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HOUSING ENTERPRISES

Potential Impacts of Severing Government Sponsorship





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The Honorable Alfonse M. D'Amato
Chairman
The Honorable Paul S. Sarbanes
Ranking Minority Member
Committee on Banking, Housing, and
Urban Affairs
United States Senate

The Honorable James A. Leach
Chairman
The Honorable Henry B. Gonzalez
Ranking Minority Member
Committee on Banking and Financial Services
House of Representatives

This report responds to the questions concerning the implications of privatizing the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation contained in Sec. 1355 of the Housing and Community Development Act of 1992 (P.L. 102-550).

We are sending copies of this report to the Secretary of Housing and Urban Development, the Secretary of the Treasury, the Director of the Congressional Budget Office, the Director of the Office of Federal Housing Enterprise Oversight, the Federal Home Loan Mortgage Corporation, and the Federal National Mortgage Association.

Major contributors to this report are listed in the appendix. If you have any questions about this report, please call me on (202) 512-8678.

A handwritten signature in black ink, reading "James L. Bothwell".

James L. Bothwell
Director, Financial Institutions
and Markets Issues

Executive Summary

Purpose

The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) are government-sponsored enterprises with about \$1.4 trillion in combined obligations as of December 1995. In response to growing concern about the potential risk that these obligations represent to taxpayers and increasing questions about the continued need for their government-sponsored status, Congress directed GAO, the Department of the Treasury, the Congressional Budget Office (CBO), and the Department of Housing and Urban Development (HUD) to each study the effects of privatizing Fannie Mae and Freddie Mac by repealing their federal charters, eliminating any federal sponsorship, and allowing the enterprises to operate as fully private corporations.

This report responds to GAO's study requirement, contained in the Housing and Community Development Act of 1992, by assessing the potential effects of privatization on (1) the enterprises; (2) residential mortgage markets in general; and (3) housing finance, homeownership, and housing affordability for very low-, low-, and moderate-income families and residents of underserved areas in particular. It also responds to the request of the House Committee on Banking and Financial Services, Subcommittee on Capital Markets, Securities, and Government Sponsored Enterprises, that GAO identify and discuss alternative policy options that Congress could consider to limit the enterprises' potential risk to taxpayers or increase their social benefits.

Background

Congress established and chartered the enterprises as government-sponsored, privately owned and operated corporations to enhance the availability of mortgage credit across the nation during both good and bad economic times. The enterprises accomplish this mission by borrowing funds in the capital markets and using these funds to purchase mortgages from lenders (banks, thrifts, and mortgage bankers) across the country, who can then make additional loans to borrowers in the primary mortgage market. The enterprises retain some of the mortgages they purchase in their own portfolios. Most of the mortgages, however, are pooled to create mortgage-backed securities (MBS) that are sold to investors in the secondary mortgage market. The enterprises charge fees for guaranteeing the timely payment of principal and interest on the MBS backed by the mortgage pools.

As of December 1995, Fannie Mae had \$513 billion in MBS obligations outstanding, \$299 billion in debt obligations, and \$253 billion in retained

mortgage holdings. Freddie Mac had \$459 billion in MBS obligations outstanding, \$119 billion in debt obligations, and \$107 billion in retained mortgages. Of the total \$3.9 trillion in U.S. residential mortgage debt as of September 1995, about 25 percent was in enterprise MBS, and about 9 percent was in enterprise-retained portfolio.

The enterprises' federal charters grant each of them explicit benefits, which GAO assumed they would lose if privatized. These explicit benefits include (1) exemption from state and local corporate income taxes, (2) exemption from registering their securities with the Securities and Exchange Commission (SEC), (3) \$2.25 billion conditional lines of credit with the Treasury Department, and (4) use of the Federal Reserve as a transfer agent.

The most important benefit that the enterprises receive from their government-sponsored status, however, is an implicit one stemming from investors' perception that the federal government would not allow the enterprises to default on their obligations. While the enterprises' charters state that their obligations must include a statement that they are not guaranteed by the United States, it seems clear that the enterprises' federal ties cause creditors to believe that their investments are safe. For example, the enterprises can borrow at rates that are only slightly above Treasury borrowing rates and can continue to borrow in the capital markets even if performing poorly. Although part of this perceived federal guarantee could also be due to the very size of the enterprises, GAO assumed that an implied federal guarantee would be substantially reduced, if not eliminated, on any debt and MBS the enterprises issue after they became fully private corporations.

As federally sponsored corporations, the enterprises are also required to operate under certain restrictions that GAO assumed would not exist if they were privatized. These restrictions include (1) confining their operations to the secondary mortgage market; (2) limits on the maximum size of mortgages they can purchase (mortgages that meet the enterprises' underwriting standards and are within this limit, currently \$207,000 on single-unit residences, are called "conforming loans" and mortgages above this limit "jumbo loans"); (3) an obligation to be active in the secondary market across the country at all times; (4) regulations requiring them to meet certain numerical goals regarding purchases of mortgages to very low-, low-, and moderate-income borrowers, and borrowers in central cities and other underserved areas; and (5) compliance with capital

requirements and safety and soundness regulations issued by the Office of Federal Housing Enterprise Oversight.

During the 1980s, several large financial companies became increasingly important issuers of “private-label” MBS. These firms did not compete directly with the enterprises, but rather purchased and securitized nonconforming or jumbo mortgages. As of September 1995, private-label MBS accounted for about 13 percent of total MBS outstanding, or about 6 percent of total residential debt.

To achieve the objectives of this report, GAO reviewed academic, professional, and business literature on the role of the enterprises in the mortgage market. GAO also interviewed representatives of the enterprises, other market participants, and individuals with expertise in mortgage markets. GAO participated with CBO, HUD, and the Treasury Department in commissioning five academic studies on different aspects of privatization to provide a common source of information. These studies are to be published separately by HUD. GAO drew upon these studies as it deemed appropriate. GAO also made estimates, based on various assumptions and the best available data, to quantify the potential impact of privatization, noting that such estimates are inherently imprecise because of the difficulty in predicting responses by the enterprises and other market participants to a major change such as privatization.

Results in Brief

Fannie Mae and Freddie Mac have played critical roles in establishing and maintaining a nationwide secondary mortgage market, enhancing the affordability and availability of housing finance, and increasing efficiency through greater standardization of mortgage products and processes. In part, their success has been due to the special nature of their government-sponsored status. Their government sponsorship, however, has also created a large potential risk to taxpayers if the federal government should ever have to assist them in meeting their financial obligations. Thus, altering or repealing their federal charters involves both potential benefits and risks as well as trade-offs among competing policy objectives that need to be considered and weighed carefully.

Although there are inherent difficulties in attempting to predict privatization’s effects, privatization could undoubtedly have a major impact on the two enterprises and on both the secondary and primary mortgage markets. Losing the explicit benefits contained in their federal charters, for example, would increase the enterprises’ costs because they

would no longer be exempted from paying either SEC registration fees on their securities or state and local income taxes. A much more substantial cost impact would result as privatization raised their cost of funds by eliminating or substantially reducing investors' perception of an implied federal guarantee on their MBS and debt. For example, GAO's analysis of available evidence indicated that the enterprises' borrowing costs would increase and that the increase could range from about 30 basis points to as much as 106 basis points if the perceived guarantee were completely eliminated by privatization.¹ To some extent, these increased costs would be passed along to homebuyers in the form of increased mortgage interest rates. GAO's analysis indicated that average interest rates on mortgages below the conforming limit would likely increase by about 15 to 35 basis points.

Eliminating the cost advantages of federal sponsorship would also likely increase competition in the secondary market if firms that currently purchase and securitize nonconforming and jumbo mortgages find it profitable to purchase and securitize conforming mortgages. The expected increased participation of these firms and perhaps a few new entrants, along with the continued participation of the enterprises, could be sufficient to keep the secondary mortgage market efficient and liquid enough to prevent the appearance of any significant regional disparities in the availability and cost of mortgage credit that are not related to differences in risk.

By increasing their costs and competition, privatization would likely have an adverse impact on the enterprises' profits, stock values, and market shares. For example, the enterprises believe that privatization would largely eliminate profits from holding mortgages in portfolio, thus making them strictly issuers of MBS. Privatization would, however, presumably allow the enterprises to enter other lines of business by removing their charter restrictions. The ultimate impact of privatization on their financial performance would thus depend upon such other factors as their strategic business decisions and the quality of management.

Privatization could have a relatively greater impact on the availability and affordability of mortgage credit for very low-, low-, and moderate-income borrowers and borrowers in underserved areas, because it would likely eliminate one of the federal mechanisms for channeling residential mortgage credit to these borrowers and areas. Both enterprises have initiated substantial efforts to help meet their numerical goals for

¹A basis point is equal to one one-hundredth of a percent.

purchasing such loans, although it is too soon to reliably estimate the effects of these efforts on housing affordability. Other existing housing policy mechanisms or new policy initiatives could be used to help offset any undue adverse impact of privatization on such residential lending.

As possible alternatives to privatization, GAO identified other policy options that could be used to limit the enterprises' risk to taxpayers or increase their social benefits. Like privatization, each of these options involves both benefits and risks and trade-offs among competing policy goals that need to be considered and weighed carefully.

GAO's Analysis

Privatization Would Increase Enterprises' Costs and Affect Their Activities

There are substantial economic benefits associated with the enterprises' federal sponsorship that presumably would be reduced, if not entirely eliminated, if Fannie Mae and Freddie Mac were to be privatized. GAO estimated that the value of these benefits in 1995 ranged from about \$2.2 billion to \$8.3 billion on a before-tax basis and from about \$1.6 billion to \$5.9 billion on an after-tax basis. Between 80 percent and 95 percent of these estimated benefits resulted from lower funding costs for enterprise debt and MBS attributable to the perception of an implied federal guarantee. Thus, the enterprises' funding costs would increase as privatization substantially reduced, or even removed, investors' perception of an implied federal guarantee on their obligations. On the basis of available evidence, GAO estimated that the increase in the enterprises' borrowing costs could range from about 30 basis points to as much as 106 basis points if the perceived federal guarantee were completely eliminated. Although harder to estimate, the enterprises' funding costs for MBS could rise anywhere from 5 to 35 basis points in the absence of a perceived federal guarantee.

