



**OFFICE OF FEDERAL HOUSING ENTERPRISE OVERSIGHT**  
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June 15, 1997

Honorable Alfonse D'Amato  
Chairman  
Committee on Banking,  
Housing, and Urban Affairs  
United States Senate  
Washington, D.C. 20510-6075

Honorable Jim Leach  
Chairman  
Committee on Banking  
and Financial Services  
House of Representatives  
Washington, D.C. 20515-6050

Dear Chairmen:

I am pleased to transmit the fourth Annual Report to Congress of the Office of Federal Housing Enterprise Oversight (OFHEO). This report has been prepared to meet the statutory requirements in section 1319B of the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Title XIII of Pub. L. No. 102-550).

The views in this report are those of the Acting Director and do not necessarily represent those of the President or the Secretary of Housing and Urban Development.

Sincerely,

Mark Kinsey,  
Acting Director



## ***Message from the Acting Director***

***“OFHEO protects the interests of the American taxpayer and contributes to the strength and vitality of the nation’s housing finance system through independent, fair and effective financial regulation of Fannie Mae and Freddie Mac...”***

*This excerpt from OFHEO’s Mission Statement summarizes the fundamentals of OFHEO’s regulatory assignment — taxpayer protection through independent safety and soundness oversight of Fannie Mae and Freddie Mac. In the 12 months since OFHEO’s Director last reported to Congress, the Office has worked diligently to carry out this mandate.*

*Much of OFHEO’s efforts in the past year have been focused on the technically complex interim steps leading to publication of a proposed risk-based capital standard for Fannie Mae and Freddie Mac. Major progress occurred in construction of the Financial Simulation Model that supports the stress test that will be used to set risk-based capital levels. Various components of the FSM were completed in the past 12 months and the model is now in the testing phase. This is unheralded but critical work. OFHEO’s team is moving expeditiously toward completion of the risk-based capital standard, but with the deliberation that this important task deserves. We remain committed to completing a proposed risk-based capital regulation for the Enterprises in 1998.*

*In the examination area, OFHEO’s Office of Examination and Oversight conducted a series of examinations of the Enterprises in the past year. These included a business risk examination at Fannie Mae and Freddie Mac and a data integrity examination at Freddie Mac. Results and conclusions of these and other Enterprise examinations conducted by OFHEO are included in this report.*

*Also noteworthy in the past 12 months has been the broad professional acknowledgement, and wide-scale publication, of OFHEO’s House Price Index. The HPI, published quarterly by OFHEO since the fourth quarter of 1995, is now the most comprehensive statistical index generally available for use in tracking changes in residential home values at the national, regional and state levels.*

*Financial regulation is not conducted in a vacuum. A summary of OFHEO’s recent activities must also take into account the considerable time spent on communication with representatives of Fannie Mae and Freddie Mac on a host of issues beyond day-to-day examination and financial oversight activities. These issues included, but were not limited to, data confidentiality, charter interpretation, investment policies, and consultation on new programs.*

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*OFHEO is a young organization, barely four years old. In this relatively brief time, the Office has attracted a dedicated staff of talented professionals and managers. The exemplary work of these team members, coupled with their continuing commitment to OFHEO's regulatory mission, has been instrumental in OFHEO's progress to date. Much of the credit for this initial team building and leadership goes to OFHEO's first Director, Aida Alvarez. In December 1996, President Clinton nominated Ms. Alvarez to be Administrator of the U.S. Small Business Administration. Ms. Alvarez left OFHEO for the SBA post in February.*

*OFHEO was created by Congress in 1992 to be an independent financial regulator protecting the interests of the American taxpayer in a time of fast-moving economic and institutional change. In the past five years, the pace and scope of change in the mortgage industry, OFHEO's area of special interest, has been especially rapid. This is due, in large measure, to technological innovation, standardization requirements and new services introduced and promoted by Fannie Mae and Freddie Mac. The continued growth and influence of Fannie Mae and Freddie Mac in the mortgage industry, and in the capital markets, only reemphasizes and reinforces the importance of OFHEO's mission. I am confident that OFHEO will continue to carry out its regulatory assignment with distinction.*

*Mark Kinsey  
Acting Director  
June 15, 1997*

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### In Memoriam

**In her three years as Director of Examination and Oversight, Marianne D. Wright left an indelible mark on OFHEO. Her professionalism, integrity and work ethic became the yardstick by which we, her colleagues, measured our accomplishments. The enthusiasm that she brought to her job was contagious. Her tenacity and humor in the face of illness was inspiring. As we mourn her passing, Marianne Wright's friends at OFHEO are profoundly grateful for the time we shared with this cherished colleague.**

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# The Price of a Mortgage

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## Introduction

The price of a mortgage -- the effective interest rate to a borrower or the yield to an investor -- is critically affected by the need to compensate for uncertainty. If mortgage industry participants knew if and when borrowers would prepay or default, the price of a mortgage could be reduced to a risk-free rate plus administrative costs. Borrower time spent rate-shopping would be reduced enormously as would the actual rate paid.

The riskless mortgage, however, is not in sight. Lenders cannot reliably predict individual borrower behavior any more than they can accurately forecast factors such as interest rates, house prices, employment levels, and divorce rates that drive mortgage defaults and prepayments. While most borrowers are aware of the effect of interest rates on their mortgage rates, they are unaware of the process by which uncertainties about defaults and prepayments also affect their borrowing costs.

This chapter discusses the components of mortgage pricing and the changes that are occurring in mortgage risk measurement and administrative practices that could have a major impact on mortgage pricing.

## What Is the “Price” of a Mortgage?

The mortgage transaction is essentially the exchange of money today for a promise to pay tomorrow. To the borrower, “price” refers to the interest rate, up-front fees, and possible mortgage insurance premiums. To a mortgage investor, price is the amount paid today for the

borrower’s promise of a series of future payments. The investor requires these payments in compensation for the time value of money and the investor’s estimate of risk. The uncertainty over whether and when a borrower will prepay or default is the source of an investor’s risk. Thus the parties to the transaction can think of price as either the interest rate promised on future payments or the estimated cash value of the promise today. They are two aspects of the same transaction. In this chapter, “price” refers to both concepts.

## The Components of Mortgage Price

As a mortgage moves from origination to a sale to a conduit, to a mortgage-backed security (MBS), and to an ultimate sale to an investor, various industry participants retain a portion of the borrower’s payment to compensate them for the portion of services they provide. In this sense, the price of a mortgage is comprised of the risk-free rate plus the sum of three elements.

- **Interest rate risk premium.** Compensation for uncertainty regarding whether and when a borrower will prepay the mortgage.
- **Credit risk premium.** Compensation for the risk that a borrower will fail to make payments.
- **Administrative costs.** The costs of originating and servicing the mortgage and any subsequent MBS over their lifetimes.

The two risk components of a mortgage are particularly difficult to price. They involve estimating the probability and timing of pre-

payment (interest rate risk) and the probability and timing of default and the severity of the loss (credit risk).

### ***Interest Rate Risk***

Investors deal with one form of interest rate risk on all fixed income investments: a change in interest rates causes a change in the value of their portfolios. Mortgage investors face the additional risk that borrowers may decide at any time to exercise their rights to pay off their loan balances. Borrowers routinely exercise this right, either because they sell the home or because they refinance for any of a variety of reasons, such as obtaining a lower interest rate to reduce their monthly payment.

From the standpoint of investors, prepayment rates are both volatile and pernicious. Over the past six years, Fannie Mae and Freddie Mac experienced annualized prepayment rates on their portfolios as low as 10 percent and as high as 38 percent. Borrowers tend to prepay most when interest rates fall, reflecting the value of refinancing at more attractive rates. Investors are then required to reinvest those funds in lower yielding instruments. When market rates rise, borrowers prepay less frequently, leaving investors with relatively lower-yielding holdings in a higher interest rate environment. Investors are willing to accept this interest rate risk by requiring an extra yield spread over risk-free borrowing rates.

### ***Credit Risk***

Credit risk on a mortgage is the risk of loss as a result of default. Mortgage originators and investors expect a small share of mortgages to default, even in the absence of unusual economic stress. For example, in research to develop its risk-based capital standard, OFHEO found that the Enterprises' portfolios, which are the largest portfolios of mortgages in the U.S., experienced an average 10-year cumulative loss rate of 2.1 percent for 30-year, fixed-rate loans originated between 1979 and 1985<sup>1</sup>. Severe economic stress can substantially

increase loss rates. In that same research, OFHEO found that the loans purchased by the Enterprises during the stressful period of 1983 to 1984 in Arkansas, Louisiana, Mississippi, and Oklahoma experienced a corresponding loss rate of 9.4 percent. The Enterprises, mortgage insurers, and other credit risk managers are prepared to absorb such losses, but require compensation for accepting that risk. Enterprise guarantee fees, mortgage insurance premiums, and the credit enhancements (e.g., reserves to absorb losses) required by nationally recognized rating agencies must be sufficient to cover both expected and extreme credit losses.

### ***Administrative Costs***

Historically, the process of originating a mortgage was paper-intensive and usually took weeks to complete. As a result, the process added significant costs and time delays to obtaining a mortgage. With the advent of new technology, mortgage industry participants are increasingly taking advantage of automated systems and advanced data communication technology to reduce costs and save time.

New technology makes it cheaper to store and use information. Data warehousing facilitates use of data from several different sources, such as loan application, a credit repository, and a loan payment history file. Advanced prepayment models are being used by mortgage servicers to manage their portfolios. Communication networks are being used to exchange information between a company and its vendors. Technology is also changing the way applications are being developed, with more partnerships between technology experts and mortgage industry experts. These issues were more fully discussed in OFHEO's 1995 and 1996 Annual Reports.<sup>2</sup> These systems have proven their ability to deliver reduced transaction costs for mortgage origination, and further savings are anticipated as the industry reengineers its business processes to take advantage of them.



## Price and the Parties to the Mortgage Transaction

In the simplest model for a mortgage transaction, a bank or thrift originates a mortgage and retains it in its portfolio. In this case, the lender performs all services associated with the mortgage and absorbs all risk.

In the securitization model for a mortgage transaction, the separate risk management and administrative services are unbundled. This model typically involves several players -- a mortgage banker to originate and service the loan, a conduit to assemble a large pool of loans and issue and administer an MBS, one or more parties to absorb credit risk, and an investor to purchase and hold the security and absorb the interest rate risk. This model permits each player to compete to provide the services in which it is most efficient or has other comparative advantages.

**Table 1** lists the separate elements of price and the typical parties in a securitization transaction. It illustrates how the components of price are established in the course of originating and securitizing pools of mortgages.

### *Interest Rate Risk Pricing*

The price that investors require for the use of their funds depends, in part, on how long those funds will be encumbered. Historical data on loan payoffs provide investors with information about past borrower prepayment behavior. Securitization greatly facilitates analysis by aggregating large numbers of mortgages from widely diversified geographic locations into pools with common characteristics. The result is relatively homogeneous mortgage pools, whose prepayment behavior can be analyzed by market participants.

Using models that estimate prepayment speeds under a variety of future interest rate paths,

**Table 1**  
**How Prices Are Established in a Securitization Model**

Cost Elements	Transaction Item	Representative Parties and Transaction	Analytic Criteria
Time Value of Money & Interest Rate Risk	Risk-free rate + premium for interest rate risk	Investors bidding for mortgage securities in an auction market.	Investor (or dealer) interest rate risk simulation models.
Credit Risk	Guarantee fee	The Enterprises negotiate guarantee fees at mortgage purchase.	Enterprise credit risk simulation models.
	Mortgage insurance premium	Mortgage insurers bidding for business from mortgage originators.	Mortgage insurer credit risk simulation models.
	Other credit enhancement costs (subordination, pool insurance, recourse, spread accounts, etc.)	Private conduits must provide sufficient enhancement to achieve an investor quality rating (triple-B or better) from a nationally recognized rating agency.	Rating agency credit risk simulation models.
Administrative Costs	Origination and servicing fees (including administration, sales, pipeline risk management, etc.)	Loan originators and servicers; origination points are commonly a basis for competition among originators and negotiation with borrowers.	Originator marketing decisions, as affected by Enterprise and conduit requirements and accounting standards.

analysts compute the interest rate risk premium implicit in market prices. Of course, different models can, and do, yield different results. Nonetheless, they provide a commonly accepted structure for investor decision-making and reporting. Actual prices are not set by modeling, but rather are the product of a bidding process. Participants in the bidding use their models to inform their bids.

### ***Credit Risk Pricing***

The managers of mortgage credit risk use statistical analysis of historical mortgage performance to predict credit losses on mortgage portfolios. Until recently, mortgage credit research analyzed the relationship between mortgage performance and the information captured in the traditional loan underwriting process. Now the industry is increasingly using consumer credit scores and mortgage scores to enhance its ability to predict credit losses. Industry participants are adjusting their origination and pricing systems and practices to take advantage of the improved risk measurement provided by this type of quantitative scoring.

The mortgage market uses three basic pricing mechanisms to provide credit risk protection. These are guarantee fees, mortgage insurance premiums, and credit enhancement costs. Guarantee fees on MBS and mortgage insurance premiums are used to compensate the Enterprises or the mortgage insurance companies for any default on a loan that is insured or guaranteed by them. A credit enhancement is available to pay for any default in the pool of loans to which it applies.

#### Enterprise Guarantee Fees

Fannie Mae and Freddie Mac retain a portion of the borrower payments as a fee for guaranteeing to the investor the timely payment of interest and principal. Most of the guarantee fee covers credit risk. The Enterprises calculate the default cost components of their guarantee fees by analyzing their historical loss experience and by using models to simulate future

loan performance. The Enterprises negotiate with lenders guarantee fees that reflect the historical performance of the loans purchased previously from that lender. In 1996, Fannie Mae earned an average guarantee fee of 0.224 percent, and Freddie Mac earned an average guarantee fee of 0.234 percent.

#### Mortgage Insurance

Credit risk on high loan-to-value (LTV) mortgages is generally shared with mortgage insurers. Mortgage insurers take the "first loss position" by absorbing losses up to the coverage ratio, which is a stated percentage of the outstanding loan. The Enterprises have established mandatory levels of mortgage insurance in their underwriting guidelines, depending on the risk they perceive in certain categories of mortgages. The non-conforming mortgage market<sup>3</sup> has adopted similar practices.

Mortgage insurance companies establish prices for the different amounts of credit loss coverage they provide. Mortgage insurance prices are risk-based, in that they vary not only with the amount of coverage, but also with the probability that loss will occur. LTV ratios are typically used as indicators of credit risk and influence price in two ways:

- There is a higher probability of default on high LTV loans than on low LTV loans.
- High LTV ratios reduce the amount of borrower equity, which increases the amount of potential loss to the insurer in the event the loan defaults.

For example, as shown in **Table 2**, the Enterprises' requirement of 25 percent coverage on a 90 percent loan would cost 0.52 percent. The same coverage on a more risky 95 percent loan (which might be acceptable for a non Enterprise loan) has a higher cost of 0.67 percent (**see highlighted rows in Table 2**).

#### Private Conduit Credit Enhancements

Private conduits securitize mortgages that the Enterprises cannot purchase due to statutory

**Table 2**  
**Sample Mortgage Insurance**  
**Rate Sheet**

Original LTV (% Value)	Percent Coverage (% UPB*)	Annual Premium (% UPB)
97	40	1.19
97	35	1.04
97	30	0.90
97	28	0.85
97	25	0.77
95	35	0.90
95	30	0.78
95	27	0.71
95	25	0.67
95	22	0.63
90	35	0.67
90	30	0.60
90	25	0.52
90	20	0.42
90	17	0.39
90	12	0.34
85	30	0.52
85	25	0.43
85	20	0.39
85	17	0.37
85	12	0.32
85	6	0.26

\* Unpaid Principal Balance  
Source: PMI Mortgage Insurance Co., 11/15/96 Rate Sheets.

limits on loan size or will not purchase due to underwriting standards. Since they lack the capital and corporate credit ratings necessary to provide effective guarantees of their MBS, private conduits arrange credit enhancements to protect investors from credit losses.

The prevailing form of credit enhancement today is subordination. This is accomplished by creating one or more “subordinate classes” of securities that receive payment only after all payments have been made on the senior classes. They thereby absorb losses from the pool. The credit risk price is expressed as a required level of subordination. Typical levels of subordination are 5-10 percent of the total security balance.

Nationally recognized credit rating agencies analyze individual conduit pools and establish

levels of credit enhancement required to receive a particular rating for a security. The highest grade (triple-A) requires the largest amount of credit enhancement and is viewed by investors as closest in credit quality to Enterprise securities. The top four grades (triple-A through triple-B) are “investment grade”, which is acceptable to more investors than lower grades.

## The Impact of Scoring Technology on Mortgage Pricing

Changes in mortgage prices are possible because of better information about mortgage risks and lower cost ways of doing business. Credit scoring, mortgage scoring, and automated underwriting systems (scoring technology) are changing the way that credit risk is measured. Mortgage insurance companies, the rating agencies, and the Enterprises are incorporating this scoring technology into their business activities, and they are encouraging their respective customers to do so as well. Changes in measuring credit risk are being reflected in how mortgages are priced in the non-conforming market and may soon be reflected in the conforming market, since credit risk is an important component of mortgage price.

The mortgage industry’s estimate of credit risk is already changing for particular loans. **Table 3** displays part of Duff & Phelps’ approach to rating mortgage pools. The rating process establishes the level of credit enhancement needed in order to achieve a particular rating for a security. The credit enhancement must cover the expected losses, as estimated by a simulation model. The higher the rating for the security, the greater the degree of economic stress the pool can withstand without producing losses for the investor. The higher rating, therefore, requires a higher level of credit enhancement.

The table illustrates the effect of incorporating mortgage scores into the rating process. The credit enhancement requirements when not

**Table 3**  
**The Impact of Credit Scores on Risk Rating**  
**(In Percent)**

		Without Mortgage Score Risk Rating			Mortgage Score Risk Rating		
Rating	LTV (1)	Rate (2)	Severity (3)	CE* (4)	Low Risk CE* (5)	Mod. Risk CE* (6)	High Risk CE* (7)
AAA	65	6.1	29.9	1.83	1.65	1.83	2.29
	75	11.3	40.4	4.54	3.64	4.41	4.54
	85	19.8	48.4	9.57	7.18	8.61	9.28
BBB	65	1.3	12.5	0.16	0.12	0.15	0.20
	75	3.3	15.7	0.51	0.38	0.46	0.51
	85	7.3	25.2	1.84	1.29	1.57	1.79

\* Credit Enhancement

Source: Duff & Phelps Credit Rating, Co., "Credit Scoring: A DCR Primer", March 1997. Sample mortgages are 30-year fixed rate underwritten to the Enterprises full documentation guidelines, varying only by LTV.

using mortgage scores are displayed in the fourth column. Columns 5, 6, and 7 show the credit enhancement requirements when using mortgage scores. Based on the simulation run for the stress level associated with a AAA rating, Duff & Phelps estimated that 85 percent LTV mortgages would experience a 19.8 percent cumulative default rate, with loss severity of 48.4 percent of the pool balance, resulting in a loss of 9.57 percent (0.198 x 0.484) of the original pool balance. Therefore, the required credit enhancement would be 9.57 percent of the pool.

Duff & Phelps then adjusted the credit enhancement requirements based on its evaluation of the particular mortgage scoring system and its interaction with the risk estimates in its loss simulation model. Duff and Phelps divided the loans into low risk, moderate risk, and high risk categories, based on mortgage scores. For the same AAA rating on 85 percent LTV mortgages, the credit enhancement requirement would be only 7.18 percent if the loans were low risk. If the loans were high risk, the credit enhancement requirement would go up to 9.28 percent.

The rating agency example highlights two potential benefits of improved credit risk measurement techniques. First, the credit

enhancement requirement might be reduced for particular loans. In this case, the requirement for 85 percent LTV loans is lower when it is known that the mortgage scores are high (credit risk is low). Second, the credit enhancement requirement might be reduced even for high risk loans. In this case, the high risk 85 percent LTV mortgages would require credit enhancement of 9.28 percent rather than 9.57 percent if the mortgage score were unknown. This suggests that there is a cost savings associated with better information.

These two features of improved risk measurement hold the potential for overall reductions in credit risk costs, and resulting reductions in mortgage interest rates. The impact may be strongest where risk measurement is most uncertain. In subprime mortgage markets, credit risk costs -- and mortgage interest rates -- are substantially higher **(see Box 1 on page 9 for further discussion of the subprime market.)**

In another application of scoring technology Standard & Poor's (S&P), has developed a new system for categorizing risk. Based on extensive research conducted with Fair Isaac Co. Inc. (FICO) and Freddie Mac, using Freddie Mac's *Loan Prospector* mortgage scoring system, S&P revised its rating practices to rely

very heavily on credit and mortgage scoring. S&P now uses seven risk grades for mortgages rather than the A, A-, B, C, and D scale which is based on traditional underwriting guidelines. Where mortgage scores are available, they are used to determine risk grades. If only the FICO credit score is available, S&P applies its own methodology to generate a mortgage score and risk grade. Only where neither score is available does S&P revert to grades based on traditional underwriting guidelines. At this writing, S&P has accepted several additional mortgage scoring systems for use as the basis for its risk grades.

