UNITED STATES

Regulation of the U.S. Secondary Mortgage Market

by Mark A. Kinsey and H. James Schwing

INTRODUCTION

Effective regulation of the secondary mortgage market is a vital element in ensuring a safe and sound mortgage finance system that meets the needs of American homebuyers. The federal government was instrumental in developing a secondary mortgage market, continues to provide assistance to ensure an active and robust market, and in exchange for this government assistance, requires certain amounts of credit to be targeted to low- and moderate-income homebuyers and to geographically underserved areas. This paper focuses on the federal government's role in regulating the secondary mortgage market, and in particular, the regulation of government-sponsored enterprises (GSEs) such as the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac).

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SECONDARY MORTGAGE MARKET IN THE U.S.

The United States has the largest and most developed mortgage market in the world. This status has been achieved over time because of the relative stability in the U.S. economy, a strong and well functioning primary market, and the development of an efficient secondary mortgage market. It is the secondary mortgage market that has successfully enabled the U.S. housing market to tap funds directly from the broader domestic and international capital markets. This, in turn, increases the supply of mortgage credit to the market and lowers the price (mortgage interest rate) of this credit.

The U.S. mortgage market is characterized by a functional separation (unbundling) of the functions of loan origination, servicing, credit risk bearing, and funding. The primary mortgage market specializes in originating and servicing mortgages, while the secondary mortgage market provides efficiencies in the funding and credit risk bearing functions of mortgage lending.

The federal government assisted in the development of a secondary mortgage market in the United States by creating secondary mortgage market institutions (SMMIs) to facilitate the efficient linkage between the housing market and the capital markets. Today, the secondary market is dominated by these government created institutions, but other private SMMIs have also entered this market and have been able to successfully operate in niche markets that are not fully served by the government-created SMMIs.

SMMIs employ several vehicles that link the capital markets to the housing market. The most prominent of these is securitization: the issuance of securities backed by pools of mortgage loans. SMMIs typically purchase loans from originators and package them together to form mortgage-backed securities (MBS). To make these securities more attractive to capital market investors, SMMIs provide credit enhancements to cover the risk to investors of not receiving timely payment of principal and interest on their MBS.

Some SMMIs purchase mortgage loans and MBS for their own investment portfolios. They fund these investments by issuing debt to the capital markets. In this case the SMMI bears both credit and interest rate risk on the underlying mortgages. Interest rate risk borne by the SMMI includes both the uncertainty of future mortgage payments (prepayment risk) and cashflow risk (matching cash flows of mortgage assets with those of the debt funding the asset). SMMIs use a variety of different types of debt (callable and non-callable) and maturities of debt to efficiently fund their mortgage investments, depending upon the relative preferences of capital market investors. SMMIs are also large and active users of derivatives and third-party credit enhancements, such as mortgage insurance, which help them to effectively manage these risks.

Still other SMMIs provide short- and long-term advances (loans) to financial institutions (usually banks and thrifts) to help finance their portfolios of mortgages. These SMMIs sell a variety of types of debt in the capital markets to obtain the funds necessary to make advances.

SECONDARY MORTGAGE MARKET INSTITUTIONS (SMMIS)

The major SMMIs that are the focus of this paper are known as government-sponsored enterprises (GSEs). The Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), and the twelve regional Federal Home Loan Banks (FHLBanks) are all GSEs and have non-government ownership. The Government National Mortgage Association (Ginnie Mae) is a government-owned corporation. Private conduits, such as large commercial banks, exist to service the markets (jumbo, home equity, and subprime) that the GSEs and Ginnie Mae either cannot or do not currently fully service. Table 1 describes the secondary market functions of SMMIs.

Table 1. Functions of Secondary Mortgage Market Institutions

	Securitization	*Portfolio Investment*	*Advances*
Fannie Mae	X	X	
Freddie Mac	X	X	
Federal Home Loan Banks		X	X
Ginnie Mae	X		
Private Conduits	X		

GOVERNMENT-SPONSORED ENTERPRISES (GSES)

GSEs are a hybrid between a private corporation and a government corporation. They resemble a private corporation in that they are owned and managed by non-government persons and entities. Fannie Mae and Freddie Mac stock is traded on the New York Stock Exchange. The Federal Home Loan Banks are a cooperative owned by their member/borrower institutions. In each case, management is judged by the returns it generates for its stockholders.

In many other important ways GSEs resemble government corporations. GSEs are chartered by the government with public missions. Their charters and missions restrict the activities of the GSEs to very specific areas, and a government regulator oversees their operations. Fannie Mae, Freddie Mac, and the FHLBanks, exist to assist in the provision of mortgage credit to the housing market. This is their public mission. The government also mandates that Fannie Mae and Freddie Mac target specific allocations of this credit for low- and moderate-income households and geographically underserved areas. The FHLBanks are required to use a portion of their profits to subsidize low-income housing and community development projects.

GSEs receive substantial benefits from the government to assist them in meeting their public missions. The government has lowered their cost structures by exempting them from state and local income taxes, and by exempting them from the registration requirements (and associated fees) of the Securities and Exchange Commission. The government has broadened the market for their securities (both debt and MBS) by allowing banks and thrifts to make unlimited investments in their securities.