By repealing their federal charters, privatization would also presumably raise the enterprises' costs by eliminating their explicit charter-based benefits. On the basis of 1995 information, for example, GAO estimated that elimination of the enterprises' exemptions from state and local income taxes and SEC registration fees could raise their costs by \$300 to \$400 million on an after-tax basis.

In addition to eliminating or reducing the financial benefits derived from federal sponsorship, privatization would also presumably remove the charter-based restrictions on the enterprises' business activities. Although it is difficult to predict how the enterprises would respond, GAO believes it reasonable to assume that they would most likely move into areas that complement their existing business, such as securitizing jumbo mortgages or other financial assets, or providing private mortgage insurance.

By increasing their costs and reducing their competitive advantage in the secondary mortgage market, privatization would likely have an adverse impact on the enterprises' market shares, profits, and stock values. For example, the enterprises expect that their potential profits from holding mortgages in portfolio could be substantially reduced, if not eliminated, without their funding advantage. However, the ability to enter new business lines could also bring new opportunities for profit. Thus, GAO notes that it is especially difficult to predict the ultimate impact of privatization on the enterprises' financial condition because it will depend so much upon such other factors as their strategic business decisions and the quality of their management.

Privatization Would Increase Mortgage Interest Rates and Affect Behavior in the Residential Mortgage Markets

To some extent, the enterprises are likely to pass along the funding cost increases resulting from privatization to homebuyers in the form of higher mortgage interest rates. Specifically, GAO estimated, partly on the basis of one of the commissioned papers prepared for this project, that interest rates on single-family, fixed-rate, conforming mortgages would rise on average by about 15 to 35 basis points. For \$2 trillion in outstanding conventional conforming fixed-rate mortgages, this would amount to about \$3 billion to \$7 billion in additional interest costs incurred by households. For a typical mortgage of about \$100,000, this would amount to an increased monthly payment of between \$10 and \$25.

The increased cost of funds resulting from privatization should also allow other firms to compete with the enterprises in securitizing conforming mortgages. With this increased competition, the enterprises would likely require MBS guarantee fees that more fully reflect the risk of the underlying mortgages than they do currently. As a result, mortgage interest rates would likely rise relatively more for borrowers making smaller down payments because such borrowers have historically had higher default rates than borrowers making larger down payments.

GAO believes that the likely increased participation of these other firms, along with the continued participation of the enterprises—even if at a reduced level—could be sufficient to keep the secondary mortgage market efficient and liquid enough to prevent the appearance of any significant regional disparities in the availability and cost of mortgage credit. Evidence on whether the enterprises have offset cyclical downturns is inconclusive. Privatization could increase the extent to which regional differences in risk are reflected in mortgage costs if the enterprises base their MBS guarantee fees on such risk factors.

In addition to increased competition in the secondary market for conforming loans, privatization would likely lead to increased competition in the secondary market for jumbo loans to the extent the enterprises moved into this area. The effects of privatization would not necessarily be limited to the secondary market, but could also affect the primary market. For example, the increased profit potential of mortgages resulting from the expected rise in mortgage interest rates could induce some banks and thrifts to hold more of the mortgages they originate in portfolio rather than to sell them in the secondary market. To offset the interest rate risk associated with fixed-rate mortgages, these banks and thrifts could also be induced to originate more variable rate mortgages. Such mortgages are not sold in the secondary market as frequently.

**Privatization Would
Remove One Method of
Channeling Mortgage
Credit**

By eliminating the enterprises' federal charters, privatization would presumably remove one of the available methods used for channeling mortgage credit to targeted groups of borrowers. In particular, HUD recently established specific numerical goals for the enterprises in funding mortgages for very low-, low-, and moderate-income households and borrowers in underserved areas. For example, in 1996, 40 percent of each enterprise's purchases are required to serve low- and moderate-income households. Such regulatory requirements, authorized by the Federal Housing Enterprise Financial Safety and Soundness Act of 1992, could conceivably be either partly or entirely eliminated by privatization. Both enterprises have initiated substantial efforts to help meet their numerical goals for purchasing loans serving targeted households, but it is too soon to reliably estimate the effects of these efforts on housing affordability or the impact they may have on residential mortgage lending by banks and thrifts to targeted groups.

According to one of the commissioned studies prepared for this project, the expected increase in mortgage interest rates resulting from

privatization would also reduce homeownership opportunities for targeted borrowers and, in particular, would delay homeownership for households with low but rising incomes. This study also concluded that interest rates on mortgages used to fund multifamily rental housing, and therefore rental housing affordability, should not be affected by privatization.

If Congress chooses to privatize the enterprises, it is possible that many targeted borrowers would turn to other governmentally assisted loan sources, such as mortgages insured by the Federal Housing Administration and securitized through the Government National Mortgage Association. Congress could also use other existing mechanisms, such as the Community Reinvestment Act, or new policy initiatives to help offset any undue impact of privatization on mortgage financing for targeted borrowers.

Policy Options to Reduce Taxpayers' Risk or Increase Social Benefits

By eliminating the enterprises' federal charters, privatization should reduce the potential risk that their obligations pose to taxpayers. Should Congress choose to privatize, GAO believes that it would be essential to achieve a clear and deliberate break between the enterprises and the government to substantially reduce or eliminate investors' perceptions about the implied federal guarantee. GAO also believes that an effective approach for achieving this change in investors' perception would be to adopt a structure that would separate the financial obligations of the previously government-sponsored enterprises from the obligations of the newly privatized ones. One such option, under congressional consideration in the proposed privatization of the Student Loan Marketing Association, is to have a holding company with one subsidiary conducting old business and another subsidiary conducting new business. Other options include having the federal government assume responsibility for old enterprise obligations or breaking each enterprise up into several much smaller firms. Each of these two options could, however, create short-term disruptions in the financial markets. The break up-option, for example, could reduce liquidity and impair efficiency in the secondary mortgage market.

GAO also identified alternative policy options short of privatization that could limit to some extent the taxpayers' risk associated with the enterprises or increase the social benefits the enterprises provide. As with privatization, these options would also require Congress to consider trade-offs between benefits and risks as well as trade-offs among competing policy goals.

For example, one alternative could be lowering the conforming loan limit. This would further restrict the range of the market in which the enterprises would be allowed to operate. Because it would likely reduce the amount of activity engaged in by the enterprises, it could reduce the overall level of taxpayers' risk. However, for those borrowers who would be shifted out of the conforming market and into the redefined jumbo market, mortgage interest rates would likely rise. There could be some offset to this increase, however, to the extent the expanded jumbo market improved the ability of other firms to regionally diversify their private-label MBS.

As another alternative, the federal government could require compensation from the enterprises in return for the risk exposure that their activities generate for the government and the taxpayer. This compensation could take the form of either user fees based on debt and MBS issuance or a percentage of income from operations. Each approach would have pros and cons. For example, while a fee on the enterprises could raise federal revenues to compensate for taxpayers' risk, it would also be likely to increase mortgage interest rates because the fee would increase the cost of funds. To the extent it reduced the enterprises' funding advantage, it could also increase the likelihood that other firms would securitize conforming mortgages.

These and other alternatives are discussed in greater detail in chapter 5.

Recommendations

GAO is making no recommendations.

Enterprise Comments and GAO's Evaluation

GAO received comments from both Fannie Mae and Freddie Mac on a draft of this report. Officials from both enterprises stated that GAO's estimates of the benefits associated with government sponsorship were overstated, suggested that GAO provide an overall estimate of enterprises' benefits to the mortgage market, and asked that GAO indicate that most of the benefits were passed on to homebuyers. Both enterprises emphasized their importance in maintaining liquidity in the conventional mortgage market, and they suggested that GAO was not accounting sufficiently for the possibility of reduced liquidity should privatization occur. Freddie Mac also suggested that privatization would increase regional disparities and cyclical variations in the availability and cost of mortgage credit. Both enterprises asserted that they compete vigorously and that there is no evidence that they have any market power. Fannie Mae officials suggested

that GAO should have concluded that their efforts in promoting home ownership among targeted groups had been successful.

On the basis of the enterprises' technical comments, GAO reduced its estimate of the benefits associated with government sponsorship by lowering its upper range for the enterprises' funding advantage on debt from 120 basis points to 106 basis points. GAO also included, as a measure of the enterprises' benefits to the mortgage market, an overall estimate of \$3 billion to \$7 billion in increased mortgage costs that would be incurred by households if privatization occurred. GAO also pointed out that it had no way to quantify how much of the benefits associated with government sponsorship are passed on to homebuyers. GAO agreed that the possible effects of privatization on liquidity both in terms of cost and cyclical availability are important and clarified its text in this regard. GAO reiterated that it cannot determine whether the enterprises do or do not have market power. In addition, GAO continues to believe that, while the enterprises have made efforts to provide additional funding to targeted groups, it is still too early to measure a clear effect.

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Abbreviations

CBO	Congressional Budget Office
CMO	Collateralized Mortgage Obligation
CRA	Community Reinvestment Act
FDIC	Federal Deposit Insurance Corporation
FHA	Federal Housing Administration
FHFB	Federal Housing Finance Board
FHLB	Federal Home Loan Bank System
FIRREA	Financial Institutions Reform, Recovery, and Enforcement Act of 1989
FSLIC	Federal Savings and Loan Insurance Corporation
GAO	General Accounting Office
GSE	Government-Sponsored Enterprise
HMDA	Home Mortgage Disclosure Act
HUD	Department of Housing and Urban Development
MBS	Mortgage-Backed Security
OFHEO	Office of Federal Housing Enterprise Oversight
OMB	Office of Management and Budget
REMIC	Real Estate Mortgage Investment Conduit
RTC	Resolution Trust Corporation
SEC	Securities and Exchange Commission
UNBOG	Underwriting Barriers Outreach Group
VA	Veterans Administration
WACC	weighted average cost of capital

Introduction

The Federal National Mortgage Association (Fannie Mae) and Federal Home Loan Mortgage Corporation (Freddie Mac)(referred to in this report jointly as the enterprises) are government-sponsored enterprises that play important roles in federal support of home ownership and America’s housing finance system.¹ The primary role of the enterprises is to ensure that mortgage funds are available to home buyers in all regions of the country at all times. Congress has asked us to study the desirability and feasibility of repealing the federal charters of the enterprises, eliminating any federal sponsorship of the enterprises, and allowing the enterprises to continue to operate as fully private entities.²

Background

The enterprises help ensure that mortgage funds are available to home buyers by buying mortgages from mortgage originators, such as savings and loans (thrifts), commercial banks, and mortgage bankers. The enterprises hold some of these mortgages in portfolio as direct investment on their own books and issue debt and equity securities to finance these holdings.