**Table 4** displays S&P's description of its risk grading system, and the relative credit enhancement requirements associated with the risk grades. The amount of credit enhancement required for Superior loans (RG1) is 20 percent below that required for average loans (RG3). The requirement for loans with the highest risk of default (RG7) is four times that required for average loans.

The impact of scoring technology on borrowers is hard to predict. At a minimum, borrowers can expect that their credit score will be part of the information used to review their application. The likelihood that a mortgage score will be generated is steadily rising. To date, this scoring information generally has not been used to price their loans. However, as more industry participants use scoring technology, it seems inevitable that risk-based pricing will move to the primary market.

One result of these developments will be a less onerous and paper-intensive mortgage application process. Because mortgage scores are designed to capture borrower characteristics that are most predictive of loan performance, additional information that has marginal value will no longer need to be provided. This is most true for applicants with high mortgage scores. Lenders will still request documentation to help underwriters judge applications that are not easily approved by an automated system.

**Table 4**  
**Standard & Poor's Risk Grades**

<b>Grade</b>	<b>Description</b>	<b>Credit Enhancement Factor</b>
<b>RG1</b>	Superior Quality - Loans Exhibiting Lowest Default Potential	<b>0.80</b>
<b>RG2</b>	Above Average Quality - Expected To Outperform The Market Overall	<b>0.90</b>
<b>RG3</b>	Average Quality Loans - Exhibit Default Rates Generally Expected Of Loans Underwritten To Guidelines	<b>1.00</b>
<b>RG4</b>	Slightly Below The Quality Exhibited By Agency Underwriting	<b>1.25</b>
<b>RG5</b>	Loans Exhibiting Default Expectations Considerably Higher Than Average Loans	<b>2.00</b>
<b>RG6</b>	Loans With Default Rates At Significant Multiples Of The Average Quality Loans	<b>3.00</b>
<b>RG7</b>	Loan Exhibiting The Highest Risk Of Default	<b>4.00</b>

Source: Standard & Poor's, "Automated Underwriting & Mortgage Score Applications", presented to the MBA National Secondary Market Conference, May 5, 1997.

Despite the potential cost savings, mortgage lenders are proceeding cautiously because of up-front costs associated with implementing new technology, changing lending policies and procedures, and training originators to work with applicants. Lenders realize that to use the technology effectively, they must rethink their business processes. Also there are potential hazards in working with borrowers who are not familiar with credit scores or mortgage scores and do not have access to their own score. An applicant may be denied a loan because of some information that the lender obtained, generated by a computer model without the applicant's knowledge, and that the applicant does not understand. Also an applicant may be

denied by one lender but approved by another lender who obtains a credit score from a different source that uses somewhat different information, as can happen with credit repositories. Finally, risk-scoring has yet to be proven effective in predicting loan performance in a period of severe economic distress. Risk scores, by definition, predict the expected performance of future loans based on the performance of past loans of similar characteristics. All of the loans used to build today's risk scores were originated in fairly good economic times. OFHEO intends to monitor the performance of loans purchased by Fannie Mae and Freddie Mac which use their scoring technology.

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<sup>1</sup> 61 Federal Register 29592, June 11, 1996.

<sup>2</sup> OFHEO 1995 Annual Report to Congress, Chapter 1 - *Current Issues*. OFHEO 1996 Annual Report to Congress, Chapter 1 - *Major Trends in Single-Family Mortgage Lending* and Chapter 2 - *Use of Scoring in Mortgage Lending*.

<sup>3</sup> The sizes of mortgage loans that the Enterprises are permitted to buy are limited by their Charter Acts. These limits are usually referred to as "conforming loan limits". For example, the maximum original principal amount of a single-family mortgage that the Enterprises can buy is \$214,600. In addition to loan size, conforming loans must also meet the Enterprises' underwriting guidelines. Non-conforming loans are loans that either exceed the conforming loan limits or do not meet the Enterprises' underwriting guidelines. Non-conforming loans that exceed \$214,600 are often called "jumbo" loans.

## Box 1 Subprime Markets and the Blurring of the Conforming Market

The subprime market encompasses a wide range of mortgage products, including mortgage loans to borrowers with imperfect credit histories; several forms of second mortgages, including both closed and open-ended home equity loans; and even so-called "125 percent LTV" loans where the total indebtedness exceeds the estimated home value.

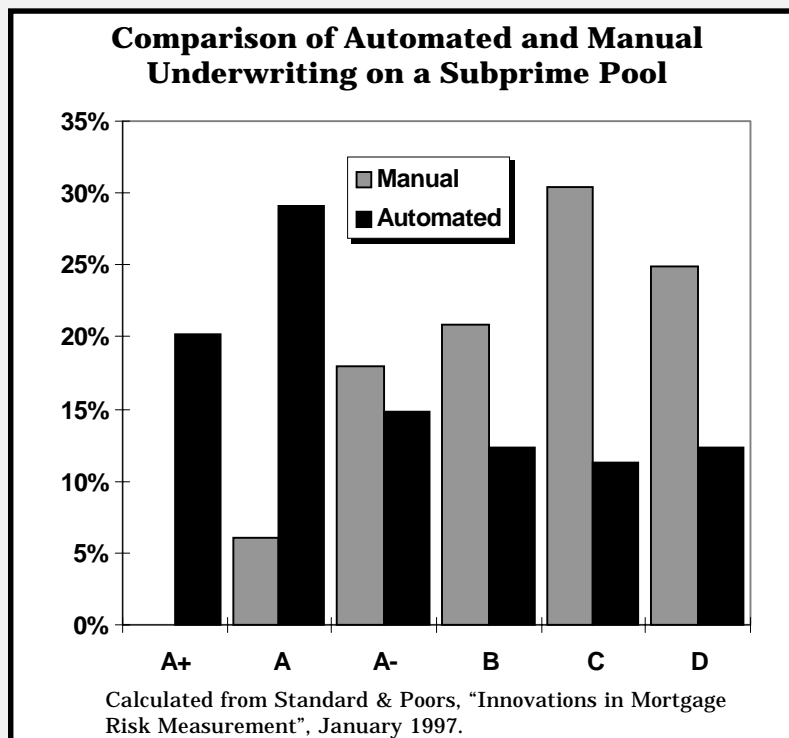
Investors have shown increasing interest in this market. For example, total issuance of home equity loan securities rose to a near record \$10.8 billion for the first quarter of 1997. Subprime mortgage loans accounted for 78 percent of this volume (April 11, 1997, Inside MBS & ABS).

Mortgage pricing in subprime markets includes a premium over prime market rates that varies with the weakness in a borrower's credit profile and other loan risk indicators. Mortgage terms are similarly restrictive, with relatively low LTV loans the rule. Borrowers face severe information shortages in evaluating offers, since it is difficult to find "standard rates" on subprime loans.

Freddie Mac delivers S&P credit enhancement requirements on these loans as part of its *Loan Prospector* automated underwriting system. Fannie Mae has announced plans to add similar capabilities to *Desktop Underwriter*. As a result, subprime lenders have increasing access to the information they need to establish competitive prices with confidence that investors will be prepared to buy the resulting securities.

Systems like *Loan Prospector* which are used to underwrite subprime mortgages permit originators to recognize loans that qualify for purchase by the Enterprises, moving them out of the subprime market and increasing the size of the prime market. Originators of these loans will be able to form Enterprise MBS which trade at higher prices than other MBS. Continued testing of their scoring models and expansion of their databases permit the Enterprises and other scoring developers to improve their measurement of the credit risk of these loans.

The application of improved risk measurement techniques to manually underwritten pools illustrates the potential impact. S&P applied automated scoring to a traditionally underwritten pool of subprime mortgages with striking results (**see figure below**). While traditional underwriting tended to bunch the loans into the lowest grades ("C" and "D"), the automated system with mortgage scoring placed many more loans into the "A" credit categories. Overall risk estimates for the pool were distinctly lower. More than one-third of the loans previously classified as subprime moved into the "A" grades under automated underwriting.



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# Mortgage Markets and the Enterprises in 1996 and Early 1997

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Fannie Mae and Freddie Mac maintained double-digit growth in profits in 1996 and early 1997 on the strength of recent rapid increases in their holdings of mortgages and their own mortgage securities, consistent with the pattern of recent years. Net interest income now accounts for more than two-thirds of the Enterprises' combined gross revenues. New mortgage purchase and guarantee volumes for the Enterprises rose last year to their highest levels since 1993, as the nation's strong economy and low interest rates stimulated record house sales and increased refinancing of existing loans. While the Enterprises' market share of new loans also rose, largely because of decreased borrower interest in adjustable-rate loans, it remained below the level of the early 1990s.

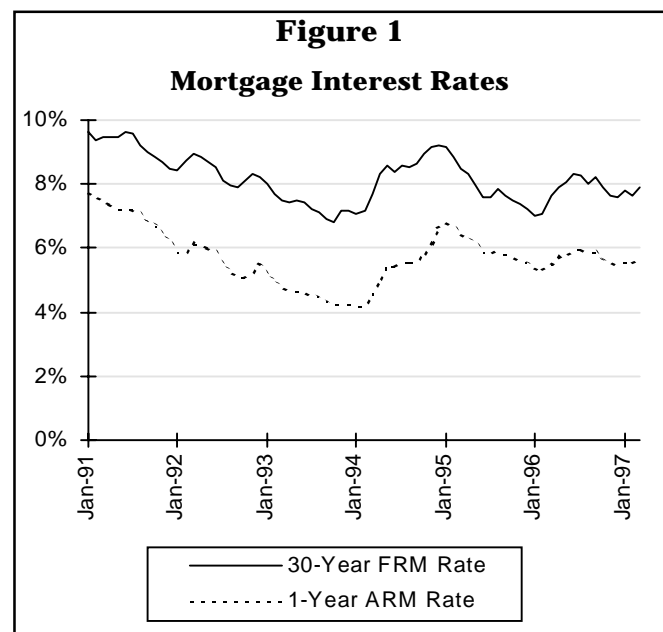
Combined capital of Fannie Mae and Freddie Mac rose \$2.7 billion, more than sufficient to enable each Enterprise to meet its minimum capital requirement. The additional capital provided protection against increases in both interest rate and credit risks. The Enterprises continued to fund mortgage asset acquisitions with large volumes of long-term callable debt, which limits loss exposure from possible future interest rate changes. They also increased the average effective maturities of their debt to offset a lengthening in expected asset lives as interest rates rose, on balance, during the year.

Credit risk indicators were generally stable last year. New loans had slightly better risk characteristics than those of the previous two years. Multifamily delinquencies declined sharply, benefiting from stronger markets, but the Enterprises' single-family delinquencies were little changed, despite significant improvement in the market as a whole.

## Housing and Primary Mortgage Market Developments

### *Housing Markets Were Strong*

A strong economy and low financing costs set the tone for 1996 and early 1997 in housing and mortgage markets. The economy grew by more than 3 percent last year, driving the unemployment rate down to its lowest level in seven years, and consumer confidence to its highest level over the same period. Mortgage interest rates in 1996 were, on average, lower than a year earlier (see **Figure 1**). Lender commitment rates on 30-year, fixed-rate mortgages (FRMs) declined to 7 percent early in the year, approaching their 1993 lows. Rates rose 1.3 percentage points by mid-year before declining to a narrow range of 7.6 to 7.9 percent late last year and early this year. Initial rates on adjustable-rate mortgages (ARMs) followed a similar pattern, but rose and fell by smaller amounts.

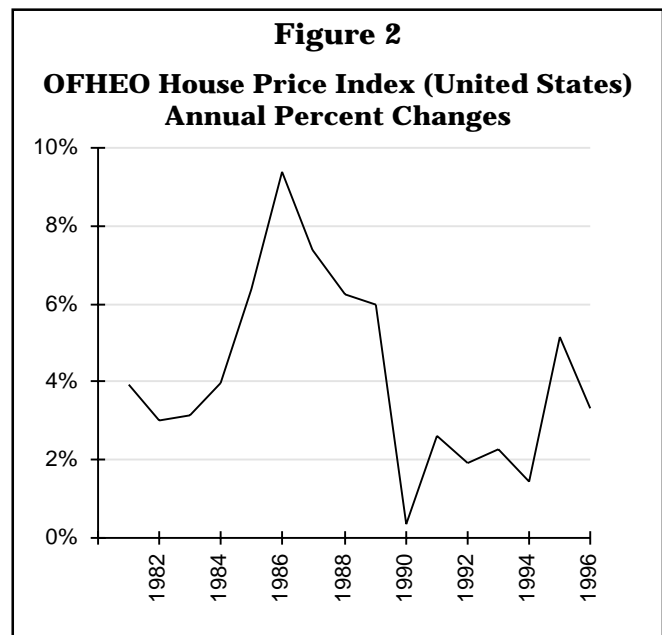


Source: Freddie Mac

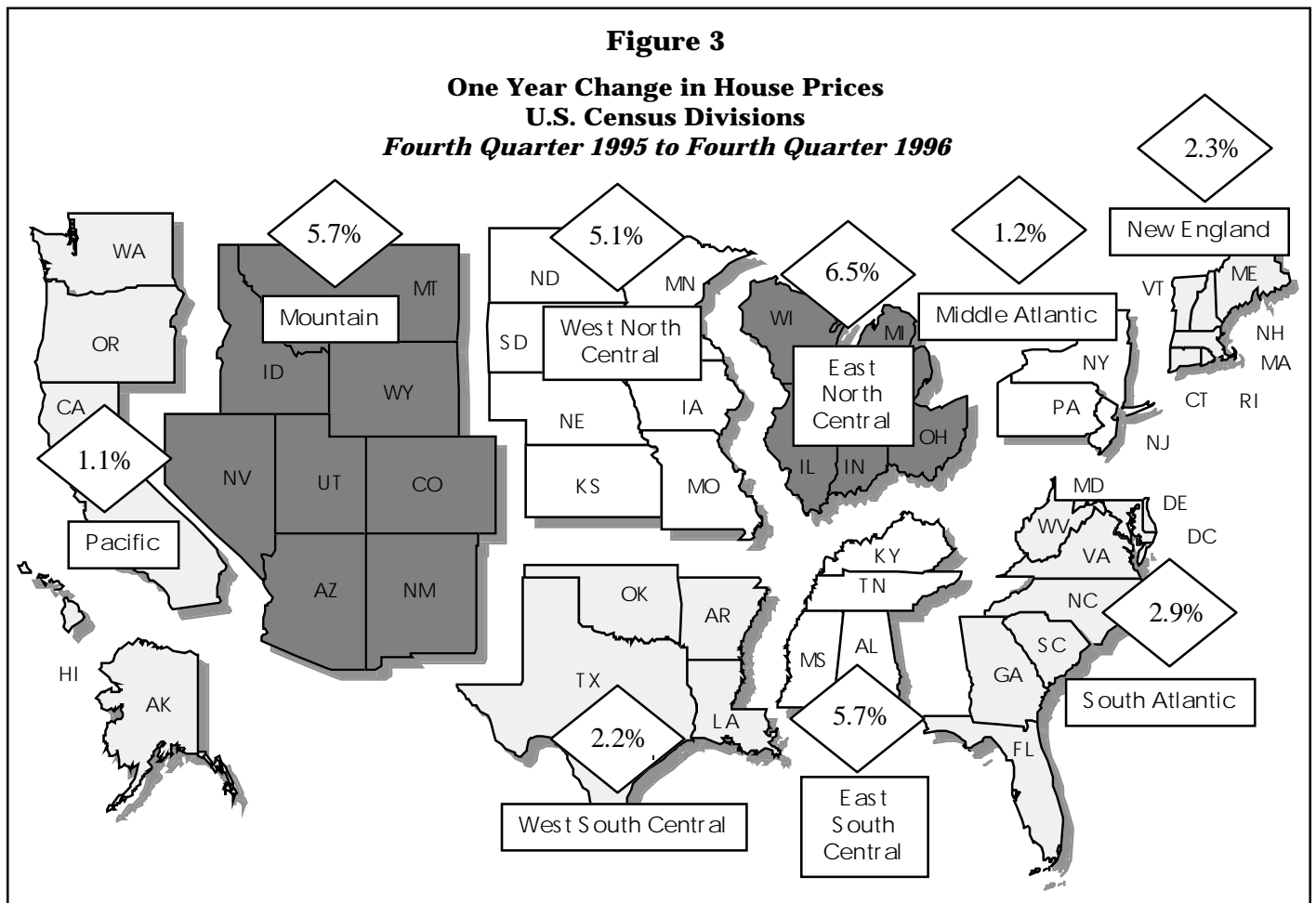


Under these conditions, markets for both new and existing homes were strong. Housing starts rose to a 9-year high in 1996, and sales of single-family homes were close to their 1978 record levels. Multifamily starts rose 14 percent last year, but remained well below their levels throughout the 1980s. The pace of starts and sales continued at similar rates in early 1997.

Single-family house prices, as measured by OFHEO's House Price Index, rose nearly 3.5 percent in 1996 (see Figure 2), slightly faster than the general inflation rate, as measured by the consumer price index, of 3.3 percent. That was slower than in 1995 but considerably faster than in the early 1990s. In general, house prices rose more rapidly in the interior of the country and less rapidly on the Pacific and Atlantic coasts (see Figure 3).



Source: OFHEO House Price Index



Source: OFHEO House Price Index

Mortgage originations increased 23 percent last year to \$785 billion (see **Figure 4**). Purchase money mortgage volumes benefited from the increased pace of house sales. At the same time, the low interest rates and firmer house prices that stimulated mortgage demand to finance increased home sales, also spurred refinancings of existing loans (see **Figure 5**). There were two periods of notable refinancing volumes -- one at the beginning of the year, which extended a small refinancing boom from late 1995, and the other at the end of the year, coinciding with the lower interest rate periods. Volumes were considerably higher during the first period because interest rates were lower.

### Loan Characteristics Reflected Market Conditions

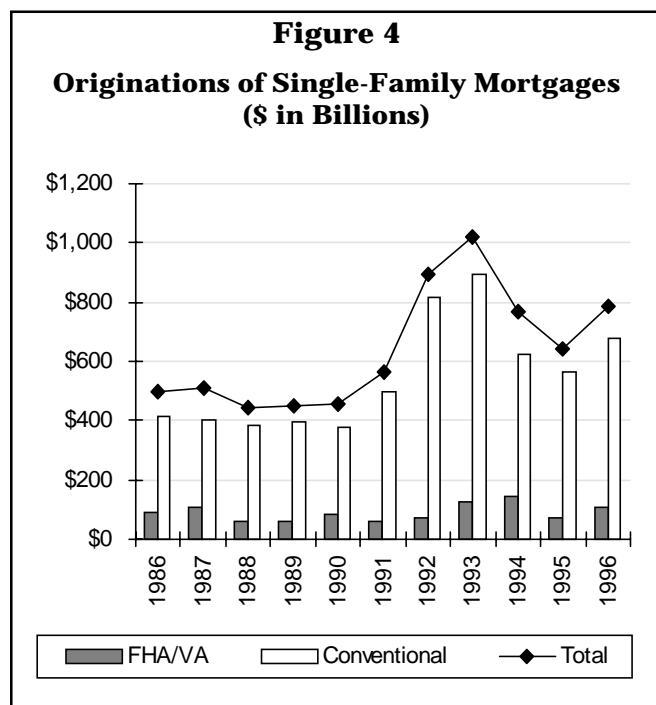
The composition of conventional loan originations in 1996 reflected the interest rate environment. The share of ARMs ranged from 14 to 36 percent, with higher shares occurring in the summer, when rates on fixed-rate loans rose both in absolute terms and relative to ARMs (see **Figure 6**). For 1996 as a whole, the ARM share fell to an average of 27 percent from 33 percent in 1995, when relatively high yields on fixed-rate loans early in the year encouraged a

much higher proportion of borrowers to choose ARMs.

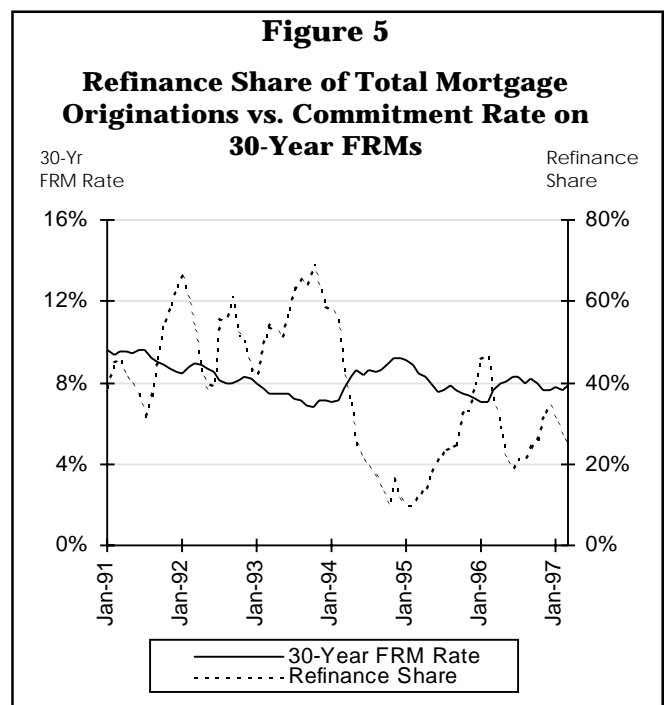
The share of 15-year fixed-rate loans rose only marginally, notwithstanding higher refinancing activity that has stimulated large increases in the volume of these loans in the past. At current rates, payments on 15-year loans are roughly one-fourth higher than payments on 30-year loans, despite their lower interest cost of about one half percentage point. Payments on 15-year loans are unlikely to become more attractive to borrowers without a significant decline in interest rates or steepening of the yield curve -- conditions experienced in 1992 and 1993.