The most important benefit the GSEs receive, however, is the ability to borrow money from the capital markets at rates significantly below those of fully private triple-A rated firms. GSEs are able to do this because the market treats their securities as though they were guaranteed by the government, which by law, they are not. A May 2001 study by the Congressional Budget Office (CBO) estimated the value of these government benefits to Fannie Mae, Freddie Mac, and the FHLBanks to be $13.6 billion in 2000.[1]

In creating Fannie Mae, Freddie Mac, and the FHLBanks, the government sought to minimize the credit risk that these institutions would take. For example, mortgages purchased by Fannie Mae and Freddie Mac that have loan-to-value (LTV) ratios in excess of 80% are required to have private mortgage insurance or other forms of credit enhancement. Higher LTV loans are riskier than lower LTV loans. Financial institutions that take out advances must provide the FHLBank with high quality collateral, which limits its exposure to credit risk on the advance.

Fannie Mae and Freddie Mac

Fannie Mae began operations as a government institution in 1938 to purchase and establish a secondary market for the new Federal Housing Administration (FHA) loans. In 1968, Fannie Mae was divided into two separate institutions: one of these was Ginnie Mae. Ginnie Mae remained a government-owned corporation chartered to provide a secondary market for government-insured or guaranteed mortgages (FHA, Veterans Administration (VA) loans, and Rural Housing Service (RHS) loans). Fannie Mae, as we know it today, was created as a shareholder owned, publicly traded corporation with a federal charter that charged the company with providing a secondary mortgage market for the conventional (non-government guaranteed or insured) loan market.

Freddie Mac began operations in 1970 as a wholly-owned subsidiary of the Federal Home Loan Bank System (System) to serve the secondary market needs for savings and loan associations, who were the exclusive members and owners of the System. Congress transformed Freddie Mac into a publicly owned GSE in 1989 and also gave it a public mission similar to Fannie Mae.

Fannie Mae and Freddie Mac (the enterprises) engage in two major types of businesses: a guarantee business and a portfolio investment business. In their guarantee business, they purchase mortgages from primary market originators (banks, thrifts, mortgage banks) and create and issue mortgage-backed securities (MBS) from pools of these mortgages. They earn fees by guaranteeing the timely payment of principal and interest to investors in these securities. At the end of 2000, Fannie Mae and Freddie Mac had over $1.28 trillion in MBS outstanding held by investors other than the enterprises.

Fannie Mae and Freddie Mac are two of the largest investors in U.S. mortgages and MBS in the world. In this line of business, the enterprises purchase loans from primary market originators and MBS from the market for their own investment portfolios. They fund these investments by selling debt in the capital markets. Their GSE status enables them to make healthy spreads on this type of business. At year-end 2000, the enterprises had combined mortgage portfolio investments of $993 billion. Net interest margin (NIM) for these investments, for the same year, was 84 basis points for Freddie Mac and 101 basis points for Fannie Mae.[2] Critical factors affecting NIM include how much risk is taken and market opportunities for buying mortgages and selling debt.

The government restricts the activities of the enterprises by requiring a limit on the size of mortgages that they can purchase. Today, that limit is $275,000 and it is adjusted annually. Mortgages that are eligible for purchase by these two companies are commonly referred to as "conforming" mortgages.

Fannie Mae and Freddie Mac are the nation's largest housing finance institutions. In the year 2000, they purchased $395 billion in conforming single-family mortgages. To put this purchase volume in perspective, purchases by Fannie Mae and Freddie Mac for 2000 represent about 58% of the conforming single-family mortgages originated in that year. While difficult to measure, this purchase share has ranged from a low of 48% to a high of 70% over the last decade.[3]

Federal Home Loan Banks

The Federal Home Loan Bank System is a GSE that was created by the federal government in 1932 to provide low-cost loans called advances, to saving and loan institutions that were the original members of the FHLBank System. Subsequent changes in the law have allowed banks, credit unions, and even insurance companies to join the System provided they hold at least 10% of their assets in residential mortgages. The System is composed of 12 regional Federal Home Loan Banks. Each FHLBank is organized and operated, as an independently capitalized and managed corporate entity owned by its member/borrowers.

The FHLBank System issues consolidated obligations (debt securities for which each bank is subject to joint and several liability) and uses the proceeds to fund advances made by each of the FHLBanks as well as other investments. In addition to advances, the FHLBanks also invest in mortgages originated by member institutions where the member institution retains a significant portion of the credit risk. The FHLBanks also invest in moderate amounts of MBS. At year-end 2000, the System had $454 billion in advances outstanding to member institutions, $16.1 billion in member mortgage asset investments, and $81 billion in MBS investments.[4]

GOVERNMENT CORPORATIONS

Ginnie Mae was created in 1968, concurrent with the creation of Fannie Mae as a GSE. Ginnie Mae is a government corporation within the Department of Housing and Urban Development (HUD). Ginnie Mae was created by the government to provide a secondary mortgage market for government guaranteed and insured mortgages. Ginnie Mae performs its mission by guaranteeing MBS backed by FHA, VA, and RHS loans. Unlike Fannie Mae and Freddie Mac, which purchase mortgages and pool them into MBS, Ginnie Mae provides its guarantee to MBS packaged and created by private issuers. Ginnie Mae securities are the only secondary mortgage market obligations that are explicitly backed by the full faith and credit of the United States. At year-end 2000, Ginnie Mae had $603.5 billion in guaranteed MBS outstanding.[5]

PRIVATE CONDUITS

In addition to the GSEs and Ginnie Mae, private sector companies (e.g., large banks, Wall Street firms) are also active in creating MBS to sell in the capital markets. "Private label" MBS provide credit enhancements to investors that are either internal (e.g., senior/subordinated structures) or external (e.g., bond or pool insurance) credit support, rather than the corporate guarantee of the GSEs or the government guarantee of Ginnie Mae. Due to the dominance of the government supported SMMIs in their respective markets, private conduits are primarily active in either the "jumbo" (loans originated in amounts that exceed Freddie Mac and Fannie Mae purchase limits) or "subprime" (loans originated with a lower than an "A" rated credit or low documentation loans) markets.