Most mortgages that the enterprises buy from mortgage originators are “securitized”—that is, the enterprises package them into mortgage pools to support mortgage-backed securities (MBS). These mortgage pools receive the interest and principal payments from the mortgages in the pools and pass them on to the investors who purchased the MBS.

The enterprises guarantee the timely payment of principal and interest payments from the mortgages in the pools to the investors and administer the payments.³ In September 1995, Fannie Mae and Freddie Mac either

¹The enterprises are only part of the federal support for home ownership; the most significant additional federal support comes from provisions of the tax code and activities of other federal entities. The tax code supports home ownership by permitting taxpayers, who itemize, to deduct their mortgage interest payments from their adjusted gross income. In addition taxpayers are permitted to defer payment of tax on capital gains on the sale of their houses and may exclude, one time, up to \$125,000 in gain on sale when they are 55 or older. Various federal agencies support home ownership. For example, the Federal Housing Administration (FHA) and Department of Veterans Affairs (VA) lower ownership costs by insuring mortgages with favorable terms for qualified individuals. In addition, the Federal Home Loan Bank System lends to mortgage lenders so they can originate and fund mortgages.

²A fully private entity would have no special ties to the federal government. It would not have special market restrictions, operating advantages, or exemptions from certain taxes or fees. In addition, a fully private entity should have no special ties to the government that would lead financial market participants to perceive an implied federal guarantee of the entity’s financial obligations. We define privatization as an action that severs all special ties and restrictions as well as eliminating or substantially reducing investors’ perception of an implied federal guarantee.

³The MBS are considered to be “off book” or “off the balance sheet” of the enterprises. The enterprises collect fees on MBS for carrying out these functions.

owned in portfolio or guaranteed about \$1.3 trillion of the \$3.9 trillion of outstanding residential mortgages in the United States.⁴

The enterprises are government-sponsored in that they operate under federal charters that convey certain benefits, impose certain restrictions, and permit the enterprises to earn a profit while serving public policy purposes, such as providing liquidity⁵ to mortgage markets. In 1992, Congress expanded the enterprises' public purpose by requiring annual goals that are to be set, monitored, and enforced by the Department of Housing and Urban Development for the purchase of mortgages on housing purchased by very low-, low-, and moderate-income and other households that are underserved by the residential mortgage market.⁶ The enterprises' charters exempt them from certain fees and taxes paid by other private sector firms. At the same time, the charters restrict the enterprises to buying mortgages that do not exceed a set dollar amount, known as the conforming loan limit.⁷

A major factor that enhances the enterprises' profitability is the financial market's perception that there exists an implied federal guarantee of their debt and other obligations (i.e., a perception that the federal government would act to ensure that the enterprises will always be able to meet their financial obligations on their debt and MBS guarantees). Investors perceive that this implied guarantee decreases the risk that the enterprises will ever fail to meet their financial responsibilities. Consequently, this perception lowers the enterprises' borrowing costs because investors are willing to accept lower expected returns on enterprise debt than they would for private firms without government ties. Likewise, funding costs on MBS are also lowered by this perception.⁸ Their lower funding costs allow the enterprises to increase their purchases and give them a cost advantage over competitors. This perception of a federal guarantee remains even though the laws chartering the enterprises contain explicit language stating that there is no such guarantee.

⁴Year-end 1995 data on total residential mortgage holdings by all financial sectors were not available.

⁵A market is more liquid if investors can buy and sell large amounts of holdings without affecting the prices of the traded securities.

⁶Federal Housing Enterprises Financial Safety and Soundness Act of 1992 ("1992 Act") Pub. L. No. 102-550, Title XIII. Housing-related goals are contained in subpart B of Title XIII.

⁷The conforming loan limit depends on how many housing units are financed by a single residential mortgage loan. Currently the conforming loan limit on a single-unit residence is \$207,000.

⁸Investors will accept lower expected returns on enterprise MBS, just as for enterprise debt, because of the perception of an implied federal guarantee. This in turn lowers the cost of funding mortgages through issuance of MBS.

The perception of the implied guarantee is based on special federal ties to the enterprises, including government-sponsored status, each enterprise's \$2.25 billion conditional line of credit with the Treasury Department, and a belief that the federal government would consider such large institutions too big to fail.⁹

The federal charter also provides several explicit provisions that lower operating costs for the enterprises. For example, certain fees paid by other corporations to the Securities and Exchange Commission (SEC) are not levied against the enterprises since the enterprises do not need to register their issuances with the SEC. They are also exempt from state and local income taxes. In addition, they can use the Federal Reserve's electronic payments system for transactions. These privileges, plus each enterprise's \$2.25 billion conditional line of credit with the Treasury, reinforce the market's perception that the government will not let the enterprises fail. Given the lower funding costs created by this perception and the lower operating costs created by certain privileges and exemptions, the enterprises have cost advantages over any potential direct competitor.¹⁰

Mortgages Are Funded by Primary and Secondary Markets

The mortgage market is made up of primary and secondary parts; and many institutions serve several roles within the overall market, as shown in tables 1.1 and 1.2. Consequently, institutions sell to, buy from, and compete with each other. As shown in table 1.2, the enterprises function as conduits and guaranteeing agencies in the secondary mortgage market.

⁹"Too big to fail" is a common way to express the idea that the failure of certain institutions that could have economywide consequences that could require the federal government to forestall normal bankruptcy and liquidation processes. This intervention decision would not depend on a formal prior declaration by the federal government that it would bail out a large failing institution. In the past, the federal government has intervened to prevent the failure of New York City, Lockheed, and Chrysler. It also intervened in the bankruptcy of Penn Central and created Conrail. In each case the failing institution had no guarantee, but federal interests were considered important enough to intervene in the normal bankruptcy resolution. See Guidelines for Rescuing Large Failing Firms and Municipalities (GAO/GGD-84-34, Mar. 29, 1984).

¹⁰See FNMA and FHLMC: Benefits Derived From Federal Ties (GAO/GGD-96-98R, March 25, 1996).

Table 1.1: The Roles, Functions, and Participants in the Primary Mortgage Market

Role	Function	Participants
Home buyers	Apply for mortgage	- Individual consumers
Originators	Receive applications and make lending decisions	- Depositories such as banks or savings and loans - Mortgage bankers
Mortgage insurers	If the home buyer defaults, provide compensation to originators who keep the mortgages as investments	- Federal Housing Administration - Veterans Affairs Department - Private mortgage insurance companies

Source: GAO analysis based on The Revolution in Real Estate Finance by Anthony Downs (Brookings Institution, 1985).

Table 1.2: The Roles and Functions of Participants in the Secondary Mortgage Market

Role	Function	Participants
Originators	Sell mortgages to investors and conduits that create MBS	- Depositories - Mortgage bankers
Investors	Buy mortgages and MBS	- Depositories - Housing enterprises - Other financial institutions such as life insurers and pension funds - Individuals
Conduits	Buy mortgages sold by originators and others, and create and manage MBS	- Freddie Mac - Fannie Mae - Private conduits
Mortgage insurers	Compensate investors if the home buyers default	- Federal Housing Administration - Veterans Affairs Department - Private mortgage insurance Companies
Guaranteeing agencies	Guarantee timely payment of principal and interest to investors from mortgages in the pools	- Fannie Mae - Freddie Mac - Government National Mortgage Association - Private conduits

Source: GAO analysis based on The Revolution in Real Estate Finance.

In the primary market, the home buyer applies to an originator for a mortgage. The originator can be a depository, such as a bank or thrift, or a mortgage banker. Traditionally, depositories originated mortgages and held them as direct investments in portfolio on their books. Their profits from holding mortgages were the difference between interest earned from the mortgages and their costs of funds, primarily interest paid to depositors after adjusting for other expenses.

Mortgage bankers originate mortgages for immediate resale in the secondary market. They earn profits primarily from two sources. The first source is fees charged to originate mortgages and profits from the sale of mortgages (losses can also result from such sales). The second source is fees investors pay to mortgage bankers for “servicing” mortgages—collecting and processing mortgage payments. In recent years many depositories have also acted like mortgage bankers in that they originate mortgages and sell them to investors rather than hold them on their books.

Mortgage insurers improve the liquidity¹¹ of the market by compensating investors for losses caused by mortgage defaults—losses created when the net sales price of the house after foreclosure does not cover the outstanding balance on the mortgage. This compensation reduces risks and makes the market more liquid. FHA and VA are the primary federal government insurers. The private mortgage insurance companies provide insurance for conventional mortgages—that is, mortgages not backed by the federal government.

The secondary mortgage market channels mortgages from originators to investors. The Government National Mortgage Association (Ginnie Mae), the enterprises and other private companies, acting as conduits, create mortgage pools and MBS that are sold to investors. From a pool of mortgages, the MBS investors receive their proportional shares of interest and principal flows.

Private-label MBS are created by fully private (nongovernment-sponsored) conduits. As of September 1995, private-label MBS totalled about 13 percent of outstanding MBS. The mortgages that these private conduits securitize either exceed the enterprises’ conforming loan limit—\$207,000 on one-unit, single-family properties—or do not meet the enterprises’

¹¹The provision of market liquidity is an important function of mortgage insurers and secondary market conduits.

underwriting standards.¹² A loan whose underwriting standards do not meet the standards of either enterprise or exceeds the conforming loan limit is called a nonconforming loan. A loan that exceeds the conforming loan limit is called a jumbo loan.

Guarantees on MBS enhance the liquidity of the secondary market. Ginnie Mae guarantees timely payment of principal and interest for mortgage pools of FHA and VA insured mortgages for a fee. The enterprises and private-label conduits guarantee timely payment of principal and interest on conventional mortgages in pools backing their MBS. The guarantees are an enhancement that reduces the risk that any given mortgage will not be paid on a timely basis.

