower interest rate (e.g., one percent). The latter choice results in negative amortization and the loans require a recast of the payment to fully amortizing if and when a ceiling on negative amortization is reached.

The rating agencies have come under severe criticism for failing to assess and rate the risk in structured finance. The nearly complete collapse of lending standards by banks and other mortgage originators led to the creation of so much worthless or near-worthless mortgage paper that as of September, 2008, banks had reported over one-half trillion dollars in losses on U.S. subprime mortgages and related exposure¹². Sub-prime mortgages with the highest default rates were made primarily by non-depository lenders and sold to sophisticated investors through complex structured products (CDOs, CDO²), many of which contained high levels of leverage, compounding the risks if underlying asset defaults turned out to be higher than predicted by the models used to structure and rate these securities.

Mason and Rosner (2007) provide an in-depth analysis of the role of the rating agencies in the sub-prime crisis. They believe that many of the current difficulties in residential mortgage-backed securities (RMBS) and collateralized debt obligations (CDOs) can be attributed to a misapplication of agency ratings. Changes in mortgage origination and servicing made it difficult to evaluate the risk of RMBS and CDOs. Furthermore the big three ratings agencies were often confronted with an array of conflicting incentives, which can affect choices in subjective measurements of risk. Of even greater concern, however, is the fact that the process of creating RMBS and CDOs requires the ratings agencies to arguably become part of the underwriting team, leading to legal risks and even more conflicts. SEC Chairman Cox's October 23, 2008 testimony supports this view, noting that

"When mortgage lending changed from originate-to-hold to originate-to-securitize, an important market discipline was lost. The lenders no longer had to worry about the future losses on the loans, because they had already cashed out. Fannie Mae and Freddie Mac, which got affordable housing credit for buying subprime securitized loans, became a magnet for the creation of enormous volumes of increasingly complex securities that repackaged these mortgages. (Fannie and Freddie together now hold more than half of the approximately \$1 trillion in Alt-A mortgages outstanding.) The credit rating agencies, which until late September 2007 were not regulated by statute, notoriously gave AAA ratings to these structured mortgage-backed securities. But that was not all: the ratings agencies sometimes helped to design these securities so they could qualify for higher ratings. These ratings not only gave false comfort to investors, but also skewed the computer risk models and regulatory capital computations. Both the risk models used by financial institutions and the capital standards used by banking and securities regulators had the credit ratings hard-wired into them."

In the September 2007 Report to Congress¹³, Cox notes that the rating agencies cite the following explanations for unexpectedly high subprime mortgage default rates: "fraud in the mortgage origination process; deterioration in loan underwriting standards; and finally, lending standards quickly became more restrictive thereby making it more difficult for over-

¹² Testimony Concerning the Role of Federal Regulators: Lessons from the Credit Crisis for the Future of Regulation by Chairman Christopher Cox
<http://www.sec.gov/news/testimony/2008/ts102308cc.htm>

¹³ <http://www.sec.gov/news/testimony/2007/ts092607cc.htm>

leveraged borrowers to re-finance." In addition, Credit Default Swaps (CDS) played an important role in spreading contagion of subprime mortgage defaults. Lenders who did not sell all of the loans they originated could buy relatively inexpensive protection against credit risks through CDS, which may have encouraged unsound lending practices and greater risk-taking. Banks, financial firms, hedge funds, and even Fannie Mae and Freddie Mac hedged their risk through CDS, thereby increasing counterparty risk and the potential for financial market contagion. The process of contagion is related to the need to post collateral against CDS positions that fall in value. Credit rating downgrades for firms hit with losses related to CDS or other leveraged securities would then lead to further collateral calls, accelerating the downward spiral.

The Commodity Futures and Trading Commission (CFTC) had proposed to regulate financial derivatives including CDS in 1998 [Washington Post (10/13/2008)]. However the Federal Reserve and the Treasury Department ruled against the CFTC, believing that it did not have the legal authority and that the fast growing market would be better off without explicit regulation.