The average loan-to-value (LTV) ratio on new conventional mortgages, as measured by the Federal Housing Finance Board, fell to 79 percent. This was largely due to the higher share of refinanced loans, which generally have lower LTV rates. Nonetheless, the average borrower downpayment in 1996 remained significantly lower than in 1990 and 1991, despite refinancing shares in those years that were as high or higher.

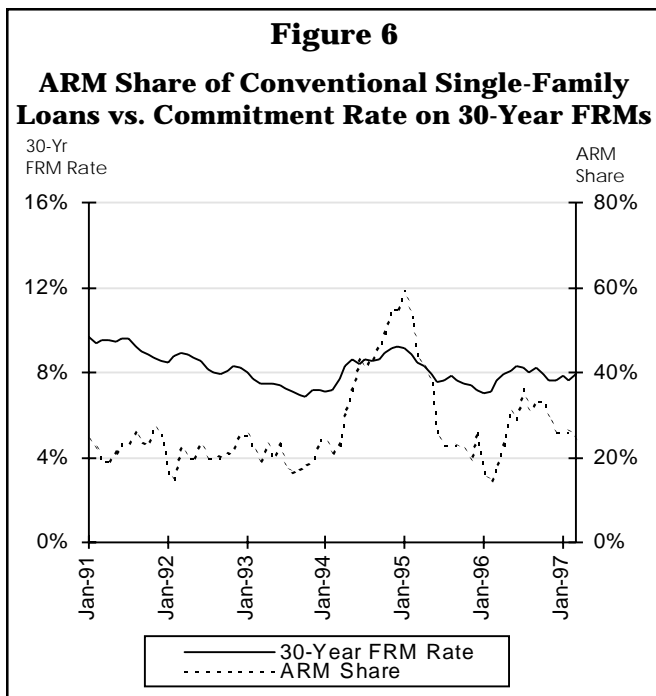
The distribution of originations by lender type showed, for the most part, a continuation of



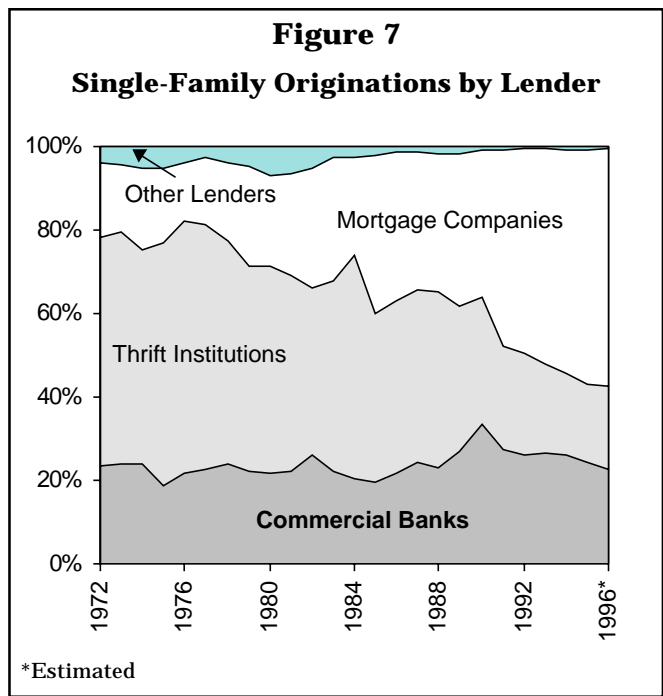
Source: HUD



Source: Freddie Mac



Source: Freddie Mac and Federal Housing Finance Board



Source: HUD

recent trends (see Figure 7). The origination share of mortgage companies rose for the sixth straight year, to 57 percent while the share for commercial banks fell to 23 percent. The thrift institutions' share rose slightly to 20 percent, the first rise in eight years, following the industry's severe shrinkages in the early 1990s.

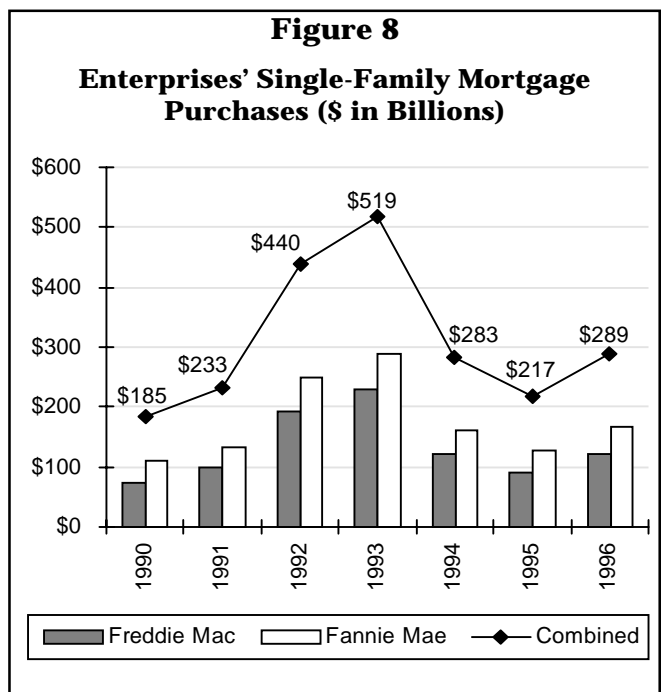
## Secondary Market Activities of the Enterprises

### *Purchases and Market Share Rose*

Purchases and new guarantees by Fannie Mae and Freddie Mac of single-family mortgages (excluding purchases of their own guaranteed securities) rose by more than 30 percent for each Enterprise in 1996 (see Figure 8).

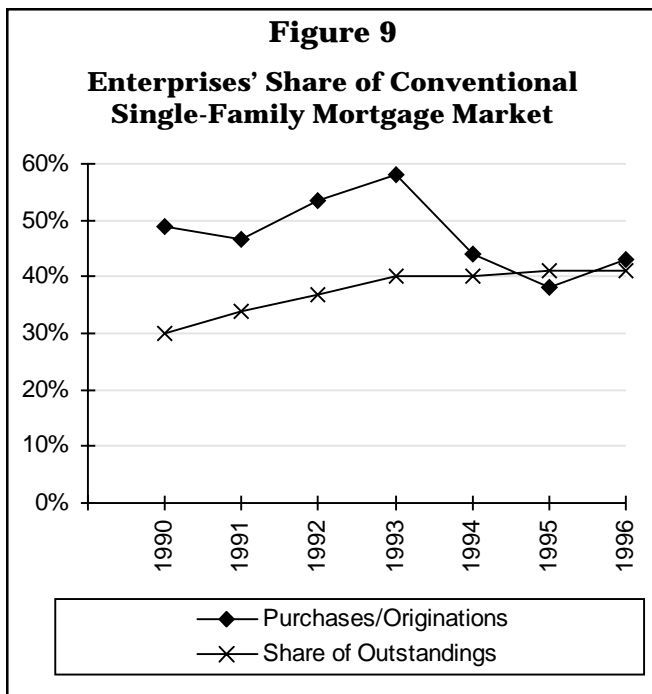
During the first quarter of 1997, Enterprise purchases and guarantees rose slightly, owing to greater refinancing volumes, but remained well below the pace of early 1996.

Last year's increase in Enterprise purchases and guarantees substantially exceeded the 20 percent increase in conventional mortgage originations. This stemmed largely from a



Source: Fannie Mae and Freddie Mac

lower origination share of ARMs, which are more frequently retained in lender portfolios. As a result, Enterprise market shares of new conventional single-family mortgages rose (see Figure 9). Market share soared in the 1980s with the development of the mortgage securities market, and rose further in the early 1990s as depository institutions struggled to re-



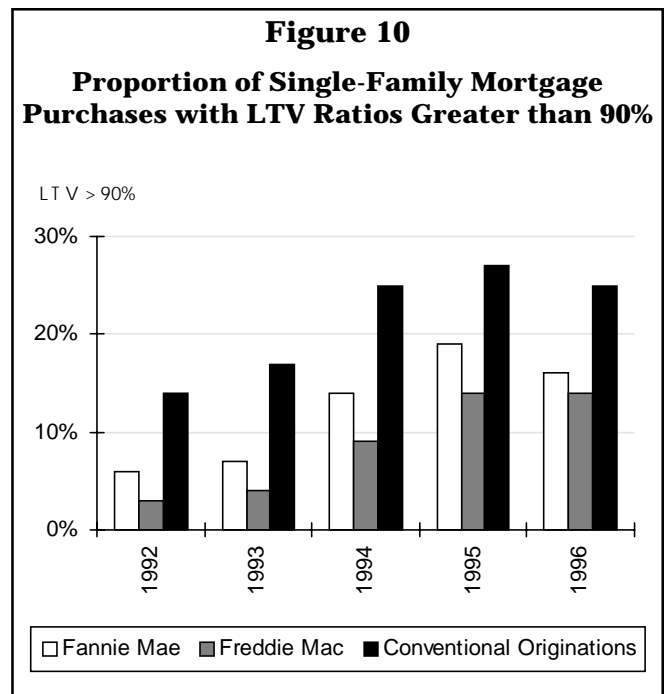
Source: Fannie Mae, Freddie Mac, and Federal Reserve Board

establish stronger capital ratios. In the past three years, Fannie Mae and Freddie Mac's market share has retreated to an average of 41 percent, about the same as their share of outstanding conventional loans.

As other financial institutions look for new ways to compete with the Enterprises, Fannie Mae and Freddie Mac may find it difficult to increase their market share of their traditional business. Last year, the Federal Home Loan Bank of Chicago announced a pilot program that would allow member banks and thrifts to retain most of the credit risk, and receive favorable capital treatment, on new loans. Interest rate risk would shift to the Home Loan Bank. Such a program, if implemented on a large scale, could create a significant new source of competition for the Enterprises.

### **1996 Purchases Appear to Be Less Risky**

Changes in the composition of the Enterprises' new credit risks reflected changes in the primary market. In general, risk characteristics of 1996 loans appear to be slightly better than those purchased or guaranteed in 1995. Aver-



Source: Fannie Mae, Freddie Mac, and Federal Housing Finance Board

age LTV ratios declined marginally for the first time in several years. Significantly, the portion of new loans with LTVs greater than 90 percent, which have much higher than average risk, declined at Fannie Mae and leveled off at Freddie Mac from 1995 to 1996 (see **Figure 10**). The Enterprises' proportion of higher LTV loans remained substantially less than that of all conventional market originations.

The mix of single-family loan types purchased or guaranteed by the Enterprises also was less risky. The share of ARMs was lower. These loans may subject borrowers to substantial payment increases if interest rates rise. At the same time, the share of intermediate-term loans was slightly higher. These loans amortize more rapidly, reducing the likelihood that the collateral would be insufficient to cover the loan balance in the event of default.

Enterprise purchases and new guarantees of multifamily mortgages also rose sharply last year to more than \$9 billion (see **Figure 11**). Volumes have more than tripled over the past four years, reflecting large increases at both Enterprises. Because multifamily mortgages

are relatively risky, the increase in originations of these loans offsets somewhat the decrease in risk for single-family purchases.

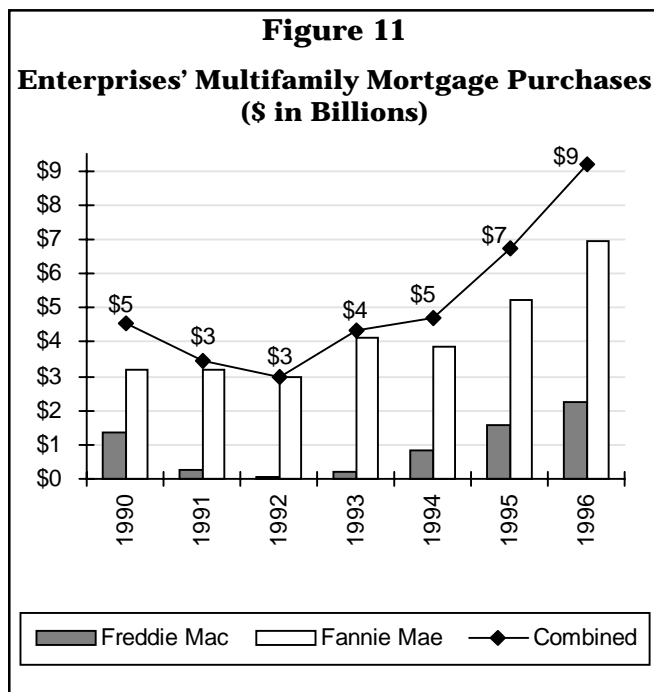
### ***New Issue Volumes of Securities Expanded, But Changes in Outstanding Volumes Were Relatively Small***

In 1996, more than 90 percent of Fannie Mae and Freddie Mac's mortgage purchases were securitized. Accordingly, volumes of new issuances of single-class mortgage-backed securities (MBS) closely followed the Enterprises' purchase volumes (see **Figure 12**). While Freddie Mac's securitization percentage has historically been over 90 percent, Fannie Mae's averaged 73 percent before rising over the past two years to 86 percent. The increase in the proportion of securitized purchases reflects, in part, increased lender preference for an exchange of MBS for loans instead of cash.

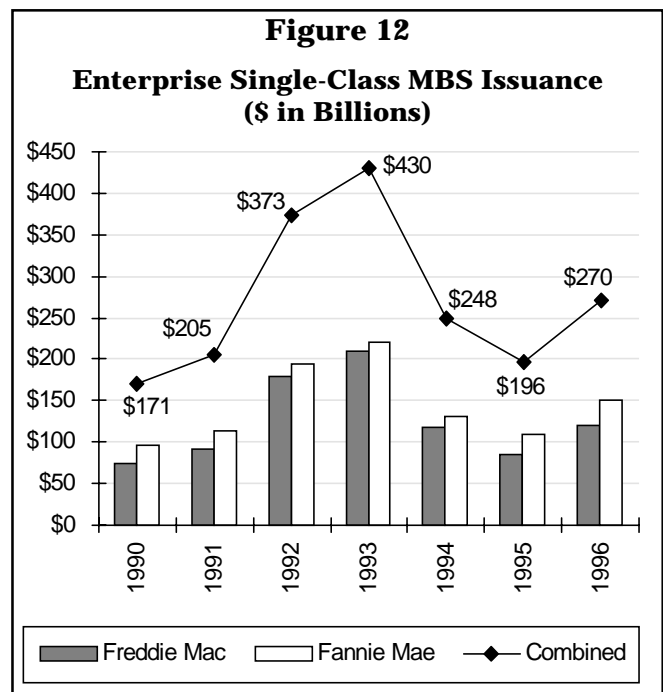
Both Enterprises are becoming increasingly significant investors in their own securities, which has moderated growth rates of non-Enterprise investor holdings. Last year, Fannie Mae purchased \$45 billion of its MBS issues and Freddie Mac purchased \$32 billion of its

issues. These purchases represented more than one-quarter of last year's new issue volume in both cases. Each Enterprise now holds close to 15 percent of its own securities. As a result, the outstanding volume of securitized mortgages in the hands of other investors increased at a slower rate -- 7 percent for Fannie Mae and 3 percent for Freddie Mac -- to a combined total of more than \$1 trillion. The different rates of growth partly reflected a faster pace of liquidation of Freddie Mac mortgages. A contributing factor is that Freddie Mac's securities include a higher portion of adjustable-rate and balloon loans, which were more likely to prepay as borrowers sought to lock in last year's low interest rates.

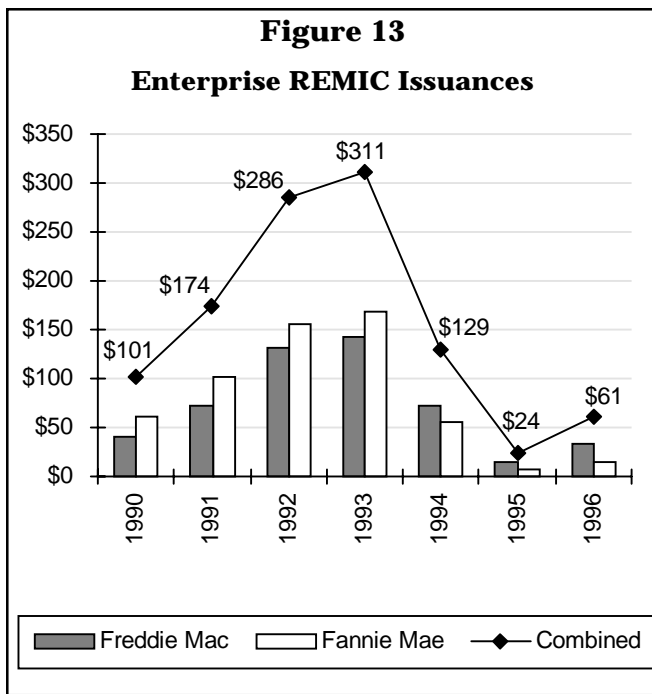
New Real Estate Mortgage Investment Conduit (REMIC) issuances more than doubled to \$34 billion at Freddie Mac, and more than tripled to \$27 billion at Fannie Mae (see **Figure 13**). A steeper yield curve and market demand for new REMIC structures were mainly responsible for the increases. Despite the volume jumps, last year's totals amounted to less than one-fifth of 1993's peak volume. New issues were insufficient to offset liquidations of the underlying loans, as outstanding REMIC volumes fell for the third consecutive year to a



Source: Fannie Mae and Freddie Mac



Source: Fannie Mae and Freddie Mac



Source: Fannie Mae and Freddie Mac

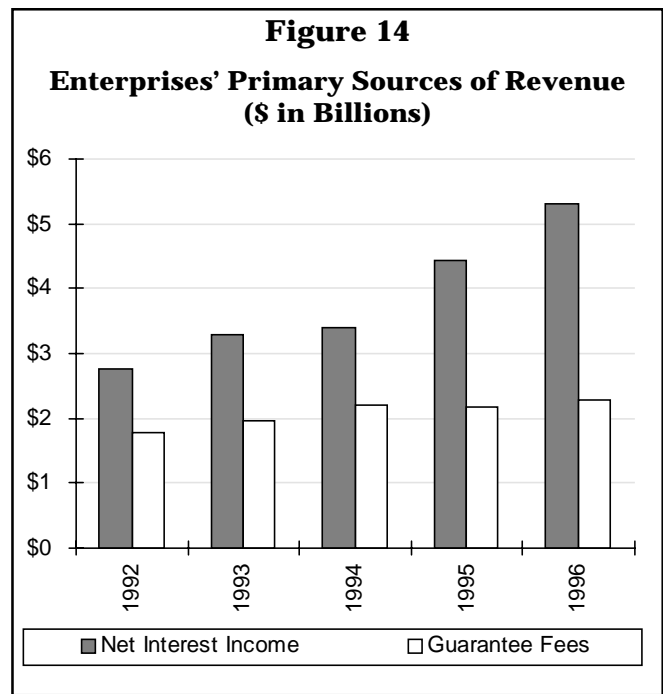
combined total of \$521 billion. Issuance volumes continued to increase in early 1997, implying increasing investor interest in these securities.

## Financial Condition of the Enterprises

### *Rapid Asset Growth Produced Higher Earnings*

Combined profit of the Enterprises was just short of \$4 billion (see **Tables A and B on pages 18-19 for selected financial data**). Freddie Mac's 1996 net income grew 14 percent. Fannie Mae's net income grew 15 percent after adjusting for its 1995 contributions to the Fannie Mae Foundation. These growth rates were both somewhat higher than in the previous year. Growth continued in early 1997; Freddie Mac's first quarter income was 10 percent above the comparable 1996 quarter, and Fannie Mae's income rose 14 percent over the year-ago quarter.

Revenue growth supporting the higher earnings of the Enterprises differed greatly between the Enterprises' two principal lines of business:



Source: Fannie Mae and Freddie Mac

portfolio investments and mortgage credit guarantees. Of the two revenue sources, spread income on investments continued to drive overall revenue growth, as it has done consistently in recent years (see **Figure 14**). The bulk of the Enterprises' investments, and the most profitable portion, is comprised of mortgages and mortgage securities. Taken together, the Enterprises have added more than \$100 billion of mortgage assets since 1994, a 44 percent increase. In 1996, Freddie Mac's net interest income grew 22 percent and contributed 94 percent of revenue gains. At Fannie Mae, net interest income rose 18 percent from a much smaller base and accounted for 81 percent of all revenue growth. (Freddie Mac's figures on net interest income are adjusted from its reported numbers to include guarantee fees on portfolio holdings of its own MBS. This adjustment makes the data comparable to Fannie Mae's.)