NEED FOR GOVERNMENT REGULATION OF SMMIS

Increasing homeownership continues to be a national priority in the United States. To help achieve this important public policy goal, the federal government created Fannie Mae, Freddie Mac, the FHLBanks, and Ginnie Mae. These institutions were designed to increase the flow and lower the cost of capital to the housing sector and to target mortgage credit to certain groups. There are a number of important reasons why the federal government regulates these institutions.

First, the real estate industry constitutes a significant component of U.S. gross domestic product (GDP). During the decade of the 1990s, the real estate industry consistently accounted for around 11% of annual GDP. The GSEs and Ginnie Mae provide the major source of funding for this industry. A disruption in the secondary mortgage market could have a significant negative impact on GDP.

A large and active secondary market has resulted in the concentration of credit risk, and more recently, interest rate risk associated with funding long-term fixed-rate mortgages into a few highly leveraged GSEs. The inability of Fannie Mae and Freddie Mac to provide credit enhancements to capital market investors in MBS, for example, would result in a significant decline in the demand for MBS from capital market investors. This, in turn, would restrict the flow of capital to the housing market.

As some of the largest financial companies in the world, a failure by one of these institutions could contribute to or worsen a systemic event in the financial markets. For example, the enterprises guarantee the timely payment of principal and interest on over $1.2 trillion in mortgage-backed securities to investors all over the world. To fund their investments in mortgages and advances, Fannie Mae, Freddie Mac and the FHLBanks combined have over $1.6 trillion in debt outstanding at year-end 2000. Banks, thrifts, pension funds, and foreign central banks are all major investors in GSE MBS and debt.

Congress recognized this concentration of risk by creating federal regulators and requiring them to address this concern by implementing capital rules and conducting examinations to ensure their safety and soundness.

Another rationale for federal regulation is that GSEs are not subject to the normal market discipline that fully private firms face. Their GSE status serves to dampen normal market forces. Investors are willing to lend money to GSEs based primarily on the perception of an implicit government guarantee and not on a strict evaluation of capital adequacy. Therefore, GSEs have the ability to increase their risk-taking without much effect on their cost of funds. Even in the extreme case when Fannie Mae had a negative economic net worth in the early 1980s, the company was still able to borrow money from the capital markets. For a fully private firm in a similar position, the flow of money from the capital markets would have dried up well before such a condition developed. The ability to increase their risk exposure, at the potential expense of the federal government, requires careful oversight of GSE activities.

Finally, the federal government created the GSEs to assist in the provision of mortgage credit to the housing market and provided these institutions with significant economic benefits to help them achieve this mission. Over the years, Congress has further refined their public missions to include providing assistance targeted to low- and moderate-income homebuyers, renters, and minorities. The federal government regulates the GSEs to ensure that the federal benefits that they receive are used for the achievement of the their public missions.

GOVERNMENT REGULATORS

There is no single regulator for the secondary mortgage market. The development and evolution of this market and the institutions participating in this market resulted in the federal government creating multiple regulators. Federal government oversight of the secondary mortgage market is primarily focused on the regulation of GSEs (Fannie Mae, Freddie Mac and the FHLBanks). Federal regulation of depository institutions in the primary market and broader federal regulation of the securities markets impact the secondary mortgage market as well. Federal government regulators that have direct and indirect responsibilities for regulating the secondary mortgage market are described below.

Department of Housing and Urban Development

The Secretary of the Department of Housing and Urban Development (HUD) is responsible for implementing federal housing policy. Consistent with this broad mandate, Congress made HUD responsible for the mission oversight of Fannie Mae and Freddie Mac. As part of its oversight of the enterprises' mission, HUD establishes and enforces affordable housing goals. These goals establish annual targets for mortgage purchases by Fannie Mae and Freddie Mac that are from low- and moderate-income households and geographically underserved areas. HUD is also responsible for approving any new mortgage programs that Fannie Mae and Freddie Mac want to engage in as well as their compliance with existing fair housing and lending laws. HUD uses taxpayer funds to regulate the mission activities of the enterprises.

Ginnie Mae is a government corporation that is within HUD and government employees administer all of Ginnie Mae's programs. The Secretary is responsible for ensuring that Ginnie Mae meets statutory capital requirements (reserves) and other regulations relating to the administration of Ginnie Mae programs.

Office of Federal Housing Enterprise Oversight

The Office of Federal Housing Enterprise Oversight (OFHEO) is an independent office within HUD and is the safety and soundness regulator for Fannie Mae and Freddie Mac. OFHEO is headed by a Director who is appointed by the President and confirmed by the Senate. The Director has exclusive authority to ensure that the enterprises are adequately capitalized and operate safely. OFHEO conducts on-site examinations to ensure the safety of the enterprises' operations and enforces capital standards to ensure that the two companies remain adequately capitalized. OFHEO's budget is determined by Congress but is directly funded through assessments on the enterprises.

Federal Housing Finance Board

The Federal Housing Finance Board (Finance Board) serves as both the safety and soundness and mission regulator of the Federal Home Loan Banks. The Finance Board operates as an independent agency, led by a five-member board with the HUD Secretary serving as an *ex officio* member. Other Finance Board members are appointed by the President and confirmed by the Senate. The Finance Board conducts annual examinations of each FHLBank to ensure the safe and sound operation, liquidity and mission compliance of each FHLBank. The Finance Board also enforces capital standards to ensure the capital adequacy of each FHLBank and the System as a whole. The Finance Board determines its own budget that is funded directly through assessments on the FHLBanks.