Private-label conduits generally use risk-based guarantee fees, which are based on the expected incremental cost of guaranteeing a particular level of credit risk exposure for the investor. For example, the conduits charge lower fees on mortgages with large down payments (i.e., mortgages with low loan-to-value ratios) than on loans with small down payments. The enterprises said that their mortgage commitment policies move them partially, but not fully, toward a risk-based fee structure.

Private-label conduits may enhance the liquidity of their MBS with other credit enhancements. Private mortgage insurance is a common form of credit enhancement to reduce risk. Another common private label credit enhancement is over-collateralization. This means that the principal amount of the mortgages backing the MBS exceeds the dollar amount of the MBS shares sold to investors. Other forms of credit enhancement for the private-label MBS include bank letters of credit,¹³ corporate guarantees,¹⁴ and private insurance of mortgage pools.

The cash flows to investors generated by interest and principal payments from any pool may vary over time. As interest rates fall, households tend to prepay principal more quickly, which is called prepayment risk. As interest rates increase, prepayments tend to slow down and cash flows to

¹²Underwriting standards are used by the enterprises to determine which mortgages they will buy as investments or place into mortgage pools. The standards limit the risk that the mortgages will create losses for the pools or the enterprises. The standards are meant to ensure the buyer has the ability to pay; the buyer is creditworthy and is likely to meet scheduled payments; and, in the event of a default, the value of the house and mortgage insurance limits any losses.

¹³A letter of credit is a guarantee by a bank to pay the principal and interest due on an MBS if the conduit fails to do so. It is a form of insurance for the investors.

¹⁴A corporate guarantee is a guarantee by the corporate parent of the conduit to pay the principal and interest due on an MBS if the conduit fails to do so. It is a form of insurance for the investors.

investors decline, since homeowners are refinancing or selling their houses more slowly. This tendency is called extension risk.

Multiclass Securities Have Improved Liquidity of the Secondary Mortgage Market

To address the need for more predictable cash flows, the enterprises and private-label conduits issue multiclass mortgage securities called collateralized mortgage obligations (CMOS) and Real Estate Mortgage Investment Conduits (REMICS). These multiclass securities can help investors better manage prepayment and extension risks by creating from the same mortgage pool several securities that receive different parts of the pool's interest and principal payments.

Investors more concerned about variations in cash flows over time can buy the classes that pay off more quickly or have a fixed payment period. Investors more willing to undertake prepayment and extension risks can buy classes with payments that vary with interest rates. The expected return on classes with prepayment and extension risks exceeds the expected return on classes without such risk. Multiclass securities can also redistribute credit risk so that one class can be designed to absorb all or much of the credit risk in return for a higher expected return. Because multiclass securities bring new investors who wish to avoid unpredictable cash flows into the market, they improve the market's liquidity and help ensure continuing funding for home mortgages. The new investors that multiclass securities have attracted include banks, thrifts, pension funds, insurance companies, and other financial institutions as well as individuals who originate, buy, hold, or sell whole mortgages.

More Than 45 Percent of All Residential Mortgage Debt in September 1995 Was Securitized and Held in MBS

Tables 1.3 and 1.4 show the different sectors of the housing finance system. The total of all residential mortgage debt in September 1995 was \$3.9 trillion. About 6 percent was held by the enterprises in portfolio, 33 percent was held in portfolio by wholly private financial institutions, 45 percent was securitized and held by various types of investors in MBS, 1 percent was held by the federal government or related agencies,¹⁵ and the rest was held by individuals and other investors.

Commercial banks and thrifts were significant holders of whole mortgages and MBS. In September 1995, banks held about 33 percent of whole mortgages and savings and loans held about 26 percent of all whole mortgages. At year-end 1995, commercial banks held 20 percent of all MBS

¹⁵Federally related agencies are corporations and GSEs with federal ties, such as FHA, VA and the Federal Deposit Insurance Corporation.

and thrifts held about 10 percent of MBS. Other major investors included life insurance companies and mutual funds.

Table 1.3: Residential Mortgage Debt Outstanding as of September, 1995

	Value (in millions)	Percent of total
Housing enterprises (in portfolio)		
Fannie Mae	\$182,229	4.71%
Freddie Mac	42,678	1.10
(Total)	224,907	5.81
Financial institutions		
Commercial banks	705,844	18.25
Savings institutions	552,144	14.28
Life insurance companies	32,607	.84
(Total)	1,290,595	33.37
Federally related agencies		
Ginnie Mae	2	0.0
Farmers Home Administration	24,471	.63
FHA and VA	9,535	.25
Resolution Trust Corporation	3,719	.10
Federal Deposit Insurance Corp.	1,340	.03
Federal Land Banks	1,656	.04
(Total)	40,723	1.05
Mortgage pools		
Ginnie Mae	463,654	11.99
Freddie Mac	503,457	13.02
Fannie Mae	559,585	14.47
Private mortgage conduits	228,616	5.91
Farmers Home Administration	2	0.00
(Total)	1,755,314	45.39
Individuals and others ^a		
(Total)	556,108	14.38
Grand Total	3,867,647	100.00

^aOthers include mortgage companies, real estate investment trusts, state and local credit agencies, state and local retirement funds, noninsured pension funds, credit unions, and finance companies.

Source: Federal Reserve Bulletin, March 1996.

**Table 1.4: Percent of All
Mortgage-Backed Security Holdings by
Investor Type as of Year-End 1995**

Investor type	Percent of total MBS
FDIC commercial banks	20.02%
FDIC savings banks	2.67
OTS regulated S&Ls	9.64
Federal credit unions	1.12
Federal Home Loan Banks	2.24
Public pension funds	7.97
Private pension funds	3.66
Life insurance companies	14.88
Mutual funds	5.04
Private individuals	1.56
Real Estate Investment Trusts	.45
Foreign investors	9.68
Dealer inventory	5.30
Housing enterprises' portfolios	7.88
All other investors	7.88
Total	100.00

Source: Inside Mortgage Securities, March 1, 1996.

The Enterprises Have Evolved With Changes in Economic Conditions and Public Policy

The enterprises have evolved since Congress created Fannie Mae to remedy the housing market effects of the Great Depression of the 1930s and Freddie Mac was created in 1970. Modifications in their charters have occurred as the result of changing economic conditions and government policies.

The Great Depression Led to Federal Assistance to Housing Markets

In the wake of the Great Depression of the 1930s, the federal government took steps to revive the economy, stabilize financial markets, and ensure mortgage markets were liquid. The government's response concentrated on the savings and loan industry, which was then the backbone of the housing finance system. Congress created a thrift regulator to ensure the safety and soundness of the thrift industry; to bolster consumer confidence and keep deposits flowing into the thrifts, it created a deposit insurance system. In addition, Congress created the Federal Home Loan Banks, which borrowed in capital markets¹⁶ and made loans to thrifts so

¹⁶Capital markets provide long-term funding through debt and stock issuances.

that they could continue to fund and originate mortgages. To further support housing, Congress created FHA, which insured mortgages originated by private financial institutions and reduced credit risk for investors.

Congress also authorized the establishment of private mortgage associations to create a secondary market for mortgages. Because private mortgage associations did not develop, Congress chartered Fannie Mae in 1938 as a government-held association to buy and hold mortgages insured by FHA. Later it was authorized to purchase VA-insured mortgages. In its early years, Fannie Mae was part of the Reconstruction Finance Corporation and subject to the regulation of the Federal Housing Administration. Modifications in Fannie Mae's structure occurred during the post-War period without changing its fundamental mission.

In the early post-World War II period, Congress articulated Fannie Mae's purposes as

- providing liquidity and special assistance for selected housing types,
- supporting the mortgage market, and
- stabilizing the economy.

Fannie Mae's mortgage purchases increased substantially during most of the 1950s. During the late 1950s through the mid-1960s, Fannie Mae sold mortgages when other sources of credit were readily available or purchased mortgages when credit was tight. After 1968, Fannie Mae's, and later Freddie Mac's, portfolios grew.

Volatile Interest Rates and Increasing House Prices Affected the Housing Mortgage Markets

In the Housing and Urban Development Act of 1968,¹⁷ Congress split Fannie Mae into two components. One component, Ginnie Mae, remained in HUD to provide support to FHA, VA, and special assistance programs. The other component was the government-sponsored, privately owned, for-profit Federal National Mortgage Association, which was to be concerned exclusively with attracting funding into residential mortgages. Thus, the newly private, yet government-sponsored, Fannie Mae continued to provide a secondary residential mortgage market and was governed by a board of directors dominated by its private sector owners with a minority of its members (5 of 18) appointed by the president. Fannie Mae was regulated by the Department of Housing and Urban Development in

¹⁷Pub. L. No. 90-448

terms of capital requirements and approval of new mortgage acquisition programs.

Ginnie Mae and Fannie Mae operated differently. Ginnie Mae did not purchase mortgages. Instead, it “guaranteed the timely payment of principal and interest” from pools of FHA- and VA-insured mortgages originated by mortgage bankers and other financial institutions. In contrast, Fannie Mae operated as a large portfolio investor. It bought mortgages from originators and financed these investments by selling debt and equity in the financial markets.

Congress permitted Fannie Mae to develop a secondary market for conventional loans to counter periodic scarcities of mortgage credit in different regions of the country during different parts of the business cycle. Consequently, Fannie Mae helped counter a scarcity of mortgage credit during the late 1960s and early 1970s, when interest rates paid by thrifts and other depository institutions were capped—sometimes below market levels. In response to these below-market rates, depositors withdrew funds and looked for higher returns elsewhere. As funds were withdrawn, thrifts were unable to originate or fund mortgages. At the same time, other originators such as mortgage bankers were able to originate mortgages at market rates and sell them to Fannie Mae. Since Fannie Mae did not have an interest rate cap, it could raise funds at market rates and thus continue to purchase mortgages at current market rates from all originators.