Interest earnings at both Enterprises were significantly affected by the refunding of previous debt issues. Fannie Mae was able to call substantial amounts of debt with high yields, which were replaced more cheaply. While Freddie Mac was also able to call some higher yielding debt, that benefit was more than offset

# Table A

<b>FANNIE MAE</b>					
SELECTED FINANCIAL HIGHLIGHTS					
(Dollars in Billions)					
	1997Q1 Annualized	1996	1995	1994	1993
<b>EARNINGS PERFORMANCE:</b>					
Earnings (\$)	2.94	2.72	2.14	2.13	1.87
Net Interest Income (\$)	3.80	3.59	3.05	2.82	2.53
Guarantee Fees (\$)	1.25	1.20	1.09	1.08	0.96
Net Interest Margin (%) <sup>1</sup>	1.17	1.18	1.16	1.24	1.38
Average Guarantee Fee (bp) <sup>2</sup>	22.7	22.4	22.0	22.5	21.3
Return on Common Equity (%)	24.0	24.1	20.9	24.3	25.3
Dividend Payout Ratio (%) <sup>3</sup>	32.6	31.4	34.6	30.8	26.8
<b>BALANCE SHEET POSITION:</b>					
Total Assets (\$)	357.0	351.0	316.5	272.5	217.0
Outstanding Debt (\$)	336.2	331.3	299.2	257.2	201.1
Mortgages:					
Retained Mtge. Portfolio (\$)	291.7	286.5	252.9	220.8	190.2
MBS (excl. MBS in Portfolio) (\$)	554.1	548.2	513.2	486.3	471.3
Retained as % of Total Mtgs. in Portfolio and MBS (%)	34.5	34.3	33.0	31.2	28.8
Capital:					
Equity/Assets & MBS (%)	1.45	1.42	1.32	1.26	1.17
Equity & Reserves/ Assets & MBS (%) <sup>4</sup>	1.53	1.50	1.41	1.37	1.29

Source: Fannie Mae

1. Taxable equivalent net interest income divided by average earning assets.
2. Guarantee fees divided by average MBS outstanding net of MBS held in portfolio.
3. Common and preferred dividends divided by net income.
4. Effective 1/1/95, reserves exclude valuation allowance related to impaired loans pursuant to SFAS 114.

# Table B

<b>FREDDIE MAC</b>					
SELECTED FINANCIAL HIGHLIGHTS					
(Dollars in Billions)					
	<b>1997Q1 Annualized</b>	<b>1996</b>	<b>1995</b>	<b>1994</b>	<b>1993</b>
<b>EARNINGS PERFORMANCE:</b>					
Earnings (\$)	1.32	1.24	1.09	0.98	0.79
Net Interest Income (\$)¹	1.93	1.71	1.40	1.11	0.85
Guarantee Fees (\$)¹	1.09	1.08	1.09	1.11	1.03
Net Interest Margin (%)¹,²	1.15	1.15	1.23	1.25	1.02
Average Guarantee Fee(bp)³	23.0	23.4	23.8	24.1	23.8
Return on Common Equity (%)	22.6	22.1	21.9	23.2	22.2
Dividend Payout Ratio (%)⁴	28.3	26.0	25.8	25.7	26.8
<b>BALANCE SHEET POSITION:</b>					
Total Assets (\$)	174.7	173.9	137.2	106.2	83.9
Outstanding Debt (\$)	153.1	156.5	119.3	92.1	48.5
Mortgages:					
Retained Mtge. Portfolio (\$)	144.7	137.8	107.7	73.2	55.9
PCs (excl. PCs in Portfolio) (\$)	473.4	473.1	459.0	460.7	439.0
Retained as % of Total Mtgs. in Portfolio and PCs (%)	23.4	22.6	19.0	13.7	11.3
Capital:					
Equity/Assets & PCs (%)	1.05	1.04	0.98	0.91	0.85
Equity & Reserves/ Assets & PCs (%)⁵	1.16	1.13	1.09	1.04	0.99

Source: Freddie Mac

1. Effective 1/1/96, Freddie Mac reports guarantee fees on retained MBS ( Freddie Mac Participation Certificates or "PCs") as guarantee fee income. Previously these fees were included in net interest income.
2. Taxable equivalent net interest income divided by average earning assets. However, for comparability with Fannie Mae, guarantee fee income on retained MBS for subsequent periods has been estimated and included in net interest income rather than fee income.
3. Guarantee fees divided by average PCs outstanding net of PCs held in portfolio.
4. Common and preferred dividends divided by net income.
5. Effective 1/1/95, reserves exclude valuation allowance related to impaired loans pursuant to SFAS 114.



by its need to replace a large volume of low yielding debt issued during 1993. Net interest margins have declined at both Enterprises over the past two years, as their mortgage purchase volumes have expanded.

Guarantee fee income for Fannie Mae rose 10 percent in 1996, reflecting increased guarantee volumes and higher average guarantee rates. Freddie Mac's guarantee income, as adjusted, fell for the second consecutive year, as a drop in its average fee outweighed the small increase in outstanding MBS.

### ***Debt Maturities Lengthened; Enterprises Re-enter Structured Note Market***

Fannie Mae and Freddie Mac are exposed to interest rate risk on their debt-funded mortgage portfolios stemming mainly from the option of homeowners to prepay their mortgage loans before maturity. The Enterprises manage this risk primarily by funding with a mix of callable and non-callable effective long-term debt. (Effective long-term debt includes the effect of off-balance sheet swaps that, in conjunction with on-balance sheet debt instruments with short-dated maturities, synthetically create long-term debt instruments.) The use of effective long-term debt provides protection in increasing interest rate environments by allowing the Enterprises to maintain stable funding costs as mortgage assets remain in the portfolio. Callable features allow the Enterprises to finance at lower costs in declining interest rate environments as mortgage assets prepay.

Both Fannie Mae and Freddie Mac increased the proportion of effective long-term debt to total debt during 1996. The run-up was in response to rising rates and, especially in Fannie Mae's case, an increase in the proportion of assets with long maturities and fixed rates. Fannie Mae's effective long-term debt increased to 81 percent of total debt in 1996 from 74 percent in 1995, while the proportion of callable debt remained unchanged at 48 percent of effective long-term debt. Freddie

Mac's effective long-term debt comprised 72 percent of total debt in 1996, up from 70 percent, and the proportion of callable debt to effective long-term debt increased one percentage point to 74 percent.

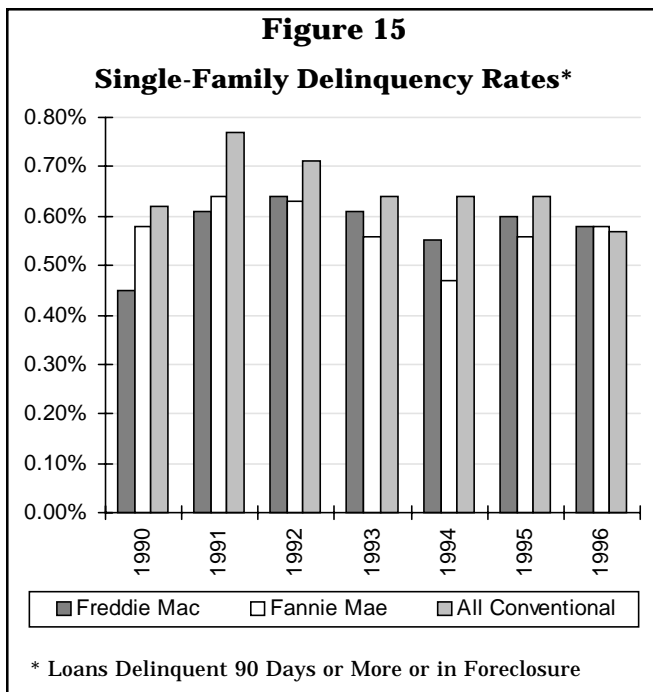
Structured note activity resurfaced at Fannie Mae and Freddie Mac in 1996 after virtually no activity the previous year. Leveraged investments in risky structured notes by California's Orange County led to its 1994 bankruptcy. This effectively dried up investor appetite for the more exotic type of these instruments. Structured notes can be an attractive funding alternative for Fannie Mae and Freddie Mac, either by swapping the structured note payment for low cost LIBOR (London Interbank Offered Rate) or discount note financing (see **Box 2 on page 23**).

### ***Credit Indicators Were Stable***

During 1996, credit-related losses (charge-offs plus foreclosure expenses) increased 14 percent at Fannie Mae and 4 percent at Freddie Mac, primarily as a result of higher loan volumes. Credit-related losses as a percentage of the mortgage portfolio plus MBS outstanding increased slightly at Fannie Mae in 1996 to 5.1 basis points from 4.8 basis points. Freddie Mac's ratio of credit-related losses to the mortgage portfolio plus MBS outstanding decreased slightly in 1996, to 10.4 basis points, but remains well above Fannie Mae.

Freddie Mac's credit performance in recent years has been adversely affected by a relatively high concentration of loans secured by properties in California. Over the past two years, the Enterprise has reduced the California share of its conventional loans from 25.5 percent to 21.8 percent.

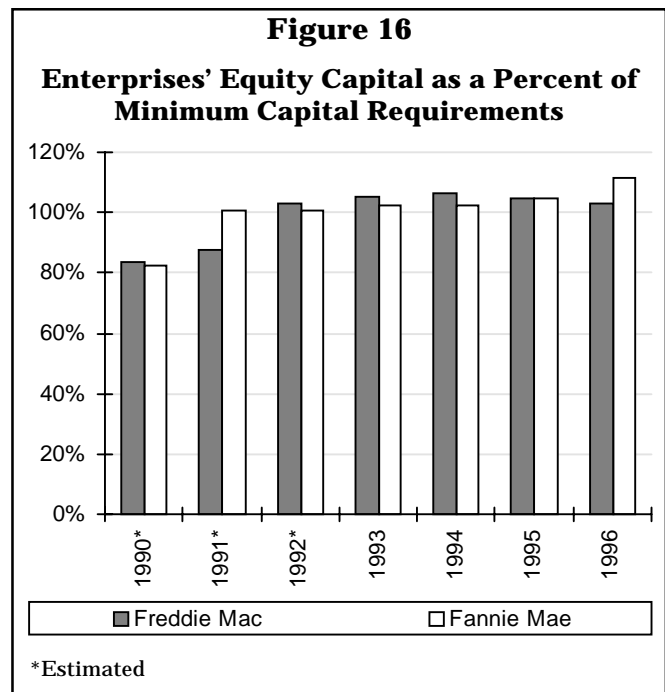
Single-family delinquencies remained relatively flat at 0.58 percent (58 basis points) in 1996 at both Enterprises (see **Figure 15**). That amounted to a two basis point increase over last year's rate at Fannie Mae and a two basis point improvement for Freddie Mac. This stability in delinquency rates occurred despite



Source: Fannie Mae and Freddie Mac

continuing strengthening of an already strong economy. Loans originated during the refinancing boom years of 1992 and 1993 are now reaching their peak default years. Although these loans are of better credit quality than loans originated prior to 1992, the large proportion of these loans in both Enterprises' portfolios kept delinquency rates from improving further.

Multifamily delinquency rates improved significantly at both Enterprises in 1996. Fannie Mae's delinquency rate on multifamily loans declined to 0.68 percent from 0.81 percent in 1995, well below the delinquency rate of 2.65 percent in 1992. The decline was helped, in part, by low interest rates and a stabilization in the multifamily rental market. Freddie Mac's multifamily delinquency rate declined to 1.96 percent from 2.88 percent in 1995, and is down significantly from 4.45 percent in 1992. The decline is a result of the diminishing impact of multifamily loans originated prior to 1991 and continued high charge-offs of previously delinquent loans. As a result of high credit losses, Freddie Mac exited the multifamily mortgage market in 1991. Freddie Mac reentered this market in 1994 and has not experienced credit losses on multifamily loans booked since that date.



Source: OFHEO

### **Enterprises Continue to Meet Capital Requirements**

Shareholder equity as a percentage of total assets and MBS, an indication of capital position, improved for both Enterprises in 1996. Fannie Mae's equity was 1.42 percent of assets plus MBS, up from 1.32 percent in 1995 and well above the 1.12 percent at year-end 1992. Similarly, Freddie Mac's equity increased to 1.04 percent of assets plus MBS, up from 0.98 percent in 1995 and much improved from 0.76 percent at the end of 1992. Improvements in this capital ratio do not, however, indicate that the risk the Enterprises pose to the federal government has declined. In particular, the ratio ignores the increase in interest rate risk exposure associated with the Enterprises' debt-funded purchases of their own mortgage securities.

Each Enterprise exceeded its regulatory minimum capital requirement in 1996. Fannie Mae surpassed its minimum capital requirement of \$11.5 billion by \$1.3 billion while Freddie Mac exceeded its requirement of \$6.5 billion by \$200 million (see Figure 16). The statutory minimum capital requirement is less sophisticated than the risk-based capital standard now being

developed by OFHEO. However, the minimum capital requirement does take into account the potentially large differences in risk exposure between debt-funded mortgages and securitized mortgages by charging 2.5 percent of capital for on-balance sheet assets and 0.45 percent for off-balance sheet obligations.

Both Enterprises adjusted their equity capital structures last year by issuing sizable amounts

of preferred stock, which they offset by repurchasing comparable amounts of common stock. Fannie Mae sold \$1 billion of preferred stock and Freddie Mac sold half that amount. Preferred stock is a cheaper source of equity funds than common stock, on which investors expect a higher rate of return. Preferred stock, however, raises fixed costs to common shareholders, increasing the variability of common stock earnings.

## Box 2

### Structured Note Activity Increased in 1996

#### What Are Structured Notes and Why Do Fannie Mae and Freddie Mac Issue Them?

Structured notes are medium-term debt obligations, most commonly issued by Government-Sponsored Enterprises (GSEs), whose interest or principal payments are determined by an index (like LIBOR or prime) and/or by a formula. They are usually characterized by a link to a derivative—an underlying swap in most cases—and designer cash flows to meet specific investor needs. Structured notes can be as simple as a straight floater, or more complex, either with the use of leverage, more than one index, or inverse floating formulas. The common types of structured notes issued by GSEs are defined in the box below.

**De-Levered Note:** a note whose coupon includes a fractional percentage of the reference index, such as  $(0.5\% \times 10 \text{ year CMT}) + 2.0\%$ . A de-levered note coupon will lag the movement of the particular index, resulting in less volatile returns over time.

**Dual Index Bond:** a structured note whose coupon is dependent on the difference between the level of two indices. For example,  $10\text{-year CMT} - 6\text{-month LIBOR} + 0.5\%$ . An investor in a dual index bond is taking a position based on the expectation of an increase in the yield spread between the two indices.

**Indexed-Amortizing Note:** a note whose principal repayments are based on a pre-determined amortization schedule. Issuances by Fannie Mae and Freddie Mac are typically linked to mortgage collateral and therefore mimic the paydown of a mortgage asset.

**Inverse Floater:** a floating rate note whose coupon varies inversely with a particular index, for example,  $10\% - 6\text{-month LIBOR}$ . An investor in an inverse floating rate note is taking a position that the reference index will fall, increasing the coupon rate on the structured note.

**Range Bond:** a bond whose coupon is dependent on the number of days that the reference index is within a pre-defined collar. For example,  $3\text{-month LIBOR} + 1.0\%$  for each day that 3-month LIBOR is between 3 percent and 9 percent. The bond would pay 0 percent for each day the reference index is outside the specified range.

**Step-Up Note:** a structured note that initially pays a fixed rate of interest to the investor for a specified period of time (the lockout period). At the expiration of a lockout period, the bond is either called by the issuer, or steps up to a higher rate. For example, 7.2 percent until July 1998 at which time the bond is callable. If not called, the bond will pay 8 percent until the year 2006.

**Straight Floater:** a floating rate instrument whose coupon varies as a function of a single index like 6-month LIBOR.

Structured notes can provide an attractive funding alternative for Fannie Mae and Freddie Mac (and often other issuers), typically by swapping the structured note payment for low cost LIBOR or discount note financing. As a result of the swap, Fannie Mae and Freddie Mac do not bear the risk associated with potentially complex payment formulas. As issuers of a structured note, they receive favorable debt financing from the swap counterparty partly as a result of their GSE status.

## Revival in Structured Note Activity

Fannie Mae and Freddie Mac issued 62 structured note deals in 1996, totalling \$2 billion. In addition, there have been 25 deals totalling \$1.4 billion in the first quarter of 1997. While these figures are small compared to the \$13 billion in issuances each year in 1993 and 1994, it represents a revival of this market for Fannie Mae and Freddie Mac after virtually no activity in 1995 (see Figure at bottom left).

Among the reasons for the drop-off in structured note activity since 1994 are the change in the yield curve, and lack of investor appetite for the riskier types of these instruments. Structured notes can provide higher returns relative to other fixed income investments if the investor's particular view with respect to the volatility, stability, or direction of rates is realized. Consequently, a steeper yield curve as experienced in 1992 through 1994 (see Figure at bottom right) provided investors more opportunity to:

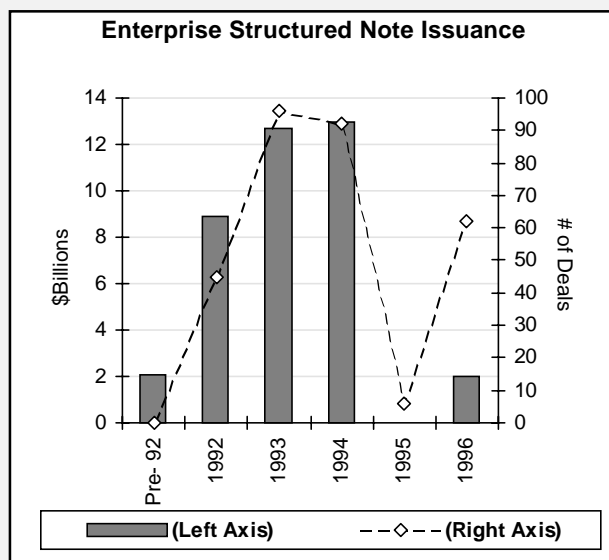
- Increase returns by taking advantage of the spread between long and short rates with coupons such as: 10-year CMT - 6 month LIBOR + 0.5%
- Increase returns by leveraging or de-leveraging the volatility of the underlying index with formulas such as:  $0.5\% \times 10\text{-year CMT} + 2.0\%$
- Speculate on the magnitude and direction of interest rate movements through instruments such as inverse floaters:  $15\% - (2 \times 3\text{ month LIBOR})$ .

Note: CMT= Constant Maturity Treasury

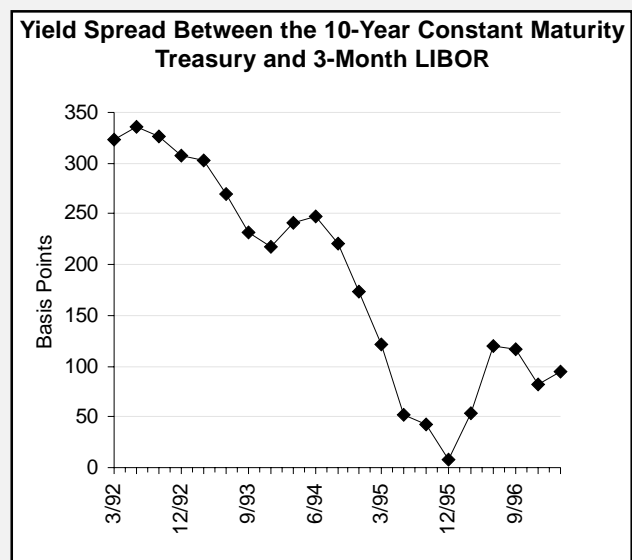
## Current Issuances Are in Less Complex Structures

Step-up notes comprised the majority of all GSE structured note issuances (including the Federal Home Loan Banks, Farm Credit Banks and the Student Loan Marketing Association), averaging 34 percent of all issues in 1992 through 1994. Step-up note issuances increased to 70 percent of all issuances in 1995, and were 56 percent of total issuances in 1996. Indexed amortizing notes (IANs), which comprised 9 percent of all issuances in 1993 and 1994, were the second major structured note type in 1996, comprising 22 percent of all agency issues in the year.

Indicative of the relative lack of investor appetite for riskier securities, there have been virtually no issuances of speculative types of structured notes such as inverse floaters and range bonds. Combined, these types of notes represented 13 percent of all issuances in 1994 and 14 percent in 1993. In addition, consistent with the flattening of the yield curve, there have been virtually no issuances of structured notes designed to take advantage of volatility or spread such as de-levered notes and dual index bonds. These instruments comprised 36 percent of all issuances in 1994 and 33 percent in 1993.



Source: Bloomberg



Source: Bloomberg

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# OFHEO's Regulatory Activities

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## Capital Classification and Regulation of Fannie Mae and Freddie Mac

### Capital Classification and Minimum Capital

The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Title XIII of P.L. 102-550) (the Act) requires OFHEO to determine the capital classifications of Fannie Mae and Freddie Mac for purposes of financial safety and soundness. The Act requires that these determinations be made "not less than quarterly." The classifications are: adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized. The Act gives the OFHEO Director "prompt corrective action" enforcement authorities if an Enterprise is classified other than adequately capitalized.