Depository Institution Regulators (Primary Market Regulators)

The regulation of depository institutions (banks and thrifts) has an important impact on the secondary mortgage market. The Federal Reserve System regulates state-chartered banks that are members of the Federal Reserve System. The Federal Deposit Insurance Corporation (FDIC) regulates state-chartered banks that are not members of the Federal Reserve System and FDIC-insured savings banks. The Comptroller of the Currency regulates federally chartered banks. The Office of Thrift Supervision regulates both state and federally chartered thrifts.

Depository institutions and their affiliates are the primary sources of mortgages that are sold into the secondary market. There are several regulations affecting depository institutions that impact the secondary mortgage market. Capital regulations on depository institutions impact their decisions to sell mortgages to the secondary market or to invest in GSE securities. Depository institution regulators require their regulated institutions to comply with consumer protection laws prohibiting discrimination in the provision of mortgage credit; requiring advance disclosure of settlement costs to home buyers and sellers; and to comply with laws requiring advanced disclosures on the terms and cost of mortgage credit.

Securities and Exchange Commission

The Securities and Exchange Commission (SEC) is responsible for maintaining the integrity of the securities markets and for protecting investors from fraudulent conduct arising out of the public offering, sale or transfer of securities. The SEC is made up of a five-member board appointed by the President and confirmed by the Senate. The SEC requires companies that issue publicly traded securities to make full, accurate and timely disclosure of information to the public that could materially affect trading in their securities. The SEC does not protect the value of the securities traded in the marketplace.

Banks, thrifts, government-sponsored enterprises, and government corporations must comply with the anti-fraud provisions of the securities laws, without exception. With respect to security registration requirements, however, Congress granted exemptions for the enterprises, Ginnie Mae and the FHLBanks. This registration exemption also extends to the SEC's periodic corporate disclosure requirements.

The GSEs and Ginnie Mae have adopted disclosure practices that they believe provide timely and accurate conveyance of material information, consistent with investor expectations. In response to increasing demand for more market disclosure, the enterprises voluntarily agreed to begin disclosing additional information on their risk profiles, starting in the first quarter of 2001. Specifically, the enterprises each agreed to take actions in the following six areas.

1. Periodically issue publicly traded and rated subordinated debt.

2. Maintain sufficient liquidity to run their business for three months without accessing the public debt markets.

3. Disclose quarterly the impact on their mortgage portfolios of an immediate 5% decline in U.S. home prices.

4. Disclose monthly an analysis of the company's exposure to a 50-basis-point change in interest rates and a 25-basis-point change in the slope of the yield curve.

5. Obtain and disclose annually a "risk to the government" rating from a nationally recognized credit rating agency.[6]

6. Disclose quarterly the results of their internally run stress test until OFHEO's risk-based capital regulation is finalized.[7]

The increased disclosures by Fannie Mae and Freddie Mac are expected to enhance market discipline on the two companies.

REGULATION OF GSEs

There are two broad types of federal regulation of GSEs: safety and soundness regulation and mission regulation. Safety and soundness regulation seeks to ensure that GSEs remain financially sound and able to perform their public mission. Mission regulation seeks to ensure that GSEs in fact perform their public missions.

Safety and Soundness Regulation

OFHEO and the Finance Board have three primary tools for regulating the safety and soundness of secondary market institutions: examinations, capital standards, and enforcement authorities. These tools complement and support each other and are necessary for effective safety and soundness regulation.

Examinations are used to assess first-hand the day-to-day operations of an institution. An examination program enables the regulator to assess the appropriateness and effectiveness of an institution's policies and processes for selecting and managing risks. It is also the principal tool for assessing an institution's financial performance.

Prudent capital standards are a critical tool for maintaining a safe and sound secondary mortgage market. Capital is the cushion that institutions need to weather bad economic conditions. Capital reduces the probability of an institution becoming insolvent. Capital standards that are tied to an institution's risk-taking activities provide additional incentive to the firm to manage risk effectively.

Enforcement authorities are the legal tools used to ensure compliance with safe and sound business practices and regulatory capital standards. For example, when a violation of a regulatory capital standard occurs, OFHEO is obligated by law to take prompt corrective action to minimize potential losses and the risk of insolvency. The Finance Board, while not obligated by strict prompt corrective action requirements, would likely take quick action as well. To move an institution out of the danger zone, a regulator might force an institution to restrict its activities, suspend or restrict dividend payments, or require it to raise additional capital.

If an institution's financial condition becomes untenable, a conservator may be appointed to run the institution. A conservator is an outside entity that will try to nurse the firm back to health to save any remaining franchise value. If none exists, the conservator will work to preserve the value of shareholder and creditor interests. The Finance Board, but not OFHEO, even has the ability to put an institution into receivership if it determines the institution is insolvent. A receiver is an outside entity that would sell off the institution's remaining assets to the highest bidders and use the proceeds to pay down the claims of the institution's creditors (liquidation).

Fannie Mae and Freddie Mac

As the safety and soundness regulator for Fannie Mae and Freddie Mac, OFHEO has a comprehensive risk-based examination program, capital regulation program, and a full set of complementary enforcement authorities to ensure that Fannie Mae and Freddie Mac are adequately capitalized and operate in a safe and sound manner. A detailed description of OFHEO's regulatory tools is provided below.