Consumer Protection

Despite a plethora of regulations on the federal and state level, many commentators believe that consumers are not adequately informed about the mortgage transaction or adequately protected against abuses in the marketplace. The two main information forms, the Good Faith Estimate (GFE) and TILA, give incomplete and overlapping information at different points in the transaction process. Congress and regulators have long been aware of the shortcomings of these regulations but intense industry lobbying has stymied attempts at reform. In 1998 Congress directed the Fed and HUD to come up with a consistent and uniform disclosure. The agencies produced a joint report but have since failed to act. Currently HUD is pressing ahead with changes in the GFE despite criticism from the FED, FTC and the industry that piecemeal reform is not good.

According to Jack Guttentag, "Truth in Lending (TILA) is a great idea gone hopelessly wrong. The idea is to require lenders to provide one uniform set of price disclosures that is consistent from loan to loan and from lender to lender. Consumers can then compare prices across different loan types and different lenders. Unfortunately, the price information in the TILA makes little economic sense and is incomprehensible to most consumers." [Guttentag (2008a)]

Guttentag points out that the TILA provides some useless information such as total payments and total interest paid over the life of the loan, and does not include more relevant information such as interest rate, and upfront fees (these are buried in finance charges which include interest). Importantly the APR is not relevant for most borrowers as it assumes the borrower keeps the loan until maturity (the average life of a loan in recent years has been less than 5 years and 90% of borrowers sell their house or refinance their loan before term). When the borrower "locks" the rate, the APR is not locked because upfront lender fees can change. There is an [ambiguous] statement about prepayment penalties (the loan *may* have one) but no specification of the terms.

Guttentag (2008b) points out problems with the recently enacted Federal Reserve amendments to Regulation Z. The rules prohibit lenders from making loans that borrowers cannot afford, and require lenders to verify income and assets (the rules would apply to "higher-price loans", which include subprime loans). In his view, regulators should steer clear of these areas because of rules that are very difficult to define and also difficult to enforce. "The Board does not have the army of highly-trained and sophisticated examiners that would be needed to enforce rules like these. Implicitly, enforcement will be delegated to community groups and class action lawyers, who like murky rules because they provide additional grounds for suing lenders."

The amendments to Regulation Z are based on problems that occurred with subprime loans. In particular there was widespread abuse of low and no documentation loans, willful disregard for borrower ability to repay (based on a assumption that house prices would continue to rise and borrowers could refinance high cost loans), incentive problems based on inadequate disclosure (borrowers not understanding the terms of the loans, steered by brokers earning outside commissions through YSP), coercion or collusion of appraisers in inflating housing values and pyramiding late fees by servicers.

In its explanation for the proposed rule changes, the Fed notes that "limitations on price and product transparency in the subprime market – often compounded by misleading or inaccurate advertising – may make it harder for consumers to protect themselves from abusive or unaffordable loans, even with the best disclosures. The injuries consumers in the subprime market may suffer as a result are magnified when originators' incentives to carefully assess consumers' repayment ability grow weaker, as can happen when originators sell their loans to be securitized. The fragmentation of the originator market can further exacerbate the problem by making it more difficult for investors to monitor originators and for regulators to protect consumers." [Federal Register (January 2008)].

In particular, the Fed points out that price information for the subprime market is not widely and readily available to consumers, products in the subprime market tend to be complex, both relative to the prime market and in absolute terms, as well as less standardized than in the prime market, the roles and incentives of originators are not transparent. Borrowers in the subprime market engage in limited shopping, may have less focus and less understanding of financial products. "Therefore, while the Board anticipates proposing changes to Regulation Z to improve mortgage loan disclosures, it is unlikely that better disclosures, alone, will address adequately the risk of abusive or unaffordable loans in the subprime market."

The subprime crisis has spawned proposals to introduce "suitability" into mortgage underwriting guidelines [Mortgage Bankers Association (2007)]. While a specific proposal for suitability is not yet fully formed, there are a variety of approaches. Most would simultaneously require more rigid, prescribed underwriting, a duty of fair dealing at the inception of the loan, a subjective evaluation by the lender whether a product is best for that borrower, the establishment of a fiduciary obligation by the lender to the borrower and a private judicial remedy for violations. Some suggest that a regulator be empowered to specify the parameters of the requirement.

Advocacy organizations (e.g., The National Consumer Law Center) also have indicated that they would want to require that the lender should, as a matter of law, have a fiduciary responsibility to determine, based on largely subjective criteria, that a particular loan product is properly matched to the needs of a particular borrower. The lender's judgment of suitability would be reviewable in the courts through a private right of action. This approach is modeled on the responsibilities that broker-dealers have in the securities industry.