To qualify as adequately capitalized, an Enterprise must meet both minimum and risk-based capital standards. However, during the period that OFHEO's risk-based capital standard is under development, and for one year after publication of a final risk-based capital rule, only the minimum capital standard applies. During this period, an Enterprise is considered adequately capitalized if its core capital -- common stock, perpetual noncumulative preferred stock, paid-in capital and retained earnings -- equals or exceeds its minimum capital requirement.

The minimum capital requirement is designed to establish an essential amount of capital that an Enterprise must hold as a cushion against losses from broad business categories. It is computed on the basis of leverage ratios applied

to all assets (2.50 percent) and off-balance sheet obligations (0.45 percent), with more complex rules applied to interest rate and foreign exchange contracts. OFHEO implemented the minimum capital provision of the Act by publishing a proposed minimum capital regulation for public notice and comment on June 8, 1995. After considering the comments received, OFHEO published the final regulation on July 8, 1996. It is codified in the Code of Federal Regulations at 12 CFR Part 1750.

Based on the minimum capital requirement, OFHEO has classified Fannie Mae and Freddie Mac adequately capitalized in each quarter since June 30, 1993.

### Risk-Based Capital

The Act requires OFHEO to establish a risk-based capital standard, using a stress test, to evaluate the capital adequacy of Fannie Mae and Freddie Mac. This risk-based capital test, to be administered at least quarterly, is currently under development by OFHEO. When operational, the test will subject the businesses of Fannie Mae and Freddie Mac to a set of financial shocks simulating the effects, over a 10-year period, of very large, sustained movements in interest rates accompanied by widespread mortgage defaults. The risk-based capital level for an Enterprise is the amount of capital the Enterprise must hold to maintain a positive capital position throughout the 10-year stress period, plus an additional 30 percent to cover management and operations risk.

OFHEO's stress test must project credit losses on a national scale comparable to the worst historical mortgage credit loss in any region of the country. OFHEO refers to this credit loss as the "benchmark loss experience." This is a description of the default and severity behavior of specific mortgage loans in a particular time and place, whose characteristics are described in the Act.

The risk-based standard is a critical aspect of the safety and soundness oversight of the two Enterprises. Unlike OFHEO's minimum capital standard, which is based on fixed leverage ratios, the risk-based standard is designed to address specific credit risk exposures and exposure to interest rate changes. OFHEO's risk-based capital standard will also respond to future changes in either of the Enterprise's risk profiles. For example, a decline in house prices, causing homeowners to have less equity in their properties and increasing the probability of default, will put upward pressure on capital requirements. A rising house price scenario would produce the opposite effect.

Although the product of OFHEO's risk-based capital test will be a single capital number, the test effectively creates a large number of marginal capital requirements for different types of activities, including a wide variety of investments, guarantees and funding strategies. This provides the Enterprises with flexibility to adjust the amount of capital they maintain or their exposure to interest rate risk and credit risk.

## Development of the Risk-Based Capital Regulation

OFHEO has made significant progress toward completing its risk-based capital regulation.

- **Feb. 7, 1995** -- Advance Notice of Proposed Rulemaking (ANPR) laid out OFHEO's basic approach to the stress test and invited public comment on a range of issues involving stress test development.

- **March 21, 1996** -- OFHEO began publishing the House Price Index (HPI), a new quarterly government economic indicator and a key component of the stress test. The HPI, a weighted repeat sales index, measures average changes in house prices at the national, regional and state level.

- **June 10, 1996** -- OFHEO published a Notice of Proposed Rulemaking (NPR) describing two key elements of the risk-based capital test -- the benchmark loss experience and the HPI. The NPR discussed the methodology for establishing the benchmark loss experience, defining the basis for determining Enterprise credit losses in the stress test. It also proposed that OFHEO use the HPI to estimate changes in the value of properties securing single-family mortgages owned or guaranteed by the Enterprises.

- **1997** -- OFHEO is working on a second NPR that will address assumptions about interest rates and mortgage performance and other issues not covered in the first NPR.

## Creating a New Regulatory Tool

A key element of OFHEO's mission is development of the methodology for simulating Enterprise performance. Establishing this methodology requires creation of a database to support OFHEO's regulatory and supervisory activities (the database), and a Financial Simulation Model (FSM). The database and the FSM are the foundation for the development and operation of the risk-based capital stress test as well as the monitoring of credit and interest rate exposure on an ongoing basis, the analysis of Enterprise financial performance over time, basic research on credit and interest rate risk relevant to the supervision of the Enterprises, and research on public policy issues relating to safety and soundness. For example, the database includes extensive detailed historical and current data on the Enterprises' activities. The FSM must simulate the behavior of the Enterprises' assets, liabilities, and off-balance sheet

obligations under adverse credit and interest rate conditions. OFHEO is currently the only federal financial regulator statutorily required to apply a stress test as part of its capital regulation.

### ***The Database***

The database includes extensive data on the historical performance of loans purchased by Fannie Mae and Freddie Mac as well as on the Enterprises' current books of business. Historical data provides a basis for evaluating how Fannie Mae and Freddie Mac may perform under economic stress. Current and historic business data is used to monitor Enterprise financial performance and to establish starting positions for simulations of Enterprise performance.

The Act requires that OFHEO's risk-based capital regulation be based upon actual risk exposures of Fannie Mae and Freddie Mac. To achieve this, OFHEO needs Enterprise data at a highly disaggregated level. To minimize regulatory reporting requirements, OFHEO collects and processes instrument-level data (data on individual mortgages, debentures, or swaps), as provided by the Enterprises. The Enterprises maintain their data in different formats and database structures. In order to make the data consistent, OFHEO created a single-format database to normalize the data.

### ***Financial Simulation Model***

The FSM is comprised of econometric models that simulate the performance of Enterprise assets and obligations. It also incorporates computer programs to simulate cash flows, implement assumptions about Enterprise operations, and translate cash flows into pro forma financial statements. OFHEO's work on the various components of the FSM is summarized below.

■ **Interest Rates** -- Interest rates are an important determinant of Enterprise performance. They directly affect an Enterprise's net interest margin -- the difference be-

tween the interest it receives on mortgages it holds in portfolio and the interest it pays on its liabilities. To the extent that the Enterprise does not lock in a profitable spread on the mortgage assets purchased for investment, changes in interest rates are an important risk factor. Both the absolute level of rates and the shape of the yield curve affect the net interest margins of the Enterprises.

OFHEO has developed a time series database of interest rates relevant to Enterprise financial performance, including U.S. Treasury yields, yields on various mortgage products, Enterprise borrowing rates, and other rates and yields associated with derivative products or contracts. This database, together with econometric models, will allow the FSM to simulate future interest rate environments.

■ **House Prices** -- House prices are a major determinant of mortgage performance. Rising house prices make it easier for a homeowner to refinance or, in the event of a default on mortgages owned or guaranteed by Fannie Mae or Freddie Mac, for the Enterprise to reduce its credit losses. The FSM uses actual house price trends to estimate how much equity borrowers have in their homes, as measured by the current (as opposed to original) LTV.

OFHEO is also analyzing the extent of any relationship between home prices and interest rates. The existence of such a relationship could have important implications for the performance of Enterprise mortgages during a stress period.

■ **Mortgage Performance** -- Mortgage performance--whether and when a mortgage is prepaid or defaults, and in the latter case, how much it costs -- translates directly into Enterprise financial performance. The FSM includes models of default and prepayment and loss severity for both single-family and multifamily mortgages. The models produce simulated default rates, loss severities, and



prepayment rates for mortgages with common sets of characteristics (e.g., product type, origination year, region, original LTV). The models have been developed based on statistical analysis of the complete historical loan-level data of the two Enterprises.

OFHEO's approach to modeling defaults and prepayments of single-family mortgages builds on established statistical methods, but also involves new approaches in several respects. In the past year, OFHEO has developed a separate model for adjustable-rate mortgages that explicitly accounts for the impact of payment shock on borrowers. With respect to single-family loss severity, OFHEO has developed an original approach for determining the cost of losses associated with the difference between the loan amount and proceeds of a foreclosure sale.

OFHEO has also broken new ground in its research on multifamily mortgage performance. The first product of this research is an innovative model of multifamily default and prepayment that considers both an owner's equity and the property's cash flow, simulating both of these as a function of economic conditions. OFHEO is performing the research required to develop a model of multifamily loss severity.

■ **Other Credit Factors** -- Fannie Mae and Freddie Mac are required by law to provide credit enhancement for loans they purchase or guarantee where the LTV is greater than 80 percent. Private mortgage insurance is the most common form of credit enhancement, but participation agreements and recourse agreements are also authorized. Since these credit enhancements provide revenues to offset some mortgage losses, they must be incorporated in the FSM. OFHEO has developed computer programs that simulate the performance of credit enhancements, consistent with their most important characteristics and the level of economic stress of a given scenario.

■ **Operations** -- Enterprise operations that can be simulated in the FSM include cost of operations, new borrowing to finance an Enterprise's portfolio, and dividend payouts. The FSM simulates Enterprise operations under a "wind-down" assumption, that is, the assumption that the Enterprises add no new business after the start of a simulation. The FSM scales operating expenses to the decline in the Enterprises' businesses. In the case of new borrowing, it simulates Enterprise debt issuance whenever, during the course of a simulation, funding is insufficient to support current asset balances. With respect to dividends, the FSM simulates payouts based on operating results and statutory requirements.

■ **Cash Flows** -- Simulated cash flows of the Enterprises' assets, liabilities, and off-balance sheet obligations (e.g., mortgage-backed securities and interest rate swaps) are produced by the FSM. Sophisticated treatment of cash flows is particularly important because, in recent years, the Enterprises have purchased a growing volume of complex mortgage derivative products, issued substantial amounts of derivative debt securities (i.e., structured notes) and entered into many billions of dollars in derivative contracts. Many of these products and arrangements are extremely sensitive to interest rates, and are likely to behave in complex ways in the event of significant swings in interest rates -- swings such as those associated with the risk-based capital stress test.

OFHEO completed development of basic liability and non-mortgage derivative cash flow generators during 1996. Generating cash flows for complex liabilities and derivatives requires OFHEO to "reverse engineer" each security and derivative transaction. This involves creating computer code for a given transaction to guide the cash flows according to a set of rules. OFHEO has contracted with a commercial service bureau to supplement its internal reverse engineering capability.

■ **Financial Reports** -- OFHEO's FSM incorporates software that translates cash flows of an Enterprise's financial instruments and activities into pro forma financial statements.

## OFHEO's House Price Index (HPI)

In March 1996, OFHEO began publishing a quarterly House Price Index (HPI), designed to capture average changes in the value of single-family homes state by state, regionally, and nationwide. The HPI measures average price changes in repeat sales or refinancings on 8 million single-family mortgages purchased or securitized by Fannie Mae and Freddie Mac during the past 22 years. The combined mortgage records of these two Enterprises comprise the nation's largest database of mortgage transactions. The HPI is the government's most

comprehensive statistical measure of changes in the nation's housing values.

In developing the stress test, OFHEO is required to use a house price index to account for changes in the loan-to-value ratios of mortgages held or guaranteed by Fannie Mae or Freddie Mac. OFHEO has determined that for purposes of the stress test, the HPI produces the most accurate picture of house price changes of any available index or survey. In a Notice of Proposed Rulemaking published June 10, 1996, OFHEO formally proposed to use the HPI as an element in the stress test.

The HPI is updated each quarter as additional mortgages are purchased by the Enterprises and additional repeat transactions are identified. These data are combined with the data of previous years stretching back to January 1975. OFHEO publishes the HPI approximately two months after the end of the previous quarter. (see **Figures 4 and 5 on page 12**)

## Rating Agency Review of the Enterprises

In April 1996, Chairman Richard Baker of the House Banking Subcommittee on Capital Markets, Securities, and Government Sponsored Enterprises, asked OFHEO to obtain credit ratings for Fannie Mae and Freddie Mac from a nationally recognized statistical rating organization on a risk to the government basis. OFHEO has statutory authority to request a rating agency review.

A contract was competitively awarded to Standard & Poor's (S&P). The rating agency was asked to evaluate the risk that each Enterprise would be unable to meet its obligations without a commitment of taxpayer funds. S&P was asked to express that risk in the form of its standard credit rating schedule. The evaluations were to be "point-in-time" ratings, valid for the date of the report only.

In a Feb. 18, 1997 letter to Chairman Baker, OFHEO reported:

*Standard & Poor's determined that both Enterprises currently merit a rating of AA-. These ratings show a clear improvement from six years ago when Standard & Poor's last publicly conducted comparable evaluations. At that time, Freddie Mac was rated A+, and Fannie Mae was rated A-. In explaining its current ratings, Standard & Poor's notes that "risk is mitigated by increased governmental oversight begun in 1992 with the passage of the [Federal Housing Enterprises Financial Safety and Soundness] Act and the chartering of OFHEO." That has resulted in higher Enterprise capital ratios, a series of examinations with recommendations that have been adopted by the Enterprises, and a continuing supervisory and enforcement*

*structure featuring prompt corrective action measures.*

*The report notes several other Enterprise strengths. Areas of improvement include hedging techniques and consistent records of strong profitability, which in Fannie Mae's case did not exist to nearly the same degree six years ago. As before, both Enterprises' ratings benefit substantially from their nationally diversified asset portfolios and from their charters. Those charters give them a protected duopoly position and create a perception among investors that their securities are effectively government guaranteed, which greatly enhances the Enterprises' liquidity. As Standard & Poor's concludes, "While the market pricing of GSE debt is not immune to concerns about creditworthiness, this concern has historically been reflected in higher pricing of debt, but no GSE has ever been subject to a liquidity crisis due to inability to access funding."*

*On the other hand, the report concludes that the Enterprises' current capital positions are relative weaknesses: "Both companies maintain capital levels that are relatively low when compared with what Standard & Poor's would expect to see at fully private companies with similar risk profiles at the 'AA-' rating level." And Standard & Poor's states that "stronger levels of capital would provide a higher measure of protection" under severe credit or interest rate scenarios.*

*Standard & Poor's evaluations provide OFHEO and the Congress with an additional perspective on the risks posed by the government's sponsor-*

*ship of the Enterprises. Standard & Poor's supports OFHEO's view that the Enterprises present no near-term danger to taxpayers. At the same time, OFHEO believes that these ratings do not substitute for OFHEO's own more detailed analyses of the Enterprises conducted in the course of examinations and otherwise.*

*Nor do they substitute for OFHEO's risk-based capital requirements that are currently under development. These requirements will be based on statutorily specified risk scenarios that are qualitatively different from those considered by Standard & Poor's. And they serve a somewhat different purpose. Standard & Poor's uses stress tests in conjunction with its understanding of management goals, strategies, and capabilities to anticipate risk exposures and vulnerabilities over the next several years. Passing or failing a specific test on a specific date is not determinative in rating the creditworthiness of an ongoing firm. OFHEO's stress test, however, is a key tool in its regulatory apparatus. The test must be met on a quarterly basis and, properly designed, will provide appropriate incentives to limit Enterprise risk-taking.*

*The report also is consistent with OFHEO's examination conclusions that credit and interest rate risk management has been strong at the Enterprises, but stresses that, given their capital positions, very stringent management controls in these areas is essential. OFHEO agrees and will continue to monitor closely Enterprise risk management.*

# Enterprise Examination

OFHEO's Office of Examination and Oversight (OEO) conducts a comprehensive program of examination activities to determine the condition of Fannie Mae and Freddie Mac for the purpose of ensuring their financial safety and soundness. These activities include on-site examinations and off-site financial analysis and supervisory monitoring, as well as ongoing communication with the board of directors and management of both Enterprises. OEO's examination program complements OFHEO's quarterly capital classification in providing comprehensive oversight of the financial safety and soundness of each Enterprise.

OFHEO's goals of examination derive from OFHEO's mission.

## OFHEO EXAMINATION GOALS

- Identify the significant sources of risks inherent in each Enterprise's current and planned business activities and products.
- Evaluate the effectiveness of each Enterprise's system for identifying, measuring, controlling, and monitoring risks.
- Communicate examination findings, conclusions, and recommendations to each Enterprise's board of directors and management in a clear, concise, and timely manner.
- Obtain commitments from the board of directors and management for prompt correction of any significant deficiencies in risk management and internal controls, as well as violations of laws and regulations.
- Verify that deficiencies and violations are corrected in an effective and timely manner.

OFHEO's framework for conducting on-site examinations is based on two key principles: (1) examinations focus on the risks present in

each Enterprise's activities and the Enterprise's management of those risks, and (2) examinations use a top-down approach. Examinations focus on risk because the negative consequences of risk-taking may have an adverse impact on an Enterprise's safety and soundness. Using a top-down approach allows OFHEO to employ its examination resources effectively and efficiently.

OFHEO has identified six categories of risk for examination. They are credit risk, interest rate risk, business risk, information systems and technology risk, operations risk, and corporate governance risk. OEO has designed examinations to assess each of these risk areas.

OFHEO recognizes that the Enterprises' business requires that they assume risk. The purpose of OFHEO examinations is not to eliminate risk at the Enterprises, but to ensure that each Enterprise manages its risks in a manner that is appropriate for the level of risk assumed. OFHEO also recognizes that the risk exposure of the Enterprises should be consistent with their public purpose as reflected by the charter acts for these two government-sponsored enterprises.

OFHEO defines risk management as being those policies, procedures, practices, information systems, and internal controls for:

- identifying;
- measuring;
- controlling; and
- monitoring risk at each Enterprise.

Risk identification focuses on detecting all significant sources of risk. Risk measurement means quantifying the Enterprise's exposure to a particular risk. Risk control is the Enterprise's process for keeping risk exposure within the limits approved by the board of directors. Risk monitoring refers to the process for oversight of risk by the Enterprise's board of directors and management.

To conduct examinations effectively, OFHEO has identified the critical components of a comprehensive risk management system. They include:

- Thorough, ongoing oversight by the board of directors;
- Effective, clearly communicated policies and procedures;
- Extensive internal controls that include prudent risk exposure limits, clear accountability, segregation of duties, and independent review; and
- Rigorous internal audit and external audit functions.

If an examination identifies deficiencies in an Enterprise's management of risk, OFHEO directs the Enterprise to address the deficiencies in a manner consistent with the seriousness of OFHEO's safety and soundness concern. OFHEO requires the Enterprise to correct significant deficiencies immediately. When appropriate, OFHEO also will recommend that the Enterprise enhance risk management to reflect current "best practices."

To achieve an extensive knowledge of the risks present in each Enterprise's business activities and of the management practices and internal controls at each Enterprise, OFHEO's initial program of examination consisted of a cycle of separate comprehensive examinations of each of the six risks identified by OFHEO. To date, OFHEO has concluded the examinations of credit risk, interest rate risk, business risk, and corporate governance risk at each Enterprise. Examinations of information systems and technology risk currently are in progress. Examinations of operations risk are scheduled for completion by the end of 1997.

At the conclusion of the initial cycle of separate examinations of each risk, OFHEO will transition to an examination program that assesses all risks at each Enterprise at the same time. Concurrent, continuous examination will allow OFHEO to target examination resources to high-priority risk areas at each Enterprise. This program of concurrent, continuous examination will be supported by a system of comprehensive monitoring to ensure that OFHEO

identifies and responds in a timely manner to changes in the risk profile of each Enterprise.

Continuing two-way communication between OFHEO and each Enterprise's board of directors and management is another essential element of OFHEO's examination philosophy. OFHEO communicates with the Enterprises to inform them of important regulatory initiatives and to request information for financial analysis and supervisory monitoring. In turn, OFHEO expects the Enterprises to keep OFHEO informed of significant issues relating to their internal operations and external operating environment. Examples of such issues include projected earnings levels, anticipated changes in the structure or level of capital, plans for new products and services, potentially consequential changes to existing products and services, changes in senior management and organizational structure, and the effect of anticipated accounting changes.

OFHEO is also developing an evaluative rating system to provide examiners with a uniform framework for evaluating each Enterprise's risk exposure and risk management. The evaluative rating system framework includes a definition of each type of risk examined by OFHEO and a structure for assessing risks and risk management processes. The framework assesses the quantity of risk exposure and the quality of risk management independently.

OFHEO is incorporating these and other examination-related topics into an examination handbook. The handbook will serve as both a guide for OFHEO examiners and a reference for the Enterprises on OFHEO's examination approach.

In the twelve months since June 16, 1996, OFHEO completed a targeted examination of data integrity at Freddie Mac, and examinations of business risk at both Fannie Mae and Freddie Mac. OFHEO examinations of information systems and technology risk currently are in progress at the Enterprises. A discussion of OFHEO's examination activities over the past year for each Enterprise follows.

## Data Integrity Examination

OFHEO conducted a Data Integrity Examination at Freddie Mac because of ongoing difficulties with the accuracy, completeness, and consistency of Freddie Mac's data deliveries to OFHEO for the development of the risk-based capital regulation. The examination also addressed other data integrity weaknesses identified in prior examinations.

Data integrity encompasses the accuracy, completeness, and consistency of the information used to operate a business. It also affects the data delivered to OFHEO by the Enterprises for the development of the simulation model supporting establishment of the risk-based capital regulation and off-site monitoring. Receipt by OFHEO of inaccurate, incomplete, or inconsistent data can cause significant inefficiencies and can hamper development of the Enterprise simulation model.