OFHEO's Examination Program for Fannie Mae and Freddie Mac

OFHEO utilizes a comprehensive risk-based examination program as an integral part of its overall regulatory oversight to ensure the ongoing safety and soundness of the enterprises. Using a risk-based approach allows OFHEO to recognize the unique operations of each enterprise while applying uniform safety and soundness standards throughout the year.

The examination process begins by developing examination strategies that are tailored to each enterprise. Each strategy is based upon OFHEO's knowledge of the enterprise, including its strengths and weaknesses, the level of risk and quality of risk management at the enterprise, the economic environment OFHEO expects the enterprises to operate in, as well as existing OFHEO guidelines, standards and priorities. By developing an examination strategy that is unique to each enterprise, OFHEO is able to ensure that higher risk areas receive more attention in the examination process.

In addition to being risk-based, OFHEO's examination program is designed to look at all of the major areas of risk at the enterprises. These risks have been divided into eleven separate program areas.

Credit Risk The risk that borrowers and counterparties will fail to meet their contractual or other obligations to an enterprise.

Interest Rate Risk The risk from movements in interest rates, including changes in: the level of interest rates, the shape of the yield curve; the level of volatility; and the relationships or spreads among various yield curves or indices.

Liquidity Management The exposure that could arise from an enterprise's inability to efficiently meet its obligations as they come due and to transact the next incremental dollar of business cost effectively.

Model Risk The exposure that could arise from the enterprises' use of internal models to select, price and manage risks.

Information Technology The infrastructure, or the general controls, needed to safeguard data, protect computer application programs, protect system software from unauthorized access, and ensure continued computer operations in case of unexpected interruptions.

Business Process Controls The process employed to ensure business initiatives and endeavors are considered and evaluated within a complete business context with particular attention directed to risk assessment and risk management framework.

Internal Controls The plan of organization, methods and procedures adopted by management to ensure that: goals and objectives are met; resource use is consistent with laws, regulations and policies; resources are safeguarded against waste, loss and misuse; and reliable data are obtained, maintained and fairly disclosed in reports.

Audit The risk that the board of directors or management's reliance on internal or external audits is misplaced.

Management Information The risk that management will make decisions based on ineffective, inaccurate or incomplete information or reports.

Management Processes The processes used to drive behaviors to support the enterprise's defined corporate goals, standards and risk tolerances.

Board Governance The manner in which the board of directors discharges its duties and responsibilities.

OFHEO assesses an enterprise's performance in identifying and managing the risk in each of the eleven examination program areas. This assessment process allows OFHEO to identify and monitor any trends in the overall safety and soundness of an enterprise.

OFHEO is required by law to make public the results and conclusions of its annual examinations of the enterprises in its annual report to Congress. In practice, OFHEO reports its examiners' conclusions for each program area. To assist the public and the enterprises in understanding how OFHEO arrives at its examination results and conclusions, OFHEO has published an examination handbook which details the objective criteria its examiners use to make judgments on the performance of each enterprise in each program area.

Making public examination results is a unique feature of OFHEO's examination program. It provides a measure of discipline on OFHEO's examiners to ensure that they make fully informed assessments in each of the program areas. It also provides OFHEO with an effective tool to get the enterprises to quickly address and resolve any safety and soundness issues that OFHEO examiners might identify during the course of an annual examination. Both Fannie Mae and Freddie Mac are very sensitive to how Congress, investors, and the rest of the public perceive the safety and soundness of their operations.

OFHEO's Regulation of Capital for Fannie Mae and Freddie Mac

Fannie Mae and Freddie Mac are subject to three separate regulatory capital standards: a minimum capital standard, a critical capital standard, and a risk-based capital standard. These standards were designed by Congress to mimic the capital structure for banks, especially as they relate to prompt corrective action (see OFHEO's Enforcement Authorities below). Despite the similar structure, the capital regulation of the enterprises is not linked in any way to the capital regulation of banks, as determined by the Basle accords. The capital standards for the enterprises were designed specifically for these two companies to ensure that they are adequately capitalized.

Minimum Capital Standard The minimum capital standard is the sum of 2.5% of on-balance sheet assets, 0.45% of outstanding MBS and 0.45% of other off-balance sheet obligations. The minimum capital standard is just that, the minimum amount of capital that an enterprise must always hold. It is designed to grow and contract with the size of an enterprise, with the difference in the ratios for on- and off-balance sheet items roughly calibrated to take into account interest rate risk associated with funding assets.

Critical Capital Standard The critical capital standard is roughly one half of the minimum capital standard. It is equal to the sum of 1.25% of on-balance sheet assets, 0.25% of outstanding MBS and 0.25% of other off-balance sheet obligations. The critical capital standard determines the threshold amount of capital that Fannie Mae and

Freddie Mac must hold to avoid being put into conservatorship. (See discussion of Enforcement Authorities below.)

Risk-Based Capital Standard The risk-based capital standard is designed to directly tie capital to risk. It bears no relationship with the minimum capital standard. The amount of capital that an enterprise needs to hold under the risk-based standard may be higher or lower than the minimum standard.

By law, the risk-based capital standard is based on a stress test that simulates the amount of capital each enterprise needs in order to maintain solvency during 10 years of severe economic stress. Key conditions of the stress test's economic scenarios are specified in law. These conditions include high levels of mortgage defaults, with associated losses and large sustained movements in interest rates.