Congress chartered Freddie Mac in 1970 in reaction to the loss of deposits in the savings and loan industry that was curtailing that industry’s ability to fund and originate home mortgages.¹⁸ Its creation ensured that the savings and loan industry had access to funds to continue to fund mortgages. Freddie Mac was first owned by the Federal Home Loan Bank Board, which regulated savings and loans, helped fund their operations through the Federal Home Loan Banks, provided deposit insurance to the thrifts through the Federal Savings and Loan Insurance Corporation, and liquidated insolvent thrifts. Freddie Mac mostly securitized the mortgages that it purchased and guaranteed timely interest and principal payments from the resulting mortgage pools.

Originally, the enterprises and FHA had identical conforming loan limits for mortgages they could purchase or guarantee. In 1974, Congress raised the

¹⁸Federal Home Loan Mortgage Corporation Act, 12 U.S.C. §1451 et seq., originally enacted as Title III of the Emergency Home Finance Act of 1970.

conforming loan limit for both enterprises above FHA's limit. Consequently, Fannie Mae and Freddie Mac could buy an increasing share of mortgages that were not provided by, or guaranteed by, the federal government.

In 1981, Congress created a formula for adjusting the conforming loan limit to account for the effects of inflation on house values. A three-tiered secondary mortgage market evolved in the late 1980s. Ginnie Mae primarily served a tier of lower value FHA and VA mortgages. The enterprises primarily served a middle tier of larger mortgages. The private-label conduits served a tier of jumbo—loans with principal amounts that exceeded the conforming limit—and other conventional, nonconforming mortgages.

In the early 1980s, Fannie Mae and Freddie Mac experienced different financial results as short-term interest rates increased. Fannie Mae held mortgages in portfolio and funded them with short-term debt. As rates increased, Fannie Mae had to issue new short-term debt at higher rates to replace existing short-term debt that came due. Because interest earned on the old mortgages in portfolio was less than interest expenses on the newly issued debt, Fannie Mae experienced total losses of about \$277 million between 1981 and 1984. In response to Fannie Mae's financial problems, the federal government provided limited tax relief and regulatory forbearance in the form of relaxed capital requirements.

Unlike Fannie Mae, Freddie Mac held few mortgages in portfolio and issued little debt to fund mortgage holdings. Rather, it created MBS and sold them to investors. Consequently the investors and not Freddie Mac bore the risks of changing interest rates. To avoid future losses from interest rate changes, Fannie Mae partially adopted Freddie Mac's strategy of issuing MBS and passing interest rate risk to investors.

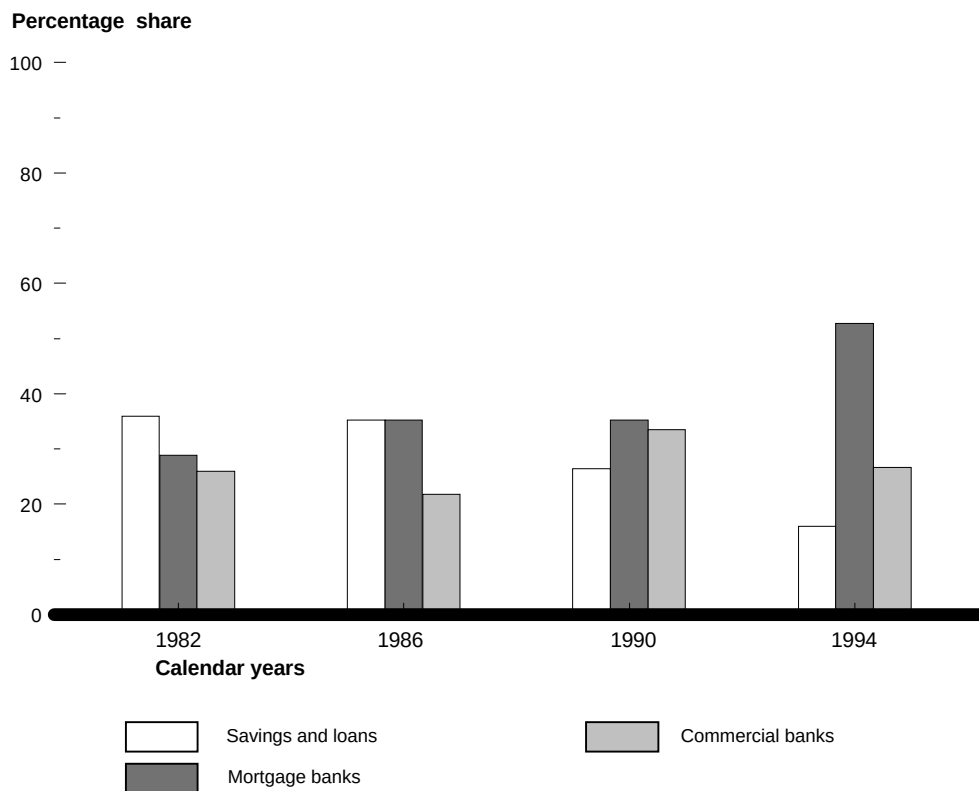
Mortgage Bankers and the Enterprises Gained Importance in Mortgage Markets as Many Thrifts Failed

The unexpected increase in interest rates in 1979 through 1981 that created problems for Fannie Mae also contributed to the failure of many thrifts in the 1980s. As interest rates rose, many thrifts became unprofitable, and some thrifts hoping to regain profitability undertook risky investments as their losses grew. In many of these cases, such actions accelerated and increased losses to the thrift deposit insurance fund, the Federal Savings and Loan Insurance Corporation (FSLIC). At the same time, FSLIC did not have the resources to close all insolvent thrifts. As the weakened thrifts deteriorated further, closure costs continued to increase.

In 1989, Congress abolished the Federal Home Loan Bank Board and dispersed its functions to other agencies. The Office of Thrift Supervision became the regulator of federally chartered savings and loans. Freddie Mac became a government-sponsored enterprise owned by private investors. Deposit insurance for thrifts went to the Savings Association Insurance Fund under the Federal Deposit Insurance Corporation (FDIC), and the Resolution Trust Corporation (RTC) was created to close and liquidate insolvent thrifts that were still open when RTC was created.

As thrifts failed and the thrift industry's originations and holdings of mortgages decreased, mortgage bankers originated more mortgages and mortgage conduits increased their issuance of MBS. As shown in figure 1.1, the importance of mortgage bankers as originators increased as that of thrifts decreased. In 1982, thrifts originated 35.9 percent of all mortgages on 1-4 family units (commonly called single-family units); however, their

Figure 1.1: Single-Family Mortgage Originations

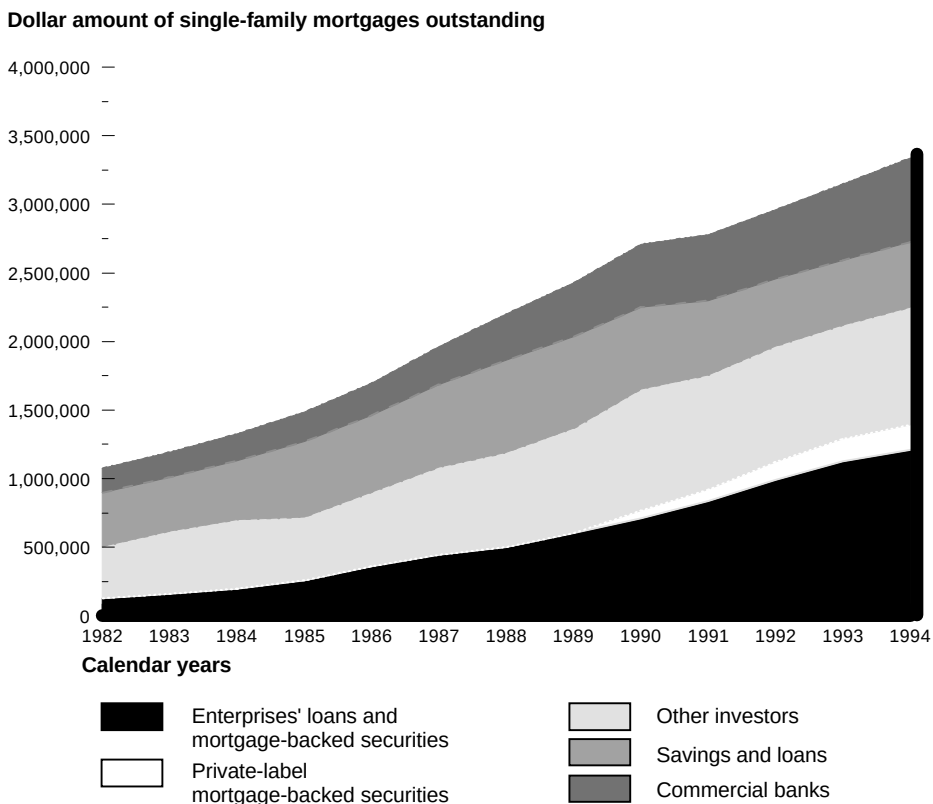


share had dropped by 1994 to 15.9 percent. In 1982, the mortgage bankers originated 28.9 percent of all mortgages for single-family units, and by 1994, their share had increased to 52.8 percent. Mortgage originations were no longer strongly tied to the thrift industry.

Not only did thrifts become less prominent as originators, they also held less mortgage debt directly in portfolio. As shown in figure 1.2, the conduits and especially the enterprises became an increasingly important mechanism for channeling residential mortgage funds. In 1982, thrifts held in portfolio 36.6 percent of all outstanding mortgages on single-family units (their holdings of MBS were not reported). By 1994, thrifts held

directly, in portfolio, only 14.3 percent of outstanding mortgages on single-family units. Much of this shrinkage of direct mortgage holdings was accounted for by the growth of the enterprises' activities. By 1994, the enterprises held in portfolio 6.7 percent of all mortgages on single-family units, and their MBS represented 29.5 percent of the outstanding single-family unit mortgages. However, the thrifts continued to hold mortgages indirectly since they held MBS created by the enterprises and other conduits.

Figure 1.2: Single-Family Mortgages Outstanding (Dollars in Millions)



Congress Altered the Housing Enterprises' Charters to Expand Public Policy Purposes and Limit Risks

The effect of the 1992 Act, in combination with the GSE-related provisions in the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), was to make the charters of the enterprises substantially the same. Provisions of the enterprises' charters, which remain in force today, include the following broad public policy purposes:

- provide stability in the secondary market for residential mortgages;
- respond appropriately to private capital markets;
- provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages for very low-, low-, and moderate-income households involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for mortgage financing; and
- promote access to mortgage markets throughout the nation (including central cities, rural areas, and underserved areas) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing.