Such proposals reflect recent trends in European mortgage regulation (see for example a review of UK mortgage and consumer lending regulation in Kempson (2008)). "Both lenders and advisers have to consider the affordability of any mortgage that they identify for individual consumers. Again, this involves the completion of a detailed fact find of consumers' personal circumstances, income and financial commitments." The FED's TILA/HOEPA amendments incorporate this approach. Guttentag (2007b) is skeptical of attempts to control underwriting. In his view: "Trying to apply the concept to these problems is potentially counter-productive to the degree that it results in vaguely-worded laws that make lenders responsible for things they cannot control."

There is a view among policy makers that consumers do not have sufficient choice when it comes to third party service provision. Mortgage and title insurance are required by the lender but paid for by the borrower. As a result it is alleged that there is little price competition and excessive premiums paid by borrowers. HUD's proposed RESPA reforms have attempted to address this issue through loan packaging – allowing lenders to offer packages of services at a guaranteed price (which would currently violate RESPA anti-kickback provisions). These proposals have met with significant industry resistance, particularly from the third party service providers (who have a lobby group - RESPRO).

Another contentious area of regulation that has not been addressed is broker compensation. Brokers receive yield spread premiums (YSP).¹⁴ Loan officers working for retail lenders receive a comparable compensation in the form of overage. Broker YSP are disclosed at the time of closing but it is typically the first time the borrower knows of its existence (overages are not disclosed). YSP create an incentive for brokers to quote higher rates and reflect a flawed agency relationship in which the broker is working for him/herself rather than for the borrower. As with third party service providers, a strong political argument against change has been the impact on small business which has been a legislative priority.

Regulations to control predatory lending have evolved over the past decade. The states and cities were the first to act but when the diversity of regulations threatened to undermine nationwide lending, the federal regulators and eventually the Congress (with the Alternative Mortgage Transactions Parity Act) pre-empted many state and local regulations. Passage of

¹⁴ The **yield spread premium** (YSP) is the cash rebate paid to a mortgage broker based on selling an interest rate above the wholesale par rate for which the borrower qualifies. Retail mortgage lending officers can earn a similar rebate on loans originated through the branch networks of lenders. Underlying the YSP phenomenon is the fact that brokers and loan officers do not have a fiduciary responsibility to the borrower to find the best price. Rather they act as independent agents maximizing their own income rather than the welfare of the customer.

HOEPA reflected concern about predatory lending practices in the mortgage market. According to the GAO (2004), “While there is no uniformly accepted definition of predatory lending, a number of practices are widely acknowledged to be predatory. These include, among other things, charging excessive fees and interest rates, lending without regard to borrowers’ ability to repay, refinancing borrowers’ loans repeatedly over a short period of time without any economic gain for the borrower, and committing outright fraud or deception—for example, falsifying documents or intentionally misinforming borrowers about the terms of a loan. These types of practices offer lenders that originate predatory loans potentially high returns even if borrowers default, since many of these loans require excessive up-front fees. No comprehensive data are available on the incidence of these practices, but banking regulators, consumer advocates, and industry participants generally agree that predatory loans are most likely to occur in the market for “subprime” loans. The subprime market serves borrowers who have limited incomes or poor or no credit histories, in contrast with the prime market, which encompasses traditional lenders and borrowers with credit histories that put them at low risk of default”.

Evidence from the subprime crisis suggests that existing predatory lending regulations were inadequate. This may reflect the fact that most subprime loans were made by unregulated lenders. Recently passed changes to the main predatory lending regulation, HOEPA, move in the direction of product regulation, banning certain loan features such as prepayment penalties on high cost loans. Figure 3 shows specific lending practices addressed by different statutes and agencies. There have been accusations that subprime lenders disproportionately targeted minority communities, offering predatory products and loan terms. These communities also suffer when the lenders go out of business.