OFHEO uses a computer model to simulate enterprise cashflows associated with mortgages and other financial assets and obligations under these severe economic conditions. The modeling of incoming and outgoing cashflows captures the risks embedded in those financial assets and obligations and the benefits of the hedges Fannie Mae and Freddie Mac have set in place. To meet the risk-based capital standard, each enterprise must have sufficient capital to survive the losses under these conditions plus an additional 30% for unspecified management and operations risks.

A stress test helps to balance the need for financial safety and soundness with the need for Fannie Mae and Freddie Mac to perform their public missions. A stress test is a tool for determining the amount of risk that an enterprise is taking at any point in time. The more precisely risk is quantified, the more accurately capital can be matched to risk and thereby minimize the amount of excess regulatory capital an enterprise needs to hold.

To achieve this balancing act, the economic conditions during the stress test were made sufficiently stressful to cover a wide range of potential conditions. Credit losses during the stress test are determined by the worst regional loss experience in the history of the enterprises. Interest rates are assumed to either go up by 50% or go down by 75%, whichever scenario is worse for the enterprises, during the first year of the stress test and remain at the new level for the remaining nine years of the test.

A stress test is particularly appropriate for Fannie Mae and Freddie Mac because they are engaged in largely one line of business —managing the risk on mortgages. There is a well-developed literature on default and prepayment risk of U.S. mortgages, and the enterprises have loan level data back to the late 1980s that allows OFHEO to estimate robust models of default and prepayment that determine mortgage cashflows during the stress test.

A stress test also gives Fannie Mae and Freddie Mac an incentive to manage risk effectively. This is because the capital adequacy of the enterprises is determined holistically. The stress test captures an enterprise's net or "bottom line" exposure to both credit and interest rate risks, simultaneously. Therefore, how an enterprise manages risk is just as important for determining their risk-based capital requirement, as is the type of asset they purchase. Activities that reduce risk (issuing callable debt, the use of credit enhancements, the effective use of derivatives to hedge risk, etc.) reduce regulatory capital requirements. Conversely, activities that increase risk increase regulatory capital requirements.

OFHEO'S ENFORCEMENT AUTHORITIES

OFHEO has at its disposal a range of enforcement authorities necessary to ensure that the enterprises are adequately capitalized and operating safely. These authorities are designed to strengthen the effectiveness of OFHEO's examination program and capital regulation. They include informal supervisory actions, formal enforcement actions, and prompt corrective action.

Informal Supervisory Actions

If during the course of an examination OFHEO becomes aware of any issue that it considers relevant to an enterprise's safety and soundness or that raises other supervisory concerns, OFHEO will notify the enterprise of its determination and provide the enterprise an opportunity to correct the problem to OFHEO's satisfaction. This interaction is characterized as "suasion."

This type of informal supervisory action is effective with the enterprises because OFHEO is required by law to report the results and conclusions of its examinations to the public in its annual report to Congress. This disclosure provision encourages early resolution of issues to avoid disclosure of OFHEO's concerns.

Formal Enforcement Actions

In the event that informal actions do not adequately address OFHEO's concerns, more formal enforcement tools are available. OFHEO can enter into a written agreement that sets forth the specific corrective and remedial measures that it determines are necessary to return an enterprise to a safe and sound condition. OFHEO can also issue cease and desist (C&D) orders and impose civil money penalties based on:

1. Conduct having an adverse effect on capital;
2. Misconduct by an executive officer or director resulting in unjust enrichment or actual or likely substantial loss to the enterprise;

3. Conduct in violation of law, their charter acts, as well as conduct in violation of any order, rule, or regulation under those laws (enforcement of HUD established housing goals is excepted); and

4. The violation of any written agreement between an enterprise and OFHEO.

Prompt Corrective Action

OFHEO has a third set of enforcement tools that are collectively referred to as prompt corrective action (PCA). The most discussed are the PCA requirements that are tied to movements in regulatory capital levels. OFHEO is required to classify an enterprise as adequately capitalized if it meets both the minimum and risk-based capital standards. OFHEO has both mandatory and discretionary actions that must be or can be taken if an enterprise is less than adequately capitalized. The purpose of PCA is to ensure that regulatory action is taken at the time an institution becomes financially troubled in order to prevent a failure or minimize resulting losses.

OFHEO has four categories it uses to classify the adequacy of capital at an enterprise. An enterprise is classified as adequately capitalized if it meets or exceeds both the minimum and risk-based capital standards. An enterprise is classified as undercapitalized if it meets the minimum capital standard but fails the risk-based capital standard. An enterprise is classified as significantly undercapitalized if it fails the minimum capital standard but meets the critical capital standard. Finally, an enterprise is classified as critically undercapitalized if it fails to meet the critical capital standard.

PCA requires OFHEO to take certain actions when an enterprise is not adequately capitalized. If an enterprise is classified as undercapitalized, it must submit a capital restoration plan to OFHEO that sets forth a reasonable plan to restore the enterprise to being adequately capitalized. In addition, OFHEO may prohibit an enterprise from making any capital distributions that would result in a downgrade of its capital classification.

If an enterprise is classified as significantly undercapitalized, it must submit a capital restoration plan that gets the company back to being adequately capitalized. An enterprise is also prohibited from making any capital distributions without the prior approval of OFHEO. OFHEO also has available several discretionary actions that it can take to improve the financial condition of the enterprise. These include placing limitations on the amount of obligations an enterprise may issue, placing limitations on the growth of assets, requiring the enterprise to acquire new capital, and restricting any activity determined to create excessive risk.

Finally, if an enterprise is classified as critically undercapitalized, OFHEO must appoint a conservator for the enterprise. This action can be avoided if the Director of OFHEO and the Secretary of Treasury both concur that this action would cause serious adverse effects on the housing finance market and that the public interest would be better served by taking some other enforcement action.