In the 1992 Act, Congress created the Office of Federal Housing Enterprise Oversight (OFHEO). OFHEO was to regulate the enterprises for safety and soundness and set capital standards for the enterprises, and HUD was authorized to establish, monitor, and enforce mortgage purchasing goals for the enterprises.

The Enterprises' Charters Confer Benefits and Impose Restrictions

Although the enterprises are privately owned and for profit, their charters impose restrictions and confer benefits that affect their ability to make profits. The enterprises are specifically authorized to deal in conventional residential mortgages under the conforming loan limit; other kinds of business are not so authorized. Other restrictions include goals set by the Secretary of HUD for the dollar volume of mortgages that the enterprises must purchase from very low-, low-, and moderate-income households and underserved rural and urban areas.

The benefits provided to each enterprise include

- a \$2.25 billion conditional line of credit with the U.S. Treasury;
- an exemption from paying state and local corporate income taxes;
- an exemption from registering their securities with the Securities and Exchange Commission (SEC), which means they do not pay SEC fees; and

- the ability to use the Federal Reserve as a transfer agent, which enhances the enterprises' operating efficiency.

Housing Enterprises Have Generally Done Well Financially

Although operating with the restrictions and benefits established by the government, the enterprises have been consistently profitable since the mid-1980s. (See table 1.5.)

Table 1.5: 1995 Financial Performance of the Housing Enterprises

Dollars in billions		
	Fannie Mae	Freddie Mac
Total assets	\$316.55	\$137.18
Mortgage holdings ^a	252.59	107.41
MBS outstanding ^a	513.23	459.05
Stockholder equity	10.96	5.86
Net income	2.14	1.09
Return on equity as of year end	19.53%	18.60%
Equity as a percentage of total assets plus MBS outstanding at year end	1.32%	.98%

^aMBS outstanding excludes MBS held in portfolio, and mortgage holdings include MBS held in portfolio.

Sources: Fannie Mae *Investor/Analysts Report* for fourth quarter 1995 and Freddie Mac news release dated January 16, 1996.

As of year-end 1995, Fannie Mae's assets exceeded \$316 billion, and Freddie Mac's \$137 billion. In addition, Fannie Mae's outstanding mortgage holdings exceeded \$252 billion, and Freddie Mac's exceeded \$107 billion. Although Freddie Mac historically retained relatively fewer mortgages than Fannie Mae, Freddie Mac has in recent years increased its share of mortgages held in portfolio. At year-end 1995, Fannie Mae mortgage holdings were about 80 percent of its total assets and 23 percent of its total mortgage servicing portfolio—the sum of mortgage holdings and MBS outstanding. Freddie Mac's mortgage holdings were about 78 percent of its total assets and 19 percent of its total servicing portfolio. In 1995, Fannie Mae's return on equity was 19.53 percent and Freddie Mac's was 18.60 percent. In 1995, Fannie Mae's equity ratio (equity divided by the sum of total assets and MBS outstanding) was 1.32 percent, and Freddie Mac's was .98 percent.

The Enterprises Are Faced With Four Major Types of Risk

While earning profits, Fannie Mae and Freddie Mac must deal with four major types of risk: business, interest rate, credit, and management risk.

Business Risk

Business risk is the possibility of financial loss due to conditions within the market or markets in which a firm operates. Because the enterprises serve the secondary market for conforming mortgages, their financial health depends on the factors that create a healthy secondary market for such mortgages. If profits decline or risks increase in this limited market, the enterprises cannot avoid associated problems by exiting their current market and entering new markets.

Interest Rate Risk

Interest rate risk is the possibility of financial loss due to changes in market interest rates. Movements in market interest rates can affect interest expenses, interest earnings, prepayments by homeowners, and the value of assets and liabilities on the balance sheet.

Rising market interest rates increase interest expenses as debt turns over and decrease the value of existing assets that are paying a below-market rate. As discussed earlier, Fannie Mae experienced this problem in the early 1980s as its interest expenses increased and interest earnings on its existing pool of mortgages were relatively constant.

When market interest rates decline, homeowners tend to prepay mortgages more quickly, resulting in a decrease of the net average interest rate received by the enterprises on mortgages held in portfolio. The net rate decreases even if new lower rate mortgages are bought by the enterprises as long as the interest rate paid on outstanding debt does not change. At the same time, if prepaid mortgages are not replaced with new lower rate mortgages, the enterprises' outstanding debt balance could exceed their mortgage balances. Whether or not the enterprises replace prepaid mortgages with new lower rate mortgages, they face interest rate risk.

The enterprises limit interest rate risk in several ways. First, the enterprises avoid interest rate risk by passing it to investors when they create MBS. Second, both enterprises limit interest rate risk by issuing callable bonds that can be paid off early if rates fall. By calling the bonds and issuing new debt as interest rates fall, the enterprises curtail interest rate expenses. Conversely, if rates increase, the enterprises continue to

pay below-market rates on their existing bonds. Callable bonds are one example of how the enterprises manage their liabilities to hedge interest rate risk associated with their asset holdings. The enterprises have also developed other methods, including certain derivative products, to control their interest expenses as the economy varies.

Credit Risk

Credit risk is the possibility of financial loss resulting from default by homeowners on housing assets that have lost value. Credit risk on mortgages is the possibility that mortgages will go into default, and the net recoveries from selling the property and collecting private mortgage insurance will not cover outstanding balances. This risk occurs when the enterprises hold mortgages in portfolio and when they guarantee principal and interest payments to investors in their MBS.

Primary determinants of credit risk are the homeowner's payment burden, the homeowner's creditworthiness, the size of the down payment, and the existence of private mortgage insurance. The first three factors affect whether the applicant can and will make timely mortgage payments. The size of the down payment and the existence of private mortgage insurance (PMI) affect the size of any loss in the event of a default. A larger down payment and PMI increase the likelihood that the house can be sold after foreclosure for an amount that is sufficient to recover the outstanding mortgage balance.

Management Risk

Management risk is the possibility of financial loss resulting from a management mistake that can threaten the company's viability. Careful oversight by the company's board, stockholders, financial markets, and regulators can help ensure that management risk is adequately controlled.

Objectives, Scope, and Methodology

Section 1355 of the 1992 Act mandated us, the Congressional Budget Office (CBO), the Department of Housing and Urban Development (HUD), and the Department of the Treasury to separately study and report on "the desirability and feasibility of repealing the federal charters of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation, eliminating any federal sponsorship of the enterprises, and allowing the institutions to continue to operate as fully private entities." This report is our response to that mandate.

We and the other agencies were directed to examine the effects of privatization on

- the requirements imposed upon and costs to the enterprises,
- the cost of capital to the enterprises,
- housing affordability and availability and the cost of homeownership,
- the level of secondary mortgage market competition subsequently available in the private sector,
- whether increased amounts of capital would be necessary for the enterprises to continue operation,
- the secondary market for residential loans and the liquidity of such loans, and
- any other factors each of the agencies deemed appropriate.

In addition to the legislative mandate, we had discussions with staff of the Subcommittee on Capital Markets, Securities, and Government Sponsored Enterprises of the House Committee on Banking and Financial Services. In these discussions staff asked us to evaluate alternative policies other than privatizing the enterprises.

To respond to the mandate and the Subcommittee staff request, we developed a list of the economic behaviors most likely to be affected by privatization, assessed how well such adjustments can be quantified, and analyzed the probable outcomes resulting from privatization.

The results of our analysis are presented in this report in terms of three principal objectives. These objectives were to assess the potential effects of privatization on (1) the enterprises; (2) residential mortgage markets in general; and (3) housing finance, homeownership, and housing affordability for very low-, low-, and moderate-income families and residents of underserved areas in particular.¹⁹ In addition, we identified and analyzed, in response to the Subcommittee's subsequent request, four policy alternatives that Congress could consider to limit the enterprises' potential risk to taxpayers or increase their social benefits.

To determine how the enterprises and housing finance markets would react to privatization of the enterprises, we reviewed academic, professional, and business literature on the role of the enterprises in mortgage markets. This review identified several ways the enterprises

¹⁹Our second and third objectives overlap. We analyzed single-family mortgages to address the second objective, market effects. Single-family mortgages finance 1-4 unit residences. We analyze single-family housing initiatives undertaken by the enterprises to fulfill social goals as part of the third objective. We also analyzed multifamily housing as part of the third objective.

could be affected by privatization and how markets may evolve and change. We interviewed market participants, such as mortgage bankers, private mortgage insurers, mortgage security underwriters, bond rating agencies, and private-label mortgage conduits, to gain their insights into how the market might perform if the enterprises were to be privatized. We interviewed additional individuals with expertise in mortgage markets, including analysts at the Federal Reserve Board, and current and former HUD staff members. We also interviewed representatives from the enterprises to obtain their perspectives on the effects of privatization.

We participated with the Congressional Budget Office (CBO), HUD, and the Treasury in commissioning five studies on different aspects of privatization. The authors of these studies presented findings at seminars attended by representatives of the four agencies and the enterprises as well as discussants who were invited to provide comments. We had extensive interactions with the authors, both within and outside of the seminars, to evaluate their methodologies and results as needed. We did not, however, verify their data.

We used the studies, the material discussed at the seminars, and comments prepared by the discussants and the enterprises as an additional source of information in preparing this report. The studies and written comments by discussants and Fannie Mae will be published by HUD in Studies on Privatizing Fannie Mae and Freddie Mac (forthcoming May 1996) and do not necessarily reflect the opinions of GAO or the other agencies.²⁰

We also relied on data and information contained in annual and investor analyst reports over the past 6 years published by the enterprises, information statements and prospectuses provided by the enterprises and private-label conduits, studies and statistical tabulations provided by the enterprises, and other information provided by parties we interviewed. We obtained documentation and evaluated the data and information as needed, but we did not verify these data. We conducted our work in Washington, D.C., from March 1994 through December 1995 in accordance with generally accepted government auditing standards.