### *Objectives and Scope*

The objectives and scope of this examination were to assess the:

- Effectiveness of internal controls over data integrity for mortgages, debt and derivatives, investments, and analytics for Freddie Mac's internal use.
- Effectiveness of internal controls over data deliveries to OFHEO of asset, debt and derivatives, and investment data.
- Adequacy of management plans for improving internal controls over data integrity.

### *Results and Conclusions*

OFHEO determined that internal controls over data integrity for financial mortgage data are effective. Financial mortgage data encompass information necessary for accurate transactions and financial reporting. Internal controls over nonfinancial data (i.e., certain demographic and geographic data) are inadequate to assure integrity. Freddie Mac is strengthening internal

controls over data integrity by converting to reliance on a central repository for mortgage data.

Systems controls over legacy, (i.e., existing systems that are being replaced) derivative, debt and securities transactions systems are not adequate to ensure data integrity; however, compensating management controls (primarily manual reconciliations) are adequate for financial reporting and internal uses of data. Freddie Mac is strengthening systems controls over data integrity by replacing legacy systems with a central repository for derivative, debt, and securities transactions.

OFHEO made recommendations to enhance internal controls over data integrity for Freddie Mac's internal use. Freddie Mac agreed to implement all recommendations.

OFHEO determined that internal controls over data deliveries to OFHEO were ineffective. OFHEO required Freddie Mac to significantly enhance internal controls to ensure the accuracy, completeness, consistency, and timeliness of data deliveries to OFHEO. In response, Freddie Mac created a regulatory reporting unit in the Corporate Accounting Department responsible for managing data submissions to OFHEO with a level of control consistent with Freddie Mac's financial reporting process and other production processes. Furthermore, Freddie Mac has established quality control standards for all data delivered to OFHEO.

OFHEO determined that management plans to ensure data integrity were incomplete. In response, Freddie Mac submitted comprehensive plans (principally detailed implementation and conversion plans with firm schedules) to correct data integrity control deficiencies. OFHEO is monitoring Freddie Mac's progress in implementing improved internal controls and in converting internal users from legacy systems to effectively-controlled data sources.

## Business Risk Examination

Business risk is the potential that an event or action will adversely affect an Enterprise's ability to achieve business objectives and successfully execute business strategies. Business risk can be heightened by changes in the structure of the mortgage finance industry, in the demand for mortgages, and in laws and regulations governing these markets. Business risk can also be affected by the design and implementation of the Enterprise's business strategies.

OFHEO conducted examinations of business risk at Fannie Mae and Freddie Mac. The examinations focused on the single-family business at each Enterprise. The examinations assessed the quality of each Enterprise's management of business risk. For the purpose of these examinations, the quality of business risk management at each Enterprise was assessed as *strong*, *adequate*, or *weak*, based on the ability of Enterprise management to identify, measure, control, and monitor business risk exposure. This assessment was made for the management of each source of business risk and for the overall management of business risk at each Enterprise.

- **Strong** risk management indicates that the quality of risk management substantially exceeds safety and soundness standards. Strong risk management is characterized by the implementation of a sound and comprehensive risk management framework for identifying, measuring, controlling, and monitoring all relevant sources of business risk, and by ongoing efforts to enhance and improve risk management practices to meet the evolving standards for best practices.
- **Adequate** risk management indicates the quality of risk management meets safety and soundness standards. Adequate risk management is characterized by the implementation of a risk management framework for identifying, measuring, controlling, and monitoring the significant sources of business risk. There

are no significant weaknesses in the risk management practices, but such practices can be enhanced and improved.

- **Weak** risk management indicates the quality of risk management fails to meet safety and soundness standards. Weak risk management is characterized by significant or pervasive weaknesses in the risk management framework for identifying, measuring, controlling, and monitoring the sources of business risk, or by the failure to address significant sources of business risk.

### Objectives

The objectives of each business risk examination were to:

- Identify the primary sources of business risk associated with the single-family business;
- Assess the development of the Enterprises' strategies to respond to these sources of business risk; and
- Evaluate the risk management processes and internal controls associated with implementation of the Enterprise's business strategies.

#### Primary Sources of Business Risk

##### Mortgage Finance Industry Structure

*Consolidation*  
*Competition*  
*Other Industry Changes*

##### New Product Development

*Product Engineering*  
*Enabling Technology*  
*Affordable Housing*  
*Post Implementation Review*

##### Home Mortgage Delivery System

*Automated Underwriting*  
*Mortgage Scoring*  
*Enabling Technology*  
*Risk-Based Pricing*

##### Compliance

*Compliance Process*  
*Fair Lending Efforts*

## Scope

The examination encompassed strategic business decisions and the implementation of those decisions for the single-family business. OFHEO identified the following four primary sources of business risk to the Enterprises:

**Mortgage Finance Industry Structure:** Business risk resulting from changes in the mortgage finance industry structure includes consolidation of seller/servicers, increased or new competition, and other structural changes, such as demographics, economic trends, or changes in laws and regulations that affect the Enterprises' businesses. The examinations reviewed each Enterprise's response to changes in the mortgage finance industry.

**New Product Development:** Business risk associated with new product development results from changes in the demand for certain mortgage products and services, and from the risk that new products and services will not be accepted by the market. To assess the potential business risk exposure from such business expansion initiatives, the examinations reviewed each Enterprise's new product development strategies and affordable housing initiatives. Each Enterprise's new product development strategies were identified and assessed by focusing on board of directors and management oversight of strategic initiatives and the Enterprise's product engineering process, including policies and procedures that ensure consistent application of the process. Enabling technology was reviewed to ensure effective support for the Enterprise's new product development plans. Risk management processes associated with implementation of each Enterprise's new product development strategies were assessed by focusing on product engineering, internal controls, and the post-implementation review process.

**Home Mortgage Delivery System:** A significant source of business risk arises from changes in the home mortgage delivery system that result from technological advances and implementation of automated underwriting. Techno-

logical changes in the delivery systems for home mortgages have dramatically altered how Fannie Mae and Freddie Mac conduct their businesses. As part of the review of business risk management, the examinations reviewed the potential business risk associated with development of automated underwriting. The examinations assessed business strategies relating to automated underwriting at each Enterprise, the incorporation of mortgage scoring into the single-family business, and the application of risk-based pricing by the Enterprises.

**Compliance:** Failure to comply with laws and regulations can expose the Enterprises to significant legal liability that could adversely affect their earnings and capital and damage their reputations. The compliance component of the examinations focused on each Enterprise's process for ensuring that it complies with applicable laws and regulations. The scope of the examinations did not include an evaluation as to whether the Enterprises were complying with specific laws and regulations. The examinations of Fannie Mae and Freddie Mac included an assessment of each Enterprise's effort to comply with the federal prohibitions against discrimination in the purchase of mortgages set forth in the Act, since these prohibitions expressly focus on the Enterprises. To assess these efforts, the examinations reviewed the management systems that identify, monitor, and control compliance with applicable laws and regulations at each Enterprise.

## **Results and Conclusions: Fannie Mae**

Overall, Fannie Mae's management of business risk, as it relates to the single-family business, is generally strong. Management has effectively identified the primary sources of business risk and measured the potential adverse impact of business risk in the single-family business. Fannie Mae consistently monitors and reports on specific strategies that have been developed to respond to sources of business risk. These strategies are consistent with corporate goals and objectives. Management has established a



system of internal controls to ensure the effective design and implementation of strategies to respond to the sources of business risk. Certain aspects of Fannie Mae's management of business risk, however, can be improved. Such enhancements to Fannie Mae's risk management can be made in the normal course of business.

Fannie Mae's management of business risk from changes in the mortgage finance industry structure is strong. Management has appropriately identified this as a primary source of business risk in the single-family business. Fannie Mae has responded to this source of business risk with specific strategies that are flexible and evolve as the market changes. Fannie Mae has appropriately implemented those strategies. Corporate goals are supported by specific strategies and tactics that include defined management responsibility and accountability. Performance is measured by specific metrics and monitored at the senior management and board level.

Fannie Mae's management of the business risk associated with the new product development process is adequate, but can be enhanced. The board of directors and management have appropriately identified business risk associated with new product development and developed new product development strategies that facilitate achievement of corporate objectives and assist the Enterprise in meeting industry, market, and customer needs. Risk management processes and internal controls associated with the design and implementation of new product development strategies are effective, but can be improved. Management has already begun to improve the new product development process by developing policies and procedures and improving financial reporting for product development. OFHEO also recommended that Fannie Mae establish additional performance measures that are consistent with Fannie Mae's internal performance indicators.

Fannie Mae's management of business risk from changes in its home mortgage delivery system is strong. Management effectively

identifies and measures potential business risk exposure associated with the use of its automated underwriting system. Fannie Mae has developed an effective strategy for the development and implementation of its automated underwriting system that is focused on improved credit risk measurement and cost savings objectives. Fannie Mae has improved its credit risk measurement capability by incorporating mortgage scores into its operations and its pricing. Effective internal control processes have been established to monitor and mitigate this source of business risk. Management reports all of the significant performance characteristics to the board of directors.

Fannie Mae's process for managing the business risk from failure to comply with laws and regulations is adequate. Fannie Mae's integrated approach to compliance ensures that business unit management and operating committees are kept informed of and are able to resolve compliance issues as they arise. Fannie Mae has designed its compliance efforts to address the federal prohibitions against discrimination in the purchase of mortgages. OFHEO recommended that Fannie Mae develop formal guidance that addresses the Enterprise's compliance with the prohibition against discrimination in any manner in the purchase of mortgages set forth in section 1325(1) of the Act.

### ***Results and Conclusions: Freddie Mac***

Overall, Freddie Mac's management of business risk, as it relates to the single-family business, is generally strong. Management has effectively identified the primary sources of business risk and measured the potential adverse impact of business risk in the single-family business. Management consistently monitors and reports to the board of directors on specific strategies that have been developed to respond to sources of business risk. Management has established a system of internal controls to ensure that the design and implementation of strategies are consistent with corporate goals and objectives. Certain aspects of Freddie Mac's management

of business risk, however, can be improved. Such enhancements to Freddie Mac's risk management can be made in the normal course of business.

Freddie Mac's management of business risk from changes in the mortgage finance industry structure is strong. Management has identified this as a primary source of business risk in the single-family business and has responded with specific strategies, including process improvement initiatives. Management has appropriately implemented those strategies. Corporate strategies are supported by specific operating objectives that include defined management responsibility and accountability. Management monitors and prepares regular and special reports for the board of directors on the market environment, industry trends, and customer satisfaction.

Freddie Mac's management of business risk associated with the new product development process is adequate. The board of directors and management have identified business risk associated with new products and services and developed formal processes, initiatives, and operating procedures that facilitate achievement of corporate strategies and assist the Enterprise in addressing industry, market, and customer needs. Risk management processes and internal controls associated with the design and implementation strategies for new products and services are generally effective, but can be improved. Management closely monitors and reports to the board of directors and senior management on the progress of all new product development initiatives. OFHEO recommended that Freddie Mac enhance the quality control processes for new products and services.

Freddie Mac's management of business risk from changes in its home mortgage delivery system is strong. Management effectively identifies and measures potential business risk exposure associated with the use of its automated underwriting system. Freddie Mac has developed an appropriate strategy for the development and implementation of automated underwriting that is focused on sound credit

risk management and process improvement. Internal control processes have also been appropriately established that mitigate this source of business risk. Management closely monitors and reports to the board of directors on the significant performance characteristics related to Freddie Mac's automated underwriting system.

Freddie Mac's process for managing the business risk from failure to comply with laws and regulations is adequate. Freddie Mac's integrated approach to compliance ensures that business unit management and operating committees are kept informed of and are able to resolve compliance issues as they arise. Freddie Mac has designed its compliance efforts to address the federal prohibitions against discrimination in the purchase of mortgages. OFHEO recommended that Freddie Mac augment its formal guidance by developing a policy that addresses the Enterprise's compliance with the prohibition against discrimination in any manner in the purchase of mortgages set forth in section 1325(1) of the Act. OFHEO also recommended that Freddie Mac complete the work already in progress to document internal policies and procedures related to management's self-assessment of risk in compliance-related areas.

## **Information Systems and Technology (IT) Risk Examination**

In the spring of 1997, OFHEO initiated examinations of each Enterprise to assess the quantity of risk exposure and the quality of risk management processes relating to information systems and technology (IT) risk. IT risk is the potential that an event or action will impair the Enterprise's ability to process operational and financial information in a timely and accurate manner.

The sources of IT risk include the degree of reliance on IT, the management and retention of IT skills and resources, the reliability or effectiveness of IT systems and services, the

dynamic nature of the IT environment, the degree of utilization of external IT resources, and the degree of integration of business and IT strategies.

The IT Risk Examination will evaluate the adequacy of the risk management framework for the information systems and technology environments. The examinations will focus on the effectiveness of management's processes to identify sources of risk, measure the level of risk exposure, implement risk controls, and monitor risk exposures.

### ***"Year 2000"***

The ability of computer systems and technology to recognize and to process accurately date sensitive information when the year changes to 2000 represents a critical component of information systems and technology risk. Computer systems and technology that fail to recognize and to process accurately dates in the next century ("Year 2000") could generate erroneous data or could fail to process business transactions. OFHEO has established a three-part approach to ensure that Fannie Mae and Freddie Mac are adequately addressing "Year 2000" issues.

First, OFHEO has forwarded to the Enterprises interagency standards for financial institutions to address the "Year 2000" issues. On May 27, 1997, OFHEO issued letters to each of the Enterprises transmitting the Federal Financial Institutions Examination Council's (FFIEC) recently-issued interagency statement entitled "Year 2000." This statement represents an interagency effort to make financial institutions aware of the potential problem and to outline examination procedures that will be utilized to evaluate the status of this potential problem.

Second, the Office of Examination and Oversight has commenced initial "Year 2000" examination procedures as a part of the Information Systems and Technology Risk Examinations. These procedures have included briefings from the Enterprises on plans and schedules for addressing "Year 2000" issues.

Third, OFHEO has established a process to routinely monitor and to assess the Enterprises' progress in implementing plans and in achieving objectives relating to "Year 2000" programs.

OFHEO also is actively participating in the FFIEC subcommittee on Information Systems Examination to remain fully informed on issues pertaining to "Year 2000" and on interagency examination procedures to ensure safe and sound information systems and technology.

## **Executive Compensation Authority**

OFHEO's enabling statute and the Enterprises' Charter Acts gives the Director of OFHEO oversight responsibility in the area of executive compensation. OFHEO's statute requires the Director to prohibit the Enterprises from providing excessive compensation to any executive officer. Specifically, the statute provides that compensation must be reasonable and comparable with compensation paid by other similar businesses to executives having similar duties and responsibilities. "Similar businesses" include publicly-held financial institutions or major financial services companies. Addition-

ally, the Enterprises' Charter Acts require the Enterprises to obtain prior approval of OFHEO's Director before entering into or changing termination agreements with their executive officers. The Charter Acts provide that the Director of OFHEO may not approve any such agreement unless the Director determines that the benefits provided under the agreement are comparable to benefits provided under such agreements for officers of other public and private entities involved in financial services and housing interests who have comparable duties and responsibilities.

## Activities

OFHEO has engaged in a number of activities to carry out the Director's executive compensation responsibilities in the past 12 months. On Sept. 26, 1996, OFHEO awarded a contract to an executive compensation consulting firm to assist the Office in developing further executive compensation expertise. The compensation consultant is helping OFHEO conduct a study comparing current components and levels of compensation of executive officers at the Enterprises with those of executive officers in other similar businesses involving similar duties and responsibilities. When the study is completed, the consultant will assist OFHEO in implementing an ongoing review of the Enterprises'

executive compensation. This includes a comprehensive review and evaluation of termination agreements and severance benefits.

Since the publication of OFHEO's 1996 Annual Report to Congress, the Director has approved the following agreements submitted by the Enterprises: one severance package for a departing executive officer and three termination agreements with executive officers who are current employees. One request for approval of a termination agreement for an executive officer, recently submitted by an Enterprise, is currently pending review by the Director. Until OFHEO completes its review of executive compensation issues, the approval of individual termination or severance packages does not set precedent on any particular issue.

## OFHEO Finance and Administration

OFHEO is funded in much the same way as the other federal financial regulators. That is, the regulatees themselves, rather than the taxpayer, underwrite the costs associated with their own regulation. In OFHEO's case, operations are funded by semiannual assessments of Fannie Mae and Freddie Mac. These assessments are prorated in proportion to each Enterprise's combined assets and mortgage-backed securities. Though not funded by the taxpayer, OFHEO's budget is, nonetheless, subject to review and approval of the congressional appropriations process.

OFHEO'S budget for FY 1997 (the fiscal year beginning Oct. 1, 1996) is \$15.5 million. Activi-

ties covered by this budget include continued development of the stress test, including a working version of the financial simulation model; ongoing examinations of Fannie Mae and Freddie Mac; rulemaking activities; and strengthening of OFHEO's infrastructure. The FY 1997 budget supports a staff of 72 full-time permanent employees.

OFHEO's recruiting and hiring policy continues to reflect a commitment to professional excellence, integrity and diversity. At the start of FY 1997, 57 percent of OFHEO's permanent staff were women or minorities. Among senior staff, 56 percent were women or minorities.

# Historical Data Tables

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**Fannie Mae Financial Data  
Table 1**

<i>(\$ in millions)</i>					
<b>Balance Sheet / MBS</b>					
	<b>Total Assets</b>	<b>Retained Mortgage Portfolio Outstanding 1/</b>	<b>Debt Outstanding</b>	<b>Total MBS Outstanding 2/</b>	<b>Multiclass MBS Outstanding 3/</b>
<b>1Q97</b>	357,010	291,713	336,174	554,109	351,791
<b>4Q96</b>	351,041	286,527	331,270	548,173	339,798
<b>3Q96</b>	338,534	277,269	319,153	543,580	331,368
<b>2Q96</b>	326,910	269,429	308,352	537,284	336,584
<b>1Q96</b>	325,139	261,492	306,815	521,063	344,725
<b>Annual Data</b>					
<b>1996</b>	351,041	286,527	331,270	548,173	339,798
<b>1995</b>	316,550	252,868	299,174	513,230	353,528
<b>1994</b>	272,508	220,815	257,230	486,345	378,733
<b>1993</b>	216,979	190,169	201,112	471,306	381,865
<b>1992</b>	180,978	156,260	166,300	424,444	312,369
<b>1991</b>	147,072	126,679	133,937	355,284	224,806
<b>1990</b>	133,113	114,066	123,403	288,075	127,278
<b>1989</b>	124,315	107,981	116,064	216,512	64,826
<b>1988</b>	112,258	100,099	105,459	170,097	26,660
<b>1987</b>	103,459	93,665	97,057	135,734	11,359
<b>1986</b>	99,621	94,123	93,563	95,568	
<b>1985</b>	99,076	94,609	93,985	54,552	
<b>1984</b>	87,798	84,135	83,719	35,738	
<b>1983</b>	78,383	75,247	74,594	25,121	
<b>1982</b>	72,981	69,356	69,614	14,450	
<b>1981</b>	61,578	59,629	58,551	717	
<b>1980</b>	57,879	55,589	54,880		
<b>1979*</b>	51,300	49,777	48,424		
<b>1978*</b>	43,506	42,103	40,985		
<b>1977*</b>	33,980	33,252	31,890		
<b>1976*</b>	32,393	31,775	30,565		
<b>1975*</b>	31,596	30,820	29,963		
<b>1974*</b>	29,671	28,666	28,168		
<b>1973*</b>	24,318	23,589	23,003		
<b>1972*</b>	20,346	19,652	19,239		
<b>1971*</b>	18,591	17,886	17,672		

Source: Fannie Mae

\*Note: Figures are not restated for 12/87 FAS 91 change.

1/ Gross Retained Portfolio net of unamortized purchase premiums, discounts, and fees.

2/ Excludes MBS held in portfolio.

3/ Includes Multiclass MBS held in portfolio.