If at any time the Director determines that an enterprise is engaging in conduct that could result in a rapid depletion of capital, the Director may reclassify an enterprise down one level from its current classification, thereby providing the Director with more PCA authorities.

FEDERAL HOME LOAN BANKS

The Finance Board has a set of examination, capital regulation and enforcement tools to regulate the safety and soundness of the FHLBanks similar to OFHEO's. The exact structure of the Finance Board's examination program and the form of their capital regulation are different from OFHEO's due to differences in the institutions that it regulates and differences in law.

Finance Board's Examination Program for the FHLBanks

The Finance Board conducts annual examinations at each of the Federal Home Loan Banks. While the specifics of the Finance Board's examination program are not available to the public, the program is designed to assess the risks faced by each FHLBank to ensure that they operate in a safe and sound manner. In addition, the program examines for compliance with other statutory and regulatory requirements.

Finance Board's Capital Regulation of the FHLBanks

Congress recently created a new capital structure for the Federal Home Loan Bank System, which was designed to make capital more permanent for the Banks whose members are now all voluntary. Congress also directed the Finance Board to more closely tie FHLBank capital requirements to risk.[8]

The new capital structure permits the FHLBanks to issue either class A stock or class B stock, or a combination of both to its members. Class A stock is generally redeemable with six months notice, while class B stock is redeemable subject to a five-year notice provision. However, redemption of shares of either class is not permitted if such action would result in the failure of a FHLBank to meet applicable minimum capital requirements. By statute, class B shares are deemed permanent capital and are more heavily weighted than class A shares for purposes of meeting capital requirements. FHLBanks are permitted to use a mix of shares so long as applicable capital requirements, including maintenance of sufficient permanent capital, are satisfied.

The requirements for the FHLBanks under this new capital structure will include both minimum and risk-based capital requirements. The minimum requirement consists of two activity-based leverage ratios. The first ratio is total capital equal to 4% of assets. The second ratio is total capital equal to 5% of assets when permanent capital is weighted by 1.5 and other capital is weighted by 1.

The risk-based capital standard requires FHLBanks to hold capital to cover credit, interest rate, and operations risk. Only permanent capital can be used to meet risk-based capital requirements. While measuring the same risks as the risk-based capital standard for the enterprises, the FHLBank standard uses separate approaches for calculating the capital requirement for each of the risk components.

Capital to cover credit risk is calculated by classifying FHLBank assets and positions into four broad categories: (1) advances, (2) rated mortgage assets, (3) rated assets and positions other than advances or mortgages, and (4) unrated assets. Maturity and/or a credit rating from a nationally recognized credit rating agency are the factors determining the capital charge for an asset or position for the first three categories. All unrated items have an 8% capital charge, except for cash, which has a zero capital charge.

FHLBanks are permitted to use their own internal models to calculate the amount of capital needed to cover losses from interest rate risk. Each FHLBank must have their internal models evaluated and approved by the Finance Board and each FHLBank is required to use specified interest rate scenarios and other technical requirements in their models. The capital requirement for operations risk is 30% of the total capital required covering interest rate and credit risk. However, this requirement may be reduced to no lower than 10% if a FHLBank can demonstrate to the satisfaction of the Finance Board that it has insurance or some other means to justify the reduction.

Finance Board's Enforcement Authorities

The Finance Board has a broad range of enforcement powers at its disposal to ensure that each FHLBank is adequately capitalized and operating safely. Consistent with the authorities available to all financial institution regulators, including OFHEO, the Finance Board can use both informal supervisory actions and formal enforcement actions, including cease and desist orders and civil money penalties, to strengthen the effectiveness of their examination program and capital regulation.

The Finance Board does not have formal prompt corrective action authorities, but they believe that they have sufficient authorities to accomplish the goal of prompt corrective action, which is to quickly take regulatory actions to address a safety and soundness problem before that problem forces a FHLBank into conservatorship. The Finance Board has the authority to appoint a conservator, and unlike OFHEO, the Finance Board can even put a FHLBank into receivership (liquidation).

MISSION REGULATION

The federal government created Fannie Mae, Freddie Mac and the Federal Home Loan Banks with specific public missions. These institutions were granted special benefits that would assist them in achieving their public missions. The mission regulation of the enterprises and the FHLBanks is described below.

Fannie Mae and Freddie Mac

The Secretary of HUD has general regulatory authority over the enterprises to ensure that their activities are consistent with their public missions. Specifically, the HUD Secretary has authority to publish such rules and regulations as are necessary to ensure that the enterprises achieve their broader public policy purposes. Establishing and enforcing affordable housing goals for Fannie Mae and Freddie Mac and regulating new mortgage programs are two of the critical mission regulatory functions assigned to HUD.

Affordable Housing Goals In return for the benefits granted to the enterprises, they are required to meet certain mandates regarding the composition of their mortgage purchases. By law, the HUD Secretary is required to set annual affordable housing goals for each enterprise. Affordable housing goals are designed to increase the availability of moderately priced housing to low- and moderate-income homebuyers and to ensure that targeted geographic regions (central cities, rural and underserved areas) have access to mortgage credit. Each year, HUD analyzes the geographic and economic composition of the mortgage purchases of Fannie Mae and Freddie Mac to ensure that they are in compliance with the goals.