In addition, we provided copies of the draft of this report to the Chairmen of Fannie Mae and Freddie Mac. On April 26, 1996, we met separately with senior enterprise officials, which included senior vice-presidents from

²⁰Freddie Mac did not provide written comments on these studies.

each agency, and they provided oral comments, which are presented and discussed on pages 49-53, 70-77, and 94-97.

One Freddie Mac official said that we relied on work performed by others that we did not verify, and therefore we should make clear when estimates by others were used. We have clarified how we evaluated and relied upon the five studies on different aspects of privatization as well as the data and information supplied by the enterprises and others.

Privatization Would Likely Increase Enterprise Costs and Change the Enterprises' Operating Strategies and Activities

Assuming that privatization eliminates the perception by investors of an implied federal guarantee of the enterprises' financial obligations as well as explicit charter benefits, the enterprises' overall annual costs would increase substantially. Based on 1995 financial statements and operations of the enterprises, total cost increases on a pretax basis could have been in the range of \$2.2 billion to \$8.3 billion. The largest increase, probably in the range of \$1.3 billion to \$4.4 billion, would likely have been in an expense that has represented in recent years more than two-thirds of total expenses of each of the enterprises—the interest the enterprises pay on their debt securities. Without the perception of an implied federal guarantee, investors would likely require higher interest rates on the enterprises' debt securities to make up for the perceived increase in risk. For the same reason, the enterprises would also have higher funding costs on the MBS they issue. In addition, increased overhead and operating expenses would result from the elimination of the enterprises' exemption from SEC registration requirements and state and local corporate income taxes.

The increased costs would likely lead the enterprises to change their operating strategies and activities so that they would probably resemble more closely the strategies of private-label conduits. In addition, they could enter into new lines of business, both within and outside of the housing finance industry.

On the other hand, if the markets' perception about the implied guarantee does not change, or changes very little, the effect of privatization on the enterprises' costs would be limited largely to expenses related to SEC registration requirements and state and local corporate income taxes. The primary effect of privatization in this case may be the enterprises' increased opportunities to enter new lines of business. Therefore, the effect of privatization largely depends on the markets' perception of the riskiness of the enterprises' debt securities and MBS following privatization.

Interest Income and Expenses Dominate the Enterprises' Finances

As shown in the 1995 income statements of the enterprises (see table 2.1 for summary information), interest income and expenses dominated the enterprises' finances. In 1995, the enterprises' major sources of income were interest earned on mortgages retained in portfolio and guarantee fees on MBS.¹ Interest income provided 94.7 percent of Fannie Mae's total revenue and 88.2 percent of Freddie Mac's. Interest income was relatively

¹Interest and principal flowing through the MBS mortgage pools are revenues to the mortgage pools, which are legally separate entities from the enterprises. These flows are not reported on the enterprises' income statements, but the fees paid by the pools to the enterprises are reported.

higher at Fannie Mae because it retained in portfolio a relatively large proportion of mortgages it has bought—33 percent, compared to Freddie Mac's retention of 18 percent (see tables 2.2 and 2.3.)

Expenses were dominated by interest paid on debt securities. As shown in table 2.1 (under Total interest expenses), this expense represented 81.0 percent of Fannie Mae's total revenues and 73.5 percent of Freddie Mac's. Debt securities are the enterprises' primary source of financing. For this reason, the enterprises' funding costs are driven primarily by the interest paid on debt securities.

Table 2.1: Income Statements for the Housing Enterprises in 1995

Dollars in Millions				
	Fannie Mae		Freddie Mac	
	Dollars	Percent of total revenues	Dollars	Percent of total revenues
Revenues				
Interest income	\$21,070.8	94.70	\$8,393.0	88.17
Guarantee and management fees	1,085.7	4.88	\$1,087.0	11.42
Other income	92.5	0.42	39.0	0.41
Total revenues	\$22,249.0	100.0	\$9,519.0	100.0
Expenses				
Interest expenses	(\$18,023.4)	81.01	(\$6,997.0)	73.51
Other expenses	(1,230.2)	5.53	(936.0)	9.83
Income before taxes and extraordinary items (revenues minus interest and other expenses)	\$2,995.4	13.46	\$1,586.0	16.66
Provision for federal income taxes	(\$839.8)	3.77	(\$495.0)	5.20
Extraordinary losses	(\$11.4)	0.05	\$0.0	0.00
Net income	\$2,144.2	9.64	\$1,091.0	11.46

Source: Preliminary 1995 financial data from Fannie Mae and Freddie Mac.

Chapter 2
Privatization Would Likely Increase
Enterprise Costs and Change the
Enterprises' Operating Strategies and
Activities

Table 2.2: Balance Sheets for the Housing Enterprises in 1995

Dollars in Millions				
Assets	Fannie Mae		Freddie Mac	
	Dollars	Percent of total assets	Dollars	Percent of total assets
Mortgage holdings ^a	\$252,588	79.8%	\$107,411	78.3%
Other assets	63,962	20.2	29,770	21.7
Total assets	\$316,550	100.0	\$137,181	100.0
Liabilities				
Liabilities and reserves	\$305,591	96.5	\$131,318	95.7
Stockholders' equity	10,959	3.5	5,863	4.3
Total liabilities and equity	\$316,550	100.0	\$137,181	100.0

^aMortgage-backed securities exclude MBS held in portfolio, and mortgage holdings include MBS held in portfolio.

Source: Preliminary 1995 financial data from Fannie Mae and Freddie Mac.

Table 2.3: Total Mortgage Servicing Portfolio

Dollars in Millions				
	Fannie Mae		Freddie Mac	
	Dollars	Percent of total	Dollars	Percent of total
Mortgage holdings	\$252,588	33.0%	\$107,411	17.8%
Mortgage-backed securities ^a	513,230	67.0	495,045	82.2
Total mortgage servicing portfolio	\$765,818	100.0	\$602,456	100.0

^aOff balance sheet item.

^bMortgage-backed securities exclude MBS held in portfolio, and mortgage holdings include MBS held in portfolio.

Source: Preliminary 1995 financial data from Fannie Mae and Freddie Mac.

Largest Enterprise Benefits Flow From Market Perception of Implied Guarantee

Due to the importance of interest income and expense in the financial condition of the enterprises, the most important advantage of the enterprises' government-sponsored status is the perception of financial market participants that the federal government is likely to act to ensure that the enterprises will meet their debt and MBS obligations. The perceived federal guarantee lowers the enterprises' funding costs in two primary ways. First, it decreases perceived risk for investors in the enterprises' debt and MBS; this lowers the funding costs that the enterprises must pay. Consequently, the enterprises pay interest rates on their debt that are

above the rates that the Treasury pays and below the rates paid by highly rated financial corporations on similar debt.

The second way that the perceived federal guarantee lowers the enterprises' funding costs is that it decreases the extent to which the enterprises must fund themselves with relatively more expensive equity capital—the difference between assets and liabilities. Equity serves as a financial cushion that can absorb financial losses in bad years. Investors in a corporation's debt require this cushion because it can help ensure the continued operation of the company when downturns occur. The amount of equity a firm needs to maintain a high debt rating depends on financial risk; if risk is relatively high, equity must be correspondingly high. Because the perceived federal guarantee lowers investors' perceived financial risk, the enterprises are able to hold less equity and fund more of their operations through issuing debt securities, compared to potential private competitors.

A further advantage of government sponsorship is that bond rating agencies and bank regulators consider the enterprises issuers of low-risk debt on the basis of their perceived government ties. This ensures that the enterprises' debt securities and MBS can be bought and held by a large class of investors that must invest in high-grade securities. These investors include banks, insurance companies, and other regulated institutions, which provide a ready and consistent outlet for enterprise debt and MBS.

The last funding advantage is that most investors realize that the very size of the enterprise ensures a ready market for reselling enterprise debt securities and MBS. Government sponsorship does not in itself guarantee large size. However, the combination of a multibillion-dollar mortgage market, the financial cost advantage arising from the perception of government backing, and the fact that only two organizations have been granted these advantages contribute to the enterprises' size. This marketability or liquidity further lowers the enterprises' funding costs since investors know they can readily resell the securities if they need cash quickly. Consequently, investors do not require higher interest rates on enterprise debt issuances due to the risk that they cannot be resold in a liquid market. The large size of the enterprises' operations may also lower their average operating costs per MBS or per mortgage due to economies of scale.²

²Here economies of scale refer to the cost of creating and administering MBS; the cost impact for the enterprises is in addition to the funding advantage for MBS because investors require a lower yield on enterprise MBS due to federal ties.

Other benefits that derive directly or indirectly from the federal charters and lower the enterprises' operating costs include

- a conditional line of credit of up to \$2.25 billion available for each enterprise from the U.S. Treasury at Treasury's discretion;
- exemption from registering securities or paying fees to SEC;
- ability to issue debt and MBS that the Federal Reserve, other bank regulators, and bond rating agencies consider high-quality, low-risk paper; and
- use of the Federal Reserve as a transfer agent, which enhances operating efficiency.

The combined funding and operating cost advantages, along with any additional efficiencies arising from sound management practices, help ensure that the enterprises are the lowest cost participants in the secondary conforming mortgage market. In effect, the advantages flowing from government sponsorship make it difficult if not impossible for other companies to compete in the secondary market for conforming loans.

Elimination of the Perception of an Implied Guarantee Would Increase Enterprises' Funding Costs

Assuming that privatization causes the market to no longer perceive an implied guarantee by the government or perceived it to be substantially weakened, the market would in turn likely demand a higher payment on debt and MBS.³ We used the 1995 financial statements and operations of the enterprises to estimate the dollar benefits of government sponsorship in funding costs on debt securities and MBS.⁴ The extent to which the savings of sponsorship flow to the enterprises, borrowers, and investors is unknown; we discuss impacts on borrowers in chapter 3. We estimated, using conservative measures of the enterprises' funding advantages resulting from government sponsorship⁵, that the total benefit in reduced interest costs the enterprises paid in 1995 on debt securities was in the range of \$893 million to \$1.3 billion, with the amount depending upon how the enterprises would treat cost increases resulting from privatization on

³If the enterprises had to pay higher interest rates on their debt, their income from issuing debt to purchase mortgages would be reduced as long as mortgage interest rates remained unchanged. Likewise, if the enterprises had to pay investors higher returns on their MBS, their income from issuing MBS to fund mortgages they purchase would also be reduced. The enterprises collect fees on MBS that represent part of the difference between payments by borrowers and the share of those payments to MBS investors.