Figure 3: Federal Laws and Statutes used to Address Predatory Lending

Predatory lending practice	Governing federal statute					Enforcing federal agencies			
	TILA	HOEPA ^a	RESPA	FTC Act	Title 18 of U.S. Code	Federal banking regulators	FTC	HUD	DOJ
Failure to disclose actual loan costs	●	●	●			●	●	●	
Prohibited fees and payments			●			●		●	
Lending without regard to ability to repay		●				●	●		
Loan flipping		●				●	●		
Fraud and deception				●	●	●	●		●
Prohibited prepayment penalties		●				●	●		
Prohibited balloon payments		●				●	●		

Source: GAO <http://www.gao.gov/new.items/d04412t.pdf>

The Future of US Mortgage Market Regulation

Regulation, along with the creation and backing of institutions designed to increase the flow of funds to housing, have shaped the US mortgage market. Arguably, government involvement in the US mortgage market is greater than in any other developed economy.

Until recently, many critics complained that the market was “over-regulated” and there were active attempts to reduce the regulatory and supervisory burden on the mortgage industry.

Despite heavy government presence, the current financial crisis has its origins in the mortgage market. If the market is over-regulated, how did it happen? While this study does not address the causes and consequences of the sub-prime crisis in detail, it is clear that the lack of regulatory oversight of the shadow banking system was a contributor to the crisis. Lax or non-existent regulation and supervision of mortgage originators was a key factor in the proliferation of sub-prime lending. Lack of oversight extended to the investment banks that created many of the complex and opaque securities that allowed sub-prime problems to spread to the wider financial system, and the opinions of rating agencies that were based on complex and ultimately unreliable statistical models were relied upon by many investors when purchasing these securities. Policy maker focus on homeownership for disadvantaged households created an atmosphere of tolerance for sub-prime lending, despite the growing concerns over predatory practices. Pressure to meet increasingly binding housing goals has been cited as a factor in the failure of Fannie Mae and Freddie Mac. And banking regulators allowed the build-up of leverage and risky products that has led to the demise of a number of major institutions. Macro-economic imbalances and the demand by investors to enhance the yield on their fixed income investments in an environment of low interest rates also played a role in the development of complex structured products that funded some mortgage markets.

What is the likely US regulatory response? The Administration and Congress have already signaled a desire to meaningfully reform mortgage market regulation. The Federal Reserve enacted restrictions on and expanded the definition of high cost mortgage products in 2007 and HERA strengthened the regulation and supervision of the GSEs in 2008. The US Treasury introduced proposals for broad financial system reform in March 2008, including specific regulation of mortgage originators. A new, more interventionist Administration and Congress is likely to enact significant change in 2009 and beyond, but the specifics of such change are unclear.

Two areas that are sure to get attention are an overhaul of consumer protection and a consolidation and expansion of safety and soundness regulation. Greater product regulation and improved disclosure (both of mortgages and securities) are likely to be at the top of the list, along with regulation and supervision of mortgage brokers and non-depository lenders. Legislators have been discussing the imposition of suitability standards on lenders, requiring (with the threat of regulatory or legal action) that lenders explicitly assess the ability of borrowers to make their payments over the life of the mortgage. Another contentious issue is the so-called cramdown provision of bankruptcy law which, if enacted, would allow courts to restructure loan terms in a consumer bankruptcy.

Recent statements by Congressional leaders and regulators suggest that US financial market regulation will move in the direction of a functional as opposed to an institutional focus.

It will be interesting to see if the role of expanding access receives as much attention as other reform efforts in coming months. On one hand, many critics allege that attempts to expand access contributed to the crisis. On the other hand, many supporters of the new administration will press for continued government involvement to assist lower income and minority households. At issue is whether the traditional emphasis on homeownership continues as some policymakers have questioned whether homeownership was extended beyond a sustainably affordable level. One possibility is that policy attention will focus more on rental housing as an affordable alternative for many households.

Another open question is the future role of the GSEs. They have their critics and supporters. It is likely that they will remain under explicit government control until the crisis subsides. Whether they remain in the government or are privatized in some fashion remains to be seen, but a return to the hybrid government sponsored but privately owned model is unlikely. If the US continues to favor the long term, fixed rate and prepayable mortgage, a model for capital market financing will continue to be needed.

Finally, there is the risk of over-regulation. If the mortgage market is too constrained in terms of the products, institutions and instruments that can be used to fund housing, the consumer and the economy may lose in the longer term through less competition, less product innovation and less risk taking.

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