The affordable housing goals are divided into three major categories. The first is a requirement that the enterprises purchase a specified minimum proportion of mortgages originated for homebuyers with less-than-median income (the low- and moderate-income goal). The second is a requirement that the enterprises purchase a specified minimum proportion of mortgages originated in targeted geographic areas including underserved areas and areas with high low-income and minority populations (the geographically targeted and underserved areas goal). The third is a requirement that an enterprise meet a purchase goal related to very low-income families and to families living in very low-income areas (the special affordable housing goal). As part of the third requirement, the enterprises must meet certain sub-goals that ensure that a portion of their rental housing business is related to mortgages that increase the availability of affordable rental housing (the multifamily goals).

The HUD Secretary is required to evaluate six factors during the development of the affordable housing goals including national housing needs; economic and demographic conditions; the size of the corresponding primary mortgage market; the enterprises' leadership role within the housing finance system; and, the requirement that the enterprises maintain a sound fiscal condition. Affordable housing goals are established through a notice and comment rulemaking process that allows input from the enterprises, affordable housing groups, industry, policymakers and the public. Fannie Mae and Freddie Mac's recent performance under these goals are presented in Tables 2 and 3.

New Mortgage Program and Other Mission Related Authorities The HUD Secretary also has oversight responsibility for new mortgage programs developed by Fannie Mae and Freddie Mac. New mortgage programs are defined to include any mortgage program significantly different from existing mortgage related programs or those approved by statute, as well as programs that represent a significant expansion of the either the dollar volume or number of mortgages or securities involved. The Secretary can disapprove a new mortgage program if he determines that the program is inconsistent with an enterprise's charter or that it is not in the public interest.

Table 2. Freddie Mac Performance Under Affordable Housing Goals[9]

	2000		1999	
	Goal	*Result*	*Goal*	*Result*
Low- and moderate-income housing	42.0%	50.0%	42.0%	46.0%
Underserved areas	24.0	29.0	24.0	28.0
Special affordable housing	14.0	21.0	14.0	17.0
Targeted multifamily	$0.99	$2.4	$0.99	$2.3

Dollars in billions

Table 3. Fannie Mae Performance Under Affordable Housing Goals[10]

	2000		1999	
	Goal	*Result*	*Goal*	*Result*
Low- and moderate-income housing	42.0%	49.5%	42.0%	45.9%
Underserved areas	24.0	31.0	24.0	26.7
Special affordable housing	14.0	22.3	14.0	18.7
Targeted multifamily	$1.3	$3.8	$1.3	$4.1

Dollars in billions

Federal Home Loan Banks

The Finance Board is responsible for mission oversight of the Federal Home Loan Banks. As part of their public mission, the FHLBanks are required by law to offer two special advance programs for community investment and affordable housing. The Finance Board oversees the Banks' compliance with these programs.

Community Investment Program (CIP) The CIP focuses on homebuyers and renters with family income that does not exceed 115% of the medium-income area, and community-based organizations involved in commercial and economic development activities for low- and moderate-income families. Each FHLBank provides advances under this program that are priced at its cost of funds plus a markup for administrative expenses. Borrowers who qualify under the CIP program can save between 25 and 35 basis points under the cost of an ordinary advance.[11]

Affordable Housing Program (AHP) The AHP provides subsidies to institutions that finance the purchase, construction, and rehabilitation of rental housing in which at least 20% of the funded units are occupied by households with very low income (not exceeding 50% of area median income). The program also provides funds to promote homeownership for families with low and moderate income. AHP subsidies are the greater of $100 million or 10% of System net income. The AHP subsidy for 2000 was $246 million.[12]

FUTURE REGULATORY CHALLENGES

Regulators are continually facing new challenges as the primary and secondary mortgage markets evolve. Technology is transforming the entire process for originating, underwriting, and funding a mortgage. Consolidation in the primary market is creating new and bigger players with more market clout in their dealings with the secondary market. Reliance on the use of derivatives to manage risk is continuing to grow. Continued market pressure to grow has resulted in the GSEs moving into non-traditional activities. Regulators must be forward looking to ensure that they have the resources and flexibility needed to address these new developments.

NOTES

[1] See Congressional Budget Office, "Federal Subsidies and the Housing GSEs," (May, 2001), page 2.

[2] See *Fannie Mae 2000 Annual Report* and *Freddie Mac 2000 Annual Report.* Freddie Mac's NIM is adjusted by OFHEO to be consistent with Fannie Mae's NIM.

[3] Estimated by OFHEO using data from the Department of Housing and Urban Development, Fannie Mae, Freddie Mac, *Inside Mortgage Finance,* and the Federal Housing Finance Board's Mortgage Interest Rate Survey.

[4] See the *2000 Federal Home Loan Banks Financial Report,* Office of Finance, Federal Home Loan Banks (March 28, 2001).

[5] See *Ginnie Mae 2000 Annual Report.*

[6] A "risk to the government" credit rating is the risk that an enterprise poses to the federal government by not being able to meet all of its financial obligations with its own resources.

[7] At the time of this writing, publication of OFHEO's final risk-based capital regulation is anticipated in September 2001. The rule will become effective at the date of publication.

[8] See the final rule of the Federal Housing Finance Board, *Capital Requirements for Federal Home Loan Banks,* 66 Fed. Reg. 8,262 (2001) to be codified at 12 C.F.R. 915, et. al.

[9] See *Freddie Mac 2000 Annual Report.*

[10] See *Fannie Mae 2000 Annual Report.*

[11] See Congressional Budget Office, "The Federal Home Loan Banks in the Housing Finance System," (July 1993), page 21.

[12] See the *2000 Federal Home Loan Banks Financial Report,* Office of Finance, Federal Home Loan Banks (March 28, 2001).