**Fannie Mae Financial Data  
Table 2**

<i>(\$ in millions)</i>							
<b>Capital</b>				<b>Earnings</b>			
	<b>Stockholders' Equity</b>	<b>Equity / (Assets + MBS) (%)</b>	<b>(Equity + Loss Reserves) / (Assets + MBS) (%) 1/</b>	<b>Net Income</b>	<b>Net Interest Margin (%) 2/</b>	<b>Average Guarantee Fee Rate (%)</b>	<b>Return on Average Common Equity (%)</b>
<b>1Q97</b>	13,178	1.45	1.53	734	1.17	0.227	24.0
<b>4Q96</b>	12,773	1.42	1.50	712	1.17	0.226	24.2
<b>3Q96</b>	12,267	1.39	1.48	691	1.17	0.225	24.5
<b>2Q96</b>	11,751	1.36	1.45	668	1.18	0.223	24.0
<b>1Q96</b>	11,379	1.34	1.44	654	1.20	0.223	23.8
<b>Annual Data</b>							
<b>1996</b>	12,773	1.42	1.50	2,725	1.18	0.224	24.1
<b>1995</b>	10,959	1.32	1.41	2,144	1.16	0.220	20.9
<b>1994</b>	9,541	1.26	1.37	2,132	1.24	0.225	24.3
<b>1993</b>	8,052	1.17	1.29	1,873	1.38	0.213	25.3
<b>1992</b>	6,774	1.12	1.25	1,623	1.37	0.212	26.5
<b>1991</b>	5,547	1.10	1.24	1,363	1.42	0.210	27.7
<b>1990</b>	3,941	0.94	1.06	1,173	1.39	0.211	33.7
<b>1989</b>	2,991	0.88	1.01	807	1.16	0.213	31.1
<b>1988</b>	2,260	0.80	0.94	507	0.89	0.216	25.2
<b>1987</b>	1,811	0.76	0.90	376	1.00	0.224	23.5
<b>1986</b>	1,182	0.61	0.74	105	0.40	0.238	9.5
<b>1985</b>	1,009	0.66	0.76	(7)	0.15	0.256	(0.7)
<b>1984</b>	918	0.74	0.85	(71)	(0.11)	0.262	(7.4)
<b>1983</b>	1,000	0.97	1.10	49	(0.01)	0.263	5.1
<b>1982</b>	953	1.09	1.25	(192)	(0.72)	0.272	(18.9)
<b>1981</b>	1,080	1.73	1.90	(206)	(0.74)	0.250	(17.2)
<b>1980*</b>	1,457	2.49	2.73	14	0.04	Not Applicable Before 1981	0.9
<b>1979*</b>	1,501	2.93	3.17	162	0.70		11.3
<b>1978*</b>	1,362	3.13	3.36	209	0.98		16.5
<b>1977*</b>	1,173	3.45	3.66	165	0.95		15.3
<b>1976*</b>	983	3.03	3.19	127	0.82		13.8
<b>1975*</b>	861	2.73	2.84	115	0.73		14.1
<b>1974*</b>	772	2.60	2.69	107	0.70		14.7
<b>1973*</b>	680	2.80	2.87	126	0.98	20.3	
<b>1972*</b>	559	2.75	2.78	96	0.84	18.8	
<b>1971*</b>	460	2.47	2.49	61	0.40	14.4	

\*Note: Figures are not restated for 12/87 FAS 91 change.

1/ Effective 1/1/95 reserves exclude valuation allowance related to impaired loans pursuant to SFAS 114.

2/ Taxable equivalent net interest income divided by average earning assets.

**Fannie Mae Financial Data  
Table 3**

<i>(\$ in millions)</i> <b>Mortgage Asset Quality</b>					<b>Business Activity: Purchases</b>			
	<b>Single-Family Delinquency Rate (%) 1/</b>	<b>Multi-family Delinquency Rate (%)</b>	<b>Charge-Offs/ (Portfolio + MBS) (%)</b>	<b>REO/ (Portfolio +MBS) (%)</b>	<b>Single-Family Mortgage Purchases</b>	<b>Multi-family Mortgage Purchases</b>	<b>Total Mortgage Purchases</b>	<b>Mortgage Securities Purchased 2/</b>
<b>1Q97</b>	0.59	0.58	0.05	0.11	34,149	1,367	35,516	8,361
<b>4Q96</b>	0.58	0.68	0.05	0.11	34,818	1,876	36,694	12,198
<b>3Q96</b>	0.56	0.91	0.05	0.11	36,987	2,013	39,000	10,902
<b>2Q96</b>	0.56	1.00	0.06	0.10	51,458	1,574	53,032	10,429
<b>1Q96</b>	0.58	0.95	0.06	0.10	43,266	1,479	44,745	11,487
<b>Annual Data</b>								
<b>1996</b>	0.58	0.68	0.05	0.11	166,529	6,942	173,471	45,016
<b>1995</b>	0.56	0.81	0.05	0.08	127,824	5,194	133,018	34,036
<b>1994</b>	0.47	1.21	0.06	0.10	164,619	3,840	168,459	24,552
<b>1993</b>	0.48	2.34	0.04	0.10	303,071	4,135	307,206	6,275
<b>1992</b>	0.53	2.65	0.04	0.09	262,056	2,956	265,012	4,930
<b>1991</b>	0.64	3.62	0.04	0.07	144,517	3,204	147,721	2,384
<b>1990</b>	0.58	1.70	0.06	0.09	116,496	3,181	119,677	977
<b>1989</b>	0.69	3.20	0.07	0.14	87,446	4,836	92,282	
<b>1988</b>	0.88	6.60	0.11	0.15	73,808	4,180	77,988	
<b>1987</b>	1.12	Not Available Before 1988	0.11	0.18	82,277	1,483	83,760	
<b>1986#</b>	1.38		0.12	0.22	89,515	1,877	91,392	
<b>1985#</b>	1.48		0.13	0.32	43,959	1,200	45,159	
<b>1984#</b>	1.65		0.09	0.33	29,161	1,106	30,267	
<b>1983#</b>	1.49		0.05	0.35	30,757	140	30,897	
<b>1982#</b>	1.41		0.01	0.20	29,077	9	29,086	
<b>1981#</b>	0.96		0.01	0.13	6,828	2	6,830	
<b>1980#</b>	0.90		0.01	0.09	8,074	27	8,101	
<b>1979*</b>	0.56		0.02	0.11	10,798	9	10,807	
<b>1978*</b>	0.55		0.02	0.18	12,302	3	12,305	
<b>1977*</b>	0.46		0.02	0.26	4,650	134	4,784	
<b>1976*</b>	1.58		0.03	0.27	3,337	295	3,632	
<b>1975*</b>	0.56		0.03	0.51	3,646	674	4,320	
<b>1974*</b>	0.51		0.02	0.52	4,746	2,273	7,019	
<b>1973*</b>	Not Available Before 1974		0.00	0.61	4,170	2,082	6,252	
<b>1972*</b>			0.02	0.98	2,596	1,268	3,864	
<b>1971*</b>			0.01	0.59	2,742	1,298	4,040	

\*Note: Asset Quality figures are not restated for 12/87 FAS 91 change.

#Note: Charge-off ratio has not been restated for change in Loss Accounting methodology.

1/ Single-family delinquency rate has been restated for periods prior to December 31, 1995, to include loans three or more months delinquent or in foreclosure.

2/ Not included in mortgage purchases.



**Fannie Mae Financial Data  
Table 4**

<i>(\$ in millions)</i>				
<b>Business Activity: MBS</b>				
	<b>Single-Family MBS Issued</b>	<b>Multifamily MBS Issued</b>	<b>Total MBS Issued</b>	<b>Multiclass MBS Issued</b>
<b>1Q97</b>	29,754	1,127	30,881	19,559
<b>4Q96</b>	30,145	1,529	31,674	16,884
<b>3Q96</b>	32,069	1,775	33,844	5,589
<b>2Q96</b>	44,674	1,307	45,981	5,546
<b>1Q96</b>	37,313	1,057	38,370	2,760
<b>Annual Data</b>				
<b>1996</b>	144,201	5,668	149,869	30,779
<b>1995</b>	106,269	4,187	110,456	9,681
<b>1994</b>	128,385	2,237	130,622	73,365
<b>1993</b>	220,485	959	221,444	210,630
<b>1992</b>	193,187	850	194,037	170,205
<b>1991</b>	111,488	1,415	112,903	112,808
<b>1990</b>	96,006	689	96,695	68,291
<b>1989</b>	66,489	3,275	69,764	41,715
<b>1988</b>	51,120	3,758	54,878	17,005
<b>1987</b>	62,067	1,162	63,229	9,917
<b>1986</b>	60,017	549	60,566	2,400
<b>1985</b>	23,142	507	23,649	
<b>1984</b>	13,087	459	13,546	
<b>1983</b>	13,214	126	13,340	
<b>1982</b>	13,970		13,970	
<b>1981</b>	717		717	
<b>1980</b>				
<b>1979</b>				
<b>1978</b>				
<b>1977</b>				
<b>1976</b>				
<b>1975</b>				
<b>1974</b>				
<b>1973</b>				
<b>1972</b>				
<b>1971</b>				

**Freddie Mac Financial Data  
Table 5**

<i>(S in millions)</i>					
<b>Balance Sheet/ MBS</b>					
	<b>Total Assets</b>	<b>Retained Mortgage Portfolio Outstanding 1/</b>	<b>Debt Outstanding 2/</b>	<b>Total MBS Outstanding 3/</b>	<b>Multiclass MBS Outstanding</b>
<b>1Q97</b>	174,442	144,672	153,124	473,405	253,191
<b>4Q96</b>	173,866	137,826	156,491	473,065	237,630
<b>3Q96</b>	162,984	129,518	146,472	471,310	235,432
<b>2Q96</b>	160,750	123,929	142,739	467,533	238,123
<b>1Q96</b>	143,792	117,644	123,637	461,189	247,013
<b>Annual Data</b>					
<b>1996</b>	173,866	137,826	156,491	473,065	237,630
<b>1995</b>	137,181	107,706	119,328	459,045	246,969
<b>1994</b>	106,199	73,171	92,053	460,656	263,662
<b>1993</b>	83,880	55,938	48,510	439,029	264,122
<b>1992</b>	59,502	33,629	28,173	407,514	217,030
<b>1991</b>	46,860	26,667	28,300	359,163	142,960
<b>1990</b>	40,579	21,520	28,375	316,359	83,437
<b>1989</b>	35,462	21,448	24,102	272,870	47,573
<b>1988</b>	34,352	16,918	24,846	226,406	10,877
<b>1987</b>	25,674	12,354	17,461	212,635	
<b>1986</b>	23,229	13,093	13,378	169,186	
<b>1985</b>	16,299	13,547	11,754	99,908	
<b>1984</b>	13,175	10,018	10,186	70,025	
<b>1983</b>	8,954	7,485	6,782	57,720	
<b>1982</b>	6,029	4,679	4,521	42,952	
<b>1981</b>	6,326	5,178	5,480	19,897	
<b>1980</b>	5,478	5,006	4,686	16,962	
<b>1979</b>	4,648	4,003	3,981	15,316	
<b>1978</b>	3,697	3,038	3,066	12,017	
<b>1977</b>	3,501	3,204	3,110	6,765	
<b>1976</b>	4,832	4,175	3,351	2,765	
<b>1975</b>	5,899	4,878	4,050	1,643	
<b>1974</b>	4,901	4,469	3,989	780	
<b>1973</b>	2,873	2,521	2,696	791	
<b>1972</b>	1,778	1,726	1,639	444	
<b>1971</b>	1,038	935	915	64	

Source: Freddie Mac

1/ Gross Retained Portfolio net of unamortized purchase premiums, discounts, and fees. Beginning 1/1/95, the data reflects adoption of SFAS 114. Data for prior periods have not been restated.

2/ Does not include subordinated borrowings.

3/ Excludes MBS held in portfolio.

**Freddie Mac Financial Data  
Table 6**

<i>(\$ in millions)</i>							
<b>Capital</b>				<b>Earnings</b>			
	<b>Stockholders' Equity</b>	<b>Equity / (Assets + MBS) (%)</b>	<b>(Equity + Loss Reserves) / (Assets + MBS) (%) 1/</b>	<b>Net Income 2/</b>	<b>Net Interest Margin (%) 2/ 3/ 4/ 5/</b>	<b>Average Guarantee Fee Rate (%) 3/</b>	<b>Return on Average Common Equity (%)</b>
<b>1Q97</b>	6,811	1.05	1.16	329	1.15	0.230	22.6
<b>4Q96</b>	6,731	1.04	1.13	321	1.10	0.232	22.2
<b>3Q96</b>	6,500	1.02	1.13	312	1.09	0.233	21.8
<b>2Q96</b>	6,407	1.02	1.13	309	1.16	0.234	22.4
<b>1Q96</b>	6,012	0.99	1.11	301	1.25	0.235	22.4
<b>Annual Data</b>							
<b>1996</b>	6,731	1.04	1.13	1,243	1.15	0.234	22.1
<b>1995</b>	5,863	0.98	1.09	1,091	1.23	0.238	21.9
<b>1994</b>	5,162	0.91	1.04	983	1.25	0.241	23.2
<b>1993</b>	4,437	0.85	0.99	786	1.02	0.238	22.2
<b>1992</b>	3,570	0.76	0.93	622	1.17	0.241	21.2
<b>1991</b>	2,566	0.63	0.81	555	1.66	0.237	23.6
<b>1990</b>	2,136	0.60	0.77	414	1.76	0.224	20.5
<b>1989</b>	1,916	0.62	0.77	437	1.62	0.234	25.0
<b>1988</b>	1,584	0.61	0.76	381	1.95	0.215	27.6
<b>1987</b>	1,182	0.50	0.64	301	1.50	0.242	28.2
<b>1986</b>	953	0.50	0.64	247	1.66	0.224	28.5
<b>1985</b>	779	0.67	0.86	208	2.31	0.221	30.0
<b>1984</b>	606	0.73	0.95	144	2.08	0.247	52.0
<b>1983</b>	421	0.63	0.85	160	1.83	0.262	44.5
<b>1982</b>	296	0.60	0.84	60	0.53	0.245	21.9
<b>1981</b>	250	0.95	1.30	31	0.63	0.195	13.1
<b>1980</b>	221	0.98	1.31	34	1.17	0.143	14.7
<b>1979</b>	238	1.19	1.49	36	1.45	0.132	16.2
<b>1978</b>	202	1.29	1.56	25	1.11	0.149	13.4
<b>1977</b>	177	1.72	2.02	21	0.77	0.189	12.4
<b>1976</b>	156	2.05	2.34	14	0.34	0.136	9.5
<b>1975</b>	142	1.88	2.24	16	0.58	0.248	11.6
<b>1974</b>	126	2.22	2.52	5	1.09	0.255	4.0
<b>1973</b>	121	3.30	3.71	12	1.35	0.324	9.9
<b>1972</b>	110	4.95	5.18	4	Not Available Before 1973	0.394	3.5
<b>1971</b>	107	9.71	Not Available	6		Not Available	5.5

1/ Effective 1/1/95 reserves exclude valuation allowance related to impaired loans pursuant to SFAS 114. Valuation allowance estimated for 1Q97.

2/ Effective January 1, 1996, Freddie Mac reports guarantee fees on retained MBS as guarantee fee income. Previously these fees were included in net interest income. However, for comparability with Fannie Mae, guarantee fee income on retained MBS for the first quarter have been estimated and included in the net interest income.

3/ 1993 and 1992 are pro forma, to reflect the change in the reporting of uncollectible interest on single-family mortgages implemented in 1994.

4/ Average balances used in pre-1987 calculations are based on the simple average of the year-end balance of the reported period and the prior year-end balance. Subsequent calculations use daily average balances.

5/ Beginning with 1993 data, net interest margin is calculated on a taxable equivalent basis.

**Freddie Mac Financial Data  
Table 7**

<i>(\$ in millions)</i> <b>Mortgage Asset Quality</b>					<b>Business Activity: Purchases</b>			
	<b>Single-Family Delinquency Rate (%) 1/</b>	<b>Multi-family Delinquency Rate (%) 2/</b>	<b>Charge-Offs/ (Portfolio + MBS) (%)</b>	<b>REO/ (Portfolio + MBS) (%) 3/</b>	<b>Single-Family Mortgage Purchases</b>	<b>Multi-family Mortgage Purchases</b>	<b>Total Mortgage Purchases</b>	<b>Mortgage Securities Purchased 4/</b>
<b>1Q97</b>	0.60	1.88	0.09	0.12	24,124	373	24,497	7,617
<b>4Q96</b>	0.58	1.96	0.10	0.13	26,784	1,232	28,016	8,663
<b>3Q96</b>	0.57	2.89	0.10	0.13	27,431	367	27,798	6,466
<b>2Q96</b>	0.58	3.14	0.11	0.13	34,456	284	34,740	9,378
<b>1Q96</b>	0.60	2.75	0.10	0.14	34,179	346	34,525	11,706
<b>Annual Data</b>								
<b>1996</b>	0.58	1.96	0.10	0.13	122,850	2,229	125,079	36,213
<b>1995</b>	0.60	2.88	0.10	0.14	89,971	1,565	91,536	39,850
<b>1994</b>	0.55	3.79	0.08	0.18	122,563	847	123,410	19,836
<b>1993</b>	0.61	3.45	0.05	0.20	229,051	191	229,242	9,947*
<b>1992</b>	0.64	4.45	0.06	0.17	191,099	27	191,126	6,394*
<b>1991</b>	0.61	3.40	0.08	0.14	99,729	236	99,965	
<b>1990</b>	0.45	2.63	0.08	0.12	74,180	1,338	75,518	
<b>1989</b>	0.38	2.53	0.06	0.09	76,765	1,824	78,589	
<b>1988</b>	0.36	2.24	0.06	0.09	42,884	1,191	44,075	
<b>1987</b>	0.36	1.49	0.06	0.08	74,824	2,016	76,840	
<b>1986</b>	0.42	1.07	0.04	0.07	99,936	3,538	103,474	
<b>1985</b>	0.42	0.63	0.04	0.10	42,110	1,902	44,012	
<b>1984</b>	0.46	0.42	0.02	0.15	Not Available Before 1985	Not Available Before 1985	21,885	
<b>1983</b>	0.47	0.58	0.02	0.13			22,952	
<b>1982</b>	0.54	1.04	0.01	0.12			23,671	
<b>1981</b>	0.61	Not Applicable Before 1982	0.00	0.07			3,744	
<b>1980</b>	0.44		0.04	0.04			3,690	
<b>1979</b>	0.31		0.02	0.02			5,716	
<b>1978</b>	0.21		0.00	0.02			6,524	
<b>1977</b>	Not Available Before 1978		0.00	0.03			4,124	
<b>1976</b>			0.03	0.04			1,129	
<b>1975</b>			0.05	0.03			1,716	
<b>1974</b>			0.70	0.02			2,185	
<b>1973</b>			0.36	0.00			1,334	
<b>1972</b>			Not Available Before 1973	Not Available Before 1973			1,265	
<b>1971</b>							778	

1/ Pre-1982 delinquencies apply to the retained and sold mortgage portfolios.

2/ 1988-1994 MF delinquencies based on unpaid principal balance. 1982-1987 MF delinquencies based on the number of loans delinquent 60 days or more.

3/ Beginning with 1Q95, data includes adoption of SFAS 114. Prior periods not restated.

4/ Not Included in mortgage purchases.

\* Estimated

**Freddie Mac Financial Data  
Table 8**

<i>(\$ in millions)</i>				
<b>Business Activity: MBS</b>				
	<b>Single-Family MBS Issued</b>	<b>Multifamily MBS Issued</b>	<b>Total MBS Issued</b>	<b>Multiclass MBS Issued</b>
<b>1Q97</b>	26,271	0	26,271	22,181
<b>4Q96</b>	25,716	757	26,473	8,335
<b>3Q96</b>	26,644	13	26,657	15,247
<b>2Q96</b>	33,831	0	33,831	5,410
<b>1Q96</b>	32,741	0	32,741	5,153
<b>Annual Data</b>				
<b>1996</b>	118,932	770	119,702	34,145
<b>1995</b>	85,522	355	85,877	15,372
<b>1994</b>	116,901	209	117,110	73,131
<b>1993</b>	208,724	0	208,724	143,336
<b>1992</b>	179,202	5	179,207	131,284
<b>1991</b>	92,479	0	92,479	72,032
<b>1990</b>	71,998	1,817	73,815	40,479
<b>1989</b>	72,931	587	73,518	39,754
<b>1988</b>	39,490	287	39,777	12,985
<b>1987</b>	72,866	2,152	75,018	
<b>1986</b>	96,798	3,400	100,198	
<b>1985</b>	37,583	1,245	38,828	
<b>1984</b>	Not Available	Not Available	18,684	
<b>1983</b>	Before 1985	Before 1985	19,691	
<b>1982</b>			24,169	
<b>1981</b>			3,529	
<b>1980</b>			2,526	
<b>1979</b>			4,546	
<b>1978</b>			6,412	
<b>1977</b>			4,657	
<b>1976</b>			1,360	
<b>1975</b>			950	
<b>1974</b>			46	
<b>1973</b>			323	
<b>1972</b>			494	
<b>1971</b>			65	

**Aggregate Financial Data**  
**Table 9**

<i>(\$ in millions)</i>					
<b>Balance Sheet/ MBS</b>					
	<b>Total Assets</b>	<b>Retained Mortgage Portfolio Outstanding</b>	<b>Debt Outstanding</b>	<b>Total MBS Outstanding</b>	<b>Multiclass MBS Outstanding</b>
<b>1Q97</b>	531,452	436,385	489,298	1,027,514	604,982
<b>4Q96</b>	524,907	424,353	487,761	1,021,238	577,428
<b>3Q96</b>	501,518	406,787	465,625	1,014,890	566,800
<b>2Q96</b>	487,660	393,358	451,091	1,004,817	574,707
<b>1Q96</b>	468,931	379,136	430,452	982,252	591,738
<b>Annual Data</b>					
<b>1996</b>	524,907	424,353	487,761	1,021,238	577,428
<b>1995</b>	453,731	360,574	418,502	972,275	600,000
<b>1994</b>	378,707	293,986	349,283	947,001	642,395
<b>1993</b>	300,859	246,107	249,622	910,335	645,987
<b>1992</b>	240,480	189,889	194,473	831,958	529,399
<b>1991</b>	193,932	153,346	162,237	714,447	367,766
<b>1990</b>	173,692	135,586	151,778	604,434	210,715
<b>1989</b>	159,777	129,429	140,166	489,382	112,399
<b>1988</b>	146,610	117,017	130,305	396,503	37,537
<b>1987</b>	129,133	106,019	114,518	348,369	11,359
<b>1986</b>	122,850	107,216	106,941	264,754	
<b>1985</b>	115,375	108,156	105,739	154,490	
<b>1984</b>	100,973	94,153	93,905	105,763	
<b>1983</b>	87,337	82,732	81,376	82,841	
<b>1982</b>	79,010	74,035	74,135	57,402	
<b>1981</b>	67,904	64,807	64,031	20,614	
<b>1980</b>	63,357	60,595	59,566	16,962	
<b>1979</b>	55,948	53,780	52,405	15,316	
<b>1978</b>	47,203	45,141	44,051	12,017	
<b>1977</b>	37,481	36,456	35,000	6,765	
<b>1976</b>	37,225	35,950	33,916	2,765	
<b>1975</b>	37,495	35,698	34,013	1,643	
<b>1974</b>	34,572	33,135	32,157	780	
<b>1973</b>	27,191	26,110	25,699	791	
<b>1972</b>	22,124	21,378	20,878	444	
<b>1971</b>	19,629	18,821	18,587	64	

**Aggregate Financial Data  
Table 10**

<i>(\$ in millions)</i>				<b>Capital</b>	<b>Earnings</b>
	<b>Stockholders' Equity</b>	<b>Equity/ (Assets + MBS) (%)</b>	<b>(Equity + Loss Reserves) / (Assets + MBS) (%)</b>	<b>Net Income</b>	
<b>1Q97</b>	19,989	1.28	1.37	1,603	
<b>4Q96</b>	19,504	1.26	1.36	1,033	
<b>3Q96</b>	18,767	1.24	1.33	1,003	
<b>2Q96</b>	18,158	1.22	1.32	977	
<b>1Q96</b>	17,391	1.20	1.30	955	
<b>Annual Data</b>					
<b>1996</b>	19,504	1.26	1.36	3,968	
<b>1995</b>	16,822	1.18	1.28	3,235	
<b>1994</b>	14,703	1.11	1.23	3,115	
<b>1993</b>	12,489	1.03	1.16	2,659	
<b>1992</b>	10,344	0.96	1.11	2,245	
<b>1991</b>	8,113	0.89	1.05	1,918	
<b>1990</b>	6,077	0.78	0.93	1,587	
<b>1989</b>	4,907	0.76	0.90	1,244	
<b>1988</b>	3,844	0.71	0.85	888	
<b>1987</b>	2,993	0.63	0.77	677	
<b>1986</b>	2,135	0.55	0.69	352	
<b>1985</b>	1,788	0.66	0.80	201	
<b>1984</b>	1,524	0.74	0.89	73	
<b>1983</b>	1,421	0.84	1.00	209	
<b>1982</b>	1,249	0.92	1.10	(132)	
<b>1981</b>	1,330	1.50	1.72	(175)	
<b>1980</b>	1,678	2.09	2.33	48	
<b>1979</b>	1,739	2.44	2.70	198	
<b>1978</b>	1,564	2.64	2.88	234	
<b>1977</b>	1,350	3.05	3.28	186	
<b>1976</b>	1,139	2.85	3.03	141	
<b>1975</b>	1,003	2.56	2.72	131	
<b>1974</b>	898	2.54	2.66	112	
<b>1973</b>	801	2.86	2.98	138	
<b>1972</b>	669	2.96	3.02	100	
<b>1971</b>	567	2.88	Not Available	67	

**Aggregate Financial Data  
Table 11**

<i>(\$ in millions)</i> Business Activity: Purchases					Business Activity: MBS			
	Single-Family Mortgage Purchases	Multifamily Mortgage Purchases	Total Mortgage Purchases	Mortgage Securities Purchased	Single-Family MBS Issued	Multi-family MBS Issued	Total MBS Issued	Multiclass MBS Issued
<b>1Q97</b>	58,273	1,740	60,013	15,978	56,025	1,127	57,152	41,740
<b>4Q96</b>	61,602	3,108	64,710	20,861	55,861	2,286	58,147	25,219
<b>3Q96</b>	64,418	2,380	66,798	17,368	58,713	1,788	60,501	20,836
<b>2Q96</b>	85,914	1,858	87,772	19,807	78,505	1,307	79,812	10,956
<b>1Q96</b>	77,445	1,825	79,270	23,193	70,054	1,057	71,111	7,913
<b>Annual Data</b>								
<b>1996</b>	289,379	9,171	298,550	81,229	263,133	6,438	269,571	64,924
<b>1995</b>	217,795	6,759	224,554	73,886	191,791	4,542	196,333	25,053
<b>1994</b>	287,182	4,687	291,869	44,388	245,286	2,446	247,732	146,496
<b>1993</b>	532,122	4,326	536,448	16,222	429,209	959	430,168	353,966
<b>1992</b>	453,155	2,983	456,138	11,324	372,389	855	373,244	301,489
<b>1991</b>	244,246	3,440	247,686	8,778	203,967	1,415	205,382	184,840
<b>1990</b>	190,676	4,519	195,195	977	168,004	2,506	170,510	108,770
<b>1989</b>	164,211	6,660	170,871		139,420	3,862	143,282	81,469
<b>1988</b>	116,692	5,371	122,063		90,610	4,045	94,655	29,740
<b>1987</b>	157,101	3,499	160,600		134,933	3,314	138,247	9,917
<b>1986</b>	189,451	5,415	194,866		156,815	3,949	160,764	2,400
<b>1985</b>	86,069	3,102	89,171		60,725	1,752	62,477	
<b>1984</b>	Freddie Mac Not Available Before 1985	Freddie Mac Not Available Before 1985	52,152		Freddie Mac Not Available Before 1985	Freddie Mac Not Available Before 1985	32,230	
<b>1983</b>			53,849				33,031	
<b>1982</b>			52,757				38,139	
<b>1981</b>			10,574				4,246	
<b>1980</b>			11,791				2,526	
<b>1979</b>			16,523				4,546	
<b>1978</b>			18,829				6,412	
<b>1977</b>			8,908				4,657	
<b>1976</b>			4,761				1,360	
<b>1975</b>			6,036				950	
<b>1974</b>			9,204				46	
<b>1973</b>			7,586				323	
<b>1972</b>			5,129				494	
<b>1971</b>							65	

1/ Pre-1982 delinquencies apply to the retained and sold mortgage portfolios.

2/ 1988-1994 MF delinquencies based on unpaid principal balance. 1982-1987 MF delinquencies based on the number of loans delinquent 60 days or more.

3/ Beginning with 1Q95, data includes adoption of SFAS 114. Prior periods not restated.

4/ Included in mortgage purchases.



**Mortgage Interest Rates  
Table 12**

	<b>Average Commitment Rates on Loans</b>		<b>Effective Rates on Closed Loans</b>	
	<i>Conventional</i>		<i>Conventional</i>	
	<b>30 Year Fixed Rate</b>	<b>One Year ARMs(%)</b>	<b>Fixed Rate (%)</b>	<b>Adjustable Rate (%)</b>
<b>1Q97</b>	(%) 7.8	5.6	8.0	7.0
<b>4Q96</b>	7.7	5.6	8.1	6.9
<b>3Q96</b>	8.2	5.9	8.4	7.2
<b>2Q96</b>	8.1	5.8	8.1	7.1
<b>1Q96</b>	7.2	5.4	7.4	6.9
<b>Annual Data</b>				
<b>1996</b>	7.8	5.7	8.0	7.0
<b>1995</b>	7.9	6.1	8.3	7.1
<b>1994</b>	8.4	5.4	8.2	6.4
<b>1993</b>	7.3	4.6	7.5	5.7
<b>1992</b>	8.4	5.6	8.5	6.6
<b>1991</b>	9.2	7.1	9.7	8.3
<b>1990</b>	10.1	8.4	10.4	9.2
<b>1989</b>	10.3	8.8	10.5	9.4
<b>1988</b>	10.3	7.9	10.4	8.5
<b>1987</b>	10.2	7.8	9.9	8.5
<b>1986</b>	10.2	8.4	10.5	9.4
<b>1985</b>	12.4	10.0	12.4	10.9
<b>1984</b>	13.9	11.5	13.2	12.1
<b>1983</b>	13.2	Not Applicable Before 1984	13.0	12.3
<b>1982</b>	16.0		15.2	15.4
<b>1981</b>	16.6	Not Available Before 1982	Not Available Before 1982	Not Applicable Before 1982
<b>1980</b>	13.7			
<b>1979</b>	11.2			
<b>1978</b>	9.6			
<b>1977</b>	8.8			
<b>1976</b>	8.9			
<b>1975</b>	9.0			
<b>1974</b>	9.2			
<b>1973</b>	8.0			
<b>1972</b>	7.4			

Average Commitment Rate Source: Freddie Mac  
Effective Rates Source: Federal Housing Finance Board

**Housing Market Activity**  
**Table 13**

	<b>Housing Starts</b> <i>Units in Thousands</i>			<b>Home Sales</b> <i>Units in Thousands</i>	
	<b>Single-Family Housing Starts</b>	<b>Multifamily Housing Starts</b>	<b>Total Housing Starts</b>	<b>New Single-Family Home Sales</b>	<b>Existing Single-Family Home Sales</b>
<b>1Q97</b>	1,193	248	1,441	824	4,083
<b>4Q96</b>	1,142	273	1,415	763	4,003
<b>3Q96</b>	1,220	272	1,492	788	4,090
<b>2Q96</b>	1,240	255	1,495	735	4,223
<b>1Q96</b>	1,187	278	1,465	739	3,970
<b>Annual Data</b>					
<b>1996</b>	1,206	271	1,477	757	4,087
<b>1995</b>	1,110	244	1,354	667	3,802
<b>1994</b>	1,234	224	1,457	670	3,946
<b>1993</b>	1,155	133	1,288	666	3,802
<b>1992</b>	1,061	139	1,200	610	3,520
<b>1991</b>	876	138	1,014	509	3,220
<b>1990</b>	932	260	1,193	534	3,211
<b>1989</b>	1,059	318	1,376	650	3,346
<b>1988</b>	1,140	348	1,488	676	3,594
<b>1987</b>	1,212	409	1,621	671	3,526
<b>1986</b>	1,263	542	1,805	750	3,565
<b>1985</b>	1,166	576	1,742	688	3,214
<b>1984</b>	1,206	544	1,750	639	2,868
<b>1983</b>	1,181	522	1,703	623	2,719
<b>1982</b>	743	320	1,062	412	1,990
<b>1981</b>	796	288	1,084	436	2,419
<b>1980</b>	962	331	1,292	545	2,973
<b>1979</b>	1,316	429	1,745	709	3,827
<b>1978</b>	1,558	462	2,020	817	3,986
<b>1977</b>	1,573	414	1,987	819	3,650
<b>1976</b>	1,248	289	1,538	646	3,064
<b>1975</b>	956	204	1,160	549	2,476
<b>1974</b>	956	382	1,338	519	2,272
<b>1973</b>	1,250	795	2,045	634	2,334
<b>1972</b>	1,451	906	2,357	718	2,252
<b>1971</b>	1,271	781	2,052	656	2,018

Components may not add to totals due to rounding.

Housing Starts Source: Bureau of the Census.

New Single-Family Home Sales Source: Bureau of the Census.

Existing Single-Family Home Sales Source: National Association of Realtors

**Weighted Repeat Sales House Price Index  
Table 14**

<b>% Change</b>	<b>USA</b>	<b>New England</b>	<b>Mid-Atlantic</b>	<b>South Atlantic</b>	<b>East North Central</b>	<b>West North Central</b>	<b>East South Central</b>	<b>West South Central</b>	<b>Mountain</b>	<b>Pacific</b>
<b>1Q97</b>	3.1	1.7	0.4	2.9	6.4	4.7	4.8	2.1	4.8	1.4
<b>4Q96</b>	3.6	2.5	1.1	3.3	6.2	5.1	5.3	2.7	5.7	1.7
<b>3Q96</b>	3.3	1.7	1.0	3.3	6.4	5.2	4.8	2.8	5.7	0.8
<b>2Q96</b>	4.6	3.6	2.8	4.6	6.5	5.6	6.1	4.4	6.8	2.8
<b>1Q96</b>	5.7	5.5	5.0	5.8	6.0	5.6	6.6	5.8	8.0	4.7
<b>Annual Data</b>										
<b>1996</b>	3.6	2.5	1.1	3.3	6.2	5.1	5.4	2.7	5.7	1.7
<b>1995</b>	5.2	5.1	3.7	5.2	6.1	5.4	6.2	5.0	8.2	3.9
<b>1994</b>	1.4	-2.8	-2.7	0.8	6.0	6.2	5.1	1.7	9.7	-3.3
<b>1993</b>	2.3	0.8	1.6	2.3	3.7	3.9	4.1	4.2	8.2	-1.6
<b>1992</b>	1.9	-0.9	1.7	2.1	3.8	3.0	3.5	3.5	5.4	-1.1
<b>1991</b>	2.6	-1.9	1.6	3.1	4.4	3.7	4.0	3.7	4.8	1.6
<b>1990</b>	0.4	-7.8	-2.3	0.3	3.8	0.7	0.7	0.8	1.8	2.9
<b>1989</b>	6.0	0.9	2.5	5.0	5.9	3.2	3.3	3.0	2.6	17.9
<b>1988</b>	6.2	4.0	6.2	7.0	6.5	2.7	2.9	-1.9	0.6	15.8
<b>1987</b>	7.4	12.3	16.0	7.5	8.3	3.8	4.9	-8.5	-0.9	9.5
<b>1986</b>	9.4	19.2	18.0	8.4	8.0	5.9	8.7	0.9	4.4	7.2
<b>1985</b>	6.4	22.1	11.9	5.8	4.4	3.1	11.1	-2.8	1.0	4.5
<b>1984</b>	4.0	16.6	12.1	1.0	2.7	4.6	-3.7	-1.1	0.6	4.5
<b>1983</b>	3.1	14.4	9.6	3.3	0.2	3.5	4.8	-0.6	-3.0	0.9
<b>1982</b>	3.1	4.9	4.1	5.2	-0.8	0.3	5.1	5.4	6.7	0.8
<b>1981</b>	3.8	5.9	-0.2	4.0	0.7	0.0	-1.9	12.3	6.2	6.4
<b>1980</b>	5.7	5.1	7.2	7.6	1.2	2.9	2.6	5.6	6.1	11.0
<b>1979</b>	11.8	12.1	14.1	12.1	9.2	8.7	6.1	12.8	14.7	15.5
<b>1978</b>	12.6	14.6	8.2	9.8	13.9	11.9	9.8	16.4	14.6	15.3
<b>1977</b>	12.5	9.9	8.3	8.9	12.8	13.1	9.7	11.1	17.9	23.0
<b>1976</b>	8.2	2.3	7.9	4.4	7.8	5.5	9.5	9.0	10.3	18.6

Source: OFHEO

Regional Division: New England: CT, MA, ME, NH, RI, VT  
 Mid-Atlantic: NJ, NY, PA  
 South Atlantic: DC, DE, FL, GA, MD, NC, SC, VA, WV  
 East North Central: IL, IN, MI, OH, WI  
 West North Central: IA, KS, MN, MO, ND, NE, SD  
 East South Central: AL, KY, MS, TN  
 West South Central: AR, LA, OK, TX  
 Mountain: AZ, CO, ID, MT, NH, NV, UT, WY  
 Pacific: AK, CA, HI, OR, WA



# Appendix

**Federal Housing Enterprises Financial Safety and Soundness Act of 1992  
(Title XIII of Public Law 102-550)**

**Office of Federal Housing Enterprise Oversight**

**OFHEO Senior Officials**

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# Federal Housing Enterprises Financial Safety and Soundness Act of 1992

(Title XIII of Public Law)

## Section 1313. DUTY AND AUTHORITY OF DIRECTOR.

(a) **DUTY.** - The duty of the Director shall be to ensure that the enterprises are adequately capitalized and operating safely, in accordance with this title.

(b) **AUTHORITY EXCLUSIVE OF SECRETARY.**- The Director is authorized, without the review or approval of the Secretary, to make such determinations, take such actions, and perform such functions as the Director determines necessary regarding -

- (1) the issuance of regulations to carry out this part, subtitle B, and subtitle C (including the establishment of capital standards pursuant to subtitle B);
- (2) examinations of the enterprises under section 1317;
- (3) determining the capital levels of the enterprises and classification of the enterprises within capital classifications established under subtitle B;
- (4) decisions to appoint conservators for the enterprises;
- (5) administrative and enforcement actions under subtitle B, actions taken under subtitle C with respect to enforcement of subtitle B, and other matters relating to safety and soundness;
- (6) approval of payments of capital distributions by the enterprises under section 303(c)(2) of the Federal National Mortgage Association Charter Act and section 303(b)(2) of the Federal Home Loan Mortgage Corporation Act;
- (7) requiring the enterprises to submit reports under section 1314 of this title, section 309(k) of the Federal National Mortgage Association Charter Act, and section 307(c) of the Federal Home Loan Mortgage Corporation Act;
- (8) prohibiting the payment of excessive compensation by the enterprises to any executive officer of the enterprises under section 1318;
- (9) the management of the Office, including the establishment and implementation of annual budgets, the hiring of, and compensation levels for, personnel of the Office, and annual assessments for the costs of the Office;
- (10) conducting research and financial analysis;
- (11) the submission of reports required by the Director under this title.

(c) **AUTHORITY SUBJECT TO APPROVAL OF SECRETARY.**- Any determinations, actions, and functions of the Director not referred to in subsection (b) shall be subject to the review and approval of the Secretary.

(d) **DELEGATION OF AUTHORITY.**- The Director may delegate to officers and employees of the Office any of the functions, powers, and duties of the Director, as the Director considers appropriate.

(e) **INDEPENDENCE IN PROVIDING INFORMATION TO CONGRESS.**- The Director shall not be required to obtain the prior approval, comment, or review of any officer or agency of the United States before submitting to the Congress, or any committee or subcommittee thereof, any reports, recommendations, testimony, or comments if such submissions include a statement indicating that the views expressed therein are those of the Director and do not necessarily represent the views of the Secretary or the President.

# Office of Federal Housing Enterprise Oversight

The **Office of Federal Housing Enterprise Oversight (OFHEO)** was established as an independent entity within the Department of Housing and Urban Development by the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 (Title XIII of P.L. 102-550). The Office is headed by a Director appointed by the President for a five-year term.

OFHEO's primary mission is ensuring the capital adequacy and financial safety and soundness of two government-sponsored enterprises (GSEs) — the **Federal National Mortgage Association (Fannie Mae)** and the **Federal Home Loan Mortgage Corporation (Freddie Mac)**.

Fannie Mae and Freddie Mac are the nation's largest housing finance institutions. They buy mortgages from commercial banks, thrift institutions, mortgage banks, and other primary lenders, and either hold these mortgages in their own portfolios or package them into mortgage-backed securities for resale to investors. These secondary mortgage market operations play a major role in creating a ready supply of mortgage funds for American homebuyers. Combined assets and off-balance sheet obligations of Fannie Mae and Freddie Mac were \$1.5 trillion at the end of 1996.

Fannie Mae and Freddie Mac are Congressionally chartered, publicly-owned corporations whose shares are listed on the New York Stock Exchange. Under terms of their GSE charters, they are exempt from state and local taxation and from registration requirements of the Securities and Exchange Commission. Each firm has a potential credit line with the U.S. Treasury.

OFHEO's oversight responsibilities include:

- Conducting broad based examinations of Fannie Mae and Freddie Mac;
- Developing a risk-based capital standard, using a stress test, that simulates stressful interest rate and credit risk scenarios;
- Making quarterly findings of capital adequacy based on a minimum capital standard and, when completed, a risk-based standard;
- Prohibiting excessive executive compensation;
- Issuing regulations concerning capital and enforcement standards;
- and
- Taking necessary enforcement actions.

OFHEO is funded through assessments of Fannie Mae and Freddie Mac. OFHEO's operations represent no direct cost to the taxpayer.

In its safety and soundness mission, OFHEO has regulatory authority similar to such other federal financial regulators as the Federal Deposit Insurance Corporation, the Office of the Comptroller of the Currency, the Office of Thrift Supervision and the Board of Governors of the Federal Reserve System.

*(The legislation that established OFHEO also requires Fannie Mae and Freddie Mac to meet certain affordable housing goals set annually by the Secretary of Housing and Urban Development. These goals specify the share of mortgages that the two GSEs are required to purchase annually from low-income, moderate-income and central-city homebuyers.)*

# Office of Federal Housing Enterprise Oversight

## Senior Officials

*Mark Kinsey*  
*Acting Director*

*Eugene Carlson*  
*Director for Public Affairs*

*Anne Dewey*  
*General Counsel*  
*Office of General Counsel*

*Susan Jacobs*  
*Director*  
*Office of Finance and Administration*

*Patrick Lawler*  
*Chief Economist and*  
*Director, Office of Policy Analysis*

*Thomas Loeffler*  
*Acting Director*  
*Office of Examination and Oversight*

*David Pearl*  
*Director*  
*Office of Research, Analysis*  
*and Capital Standards*

*Mary Ellen Taylor*  
*Policy Advisor and*  
*Director, Congressional Affairs*



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