⁴FNMA and FHLMC: Benefits Derived From Federal Ties (GAO/GGD-96-98R, Mar. 25, 1996).

⁵For this calculation, we used 30 and 5 basis points as the funding advantage on debt and MBS, respectively, based on Congressional Budget Office, Reducing the Deficit: Spending and Revenue Options (Feb. 1995) pp. 318-319. CBO stated that the enterprises' funding advantage on debt was at least 30 basis points and on MBS was at least 5 basis points

their federal tax returns.⁶ We estimate the total combined benefit in funding costs the enterprises received on MBS was in the range of \$343 million to \$486 million. We also estimated, using higher measures of the enterprises' funding advantages, that the total benefit on debt was in the range of \$3.2 billion to \$4.4 billion and was in the range of \$2.4 billion to \$3.4 billion on MBS.⁷

In one of the studies done for this project, Ambrose and Warga⁸ estimated the current funding advantage of government sponsorship for enterprise fixed-rate debt. They used two approaches. In their first approach, they estimated how much lower the enterprises' average current interest rate is than the average interest rate on similar debt⁹ issued by their potential competitors. On the basis of yield data, they estimated that the enterprises paid on average about 0.37 percent less on noncallable debt and about .63 percent less on callable debt from 1985 to 1994.¹⁰ They also made estimates for the more current 1991 to 1994 time period and using different A, double-A, and triple-A rated corporations as benchmarks. The estimated funding advantage on callable debt for the 1991 to 1994 period ranged from .8 to 1.06 percent. The enterprises' interest rates, however, were higher than rates on U.S. Treasury debt. This difference suggests uncertainty in the market's perception that the government is likely to rescue the enterprises if they failed.

⁶Funding costs are deductible for federal corporate income tax purposes. It should be noted that the (higher) estimated pretax value of financial benefits is consistent with a scenario in which the extra costs to the enterprises resulting from repeal of benefits would be passed through entirely to homebuyers with no corresponding loss in each enterprise's corporate income. The estimated aftertax value is consistent with a case in which the enterprises would not be able to pass through any extra costs to homebuyers. As a result, deductibility of these extra costs would directly lower corporate income.

⁷The higher range of our dollar estimates of the funding advantage resulting from government sponsorship assumed a 1.06 percentage point funding advantage on debt and .35 percentage points on MBS.

⁸These data are reported in a study commissioned by HUD. The study was conducted by Brent Ambrose and Arthur Warga and was entitled "Implications of Privatization: The Costs to FNMA and FHLMC."

⁹Their estimates are based on bond yields in which they control for differences in bond characteristics such as maturity and age. The estimates reported here are based on a rating of AA to represent the credit quality of debt issued by potential competitors. Double-A is a rating assigned by Standard and Poors, a major bond rating agency. It indicates quality of the debt and the likelihood that a bond issuer will make principal and interest payments on schedule. The best rating is AAA. Yield is the interest rate received on a security if the investor holds it until maturity.

¹⁰The enterprises rely heavily on callable debt to finance their retained mortgage portfolios. Noncallable debt is debt that must be paid on schedule by the issuer and cannot be prepaid. Callable debt, in contrast, can be paid off at the issuer's discretion. Callable debt is advantageous when interest rates decline below the interest paid on such debt. As of year-end 1994, over half of Fannie Mae' long-term debt and over 80 percent of Freddie Mac's were callable or had downward rate adjustment features.

In the second approach, Ambrose and Warga evaluated how differences in cash flows and returns over time between debt and equity issued by the enterprises and other borrowers may have affected cost of capital differentials.¹¹ They concluded, on the basis of this approach, that if the enterprises had to issue debt with characteristics similar to debt issued by potential A-rated competitors, their cost of funds would have increased by about 1.5 percentage points.

Ambrose and Warga also compared average differences in investor yields between enterprise and private-label multiclass MBS. Enterprise MBS had average yields that were .27 to .37 percentage points lower than private-label MBS.¹²

Analysts Expect That Privatization Would Probably Require an Increase in the Enterprises' Equity Capital Levels

Because the perception of an implied federal guarantee lowers the perceived risk of the enterprises' debt securities and MBS, investors accept lower yields on all enterprise securities and permit the enterprises to operate with less equity than they would otherwise require. A good measure of equity adequacy is the ratio of equity to all assets—the sum of book assets and MBS. (Generally, the larger the ratio, the less the likelihood that operating losses will result in the failure of the entity.) In 1995, Fannie Mae's ratio of equity to all assets was 1.3 percent, and Freddie Mac's was 0.9 percent. (Freddie Mac's lower ratio reflects the fact that less equity needs to be held against the risks of MBS.) These equity ratios are generally lower than ratios maintained by other financial institutions that deal in mortgages and MBS.

As of December 1995, OFHEO required the enterprises to meet two different minimum equity ratios: the minimum ratio of equity to retained assets and the minimum ratio of equity to off-balance sheet assets. The minimum ratio of equity to retained assets, which includes mortgages held in portfolio, was 2.5 percent; the minimum ratio to off-balance sheet assets, which includes MBS, was .45 percent. The enterprises' current ratios satisfy the minimums set by OFHEO.

¹¹The approach is based on a model called the capital asset pricing model. The approach compares how one financial instrument's returns fluctuate, in terms of both direction and volatility, compared to benchmark securities chosen by the analyst. The authors chose securities issued by highly rated depository institutions as their benchmark securities.

¹²Ambrose and Warga discussed estimation problems in estimating enterprise funding advantages because the debt and MBS instruments issued by the enterprises have features different from those issued by private issuers. In particular, they report only average yield differences for MBS, because they were unable to control for the large differences in features between enterprise and private label MBS. The MBS estimates were based on collateralized mortgage obligations, which were discussed in chapter 1.

Analysts at the enterprises, mortgage market analysts at rating agencies, and private-label conduits told us high bond ratings are desirable since they indicate the firm imposes lower risks and investors will permit lower risk firms to pay lower interest rates on their debt. However, to obtain such ratings as fully private firms, these analysts generally told us that the enterprises would probably have to increase their equity levels.

Privatization Would Eliminate Direct Benefits

Privatization would eliminate the direct benefits conveyed by the enterprises' federal charters. The most significant of the direct charter-based benefits is probably the exemption from state and local corporate income taxes. If the enterprises had paid state and local corporate income taxes at an average rate of 8 percent in 1995 and if no other costs, capital levels, or operating strategies had changed, we estimated that this would have resulted in a combined increase in expenses for the enterprises in the range of \$367 million to \$256 million, again depending upon the enterprises' treatment of the increases in their federal tax returns.¹³

Expenses related to SEC registration fees, which the enterprises would also have to pay if privatized, would also be significant. If the enterprises had been required to register with SEC and pay fees in 1995 and if no other costs, capital levels, or operating strategies had changed, registration would likely have cost the enterprises SEC's statutory fee of 3.4 basis points on each dollar of long-term debt, MBS, and CMO issued. The combined increase in expenses for the enterprises would have been in the range of \$102 million to \$72 million.¹⁴

The enterprises do not currently have to obtain ratings on their debt, MBS, and equity issuances from private rating firms. If they were privatized, they would need to obtain such ratings. We understand that rating fees average about 3 basis points (.03 percent) on issuances but are subject to substantial discounts for large issuers. Our calculations, however, do not include an estimate of the amount of fees that the enterprises might have to pay if privatized.

¹³FNMA and FHLMC: Benefits Derived From Federal Ties (GAO/GGD-96-98R, Mar. 25, 1996). The 8 percent average state corporate income tax rate is based on a Congressional Research Service report entitled "Unfunded Mandates and State Taxation of the Income of Fannie Mae, Freddie Mac, and Sallie Mae: Implications for D.C. Finances," written by Dennis Zimmerman (Sept. 8, 1995).

¹⁴FNMA and FHLMC: Benefits Derived From Federal Ties (GAO/GGD-96-98R, Mar. 25, 1996). We excluded short-term debt issuances by the enterprises because SEC officials told us that such debt could be defined as commercial paper and not be subject to SEC registration fees. A basis point is one one-hundredth of a percentage point.

Determining the cost advantage of using the Federal Reserve as a transfer agent is difficult. However, using the Federal Reserve could make enterprise securities more liquid and convenient investments than they would be otherwise. Such convenience could also lower MBS issuance costs. Just as with rating fees, we did not estimate such costs.¹⁵

These cost increases resulting from privatization would also likely have an adverse impact on the enterprises' market shares, profits, and stock values. The magnitude of the effect would depend on the magnitude of the cost increase. In addition, certain expenditures, such as those for compensation, could decline.

Privatization Could Change the Enterprises' Operating and Marketing Strategies

The combination of potentially higher funding costs, increases in other expenses, and opportunities to expand into new business areas associated with privatization could alter the enterprises' operating strategies. The enterprises have noted that removal of their benefits and restrictions would lead them to change their operating strategies. An important determinant in the extent and type of behavioral change would be the effect of privatization on the enterprises' funding costs. For example, if debt costs increase substantially as a result of privatization but MBS funding costs and mortgage interest rates go up by lesser amounts, the enterprises would have strong incentives to change both the amount of mortgages they fund and the way they fund mortgages. They might decide to hold fewer mortgages in portfolio and fund a larger proportion of mortgages by issuing MBS. This possibility is discussed in more detail in chapter 3.

The markets' perception of increased credit risk of enterprise securities could also lead the enterprises to change the terms under which they securitize mortgages. The MBS issued by the enterprises could come to more closely resemble those issued by private-label conduits. In addition, the elimination of charter restrictions would provide the enterprises with expanded opportunity in the areas of nonconforming mortgages and nonmortgage securitization as well as areas related to secondary mortgage market lending.

¹⁵We did not have data to estimate rating fees, because the discounts given by rating agencies are proprietary information. In addition, the enterprises pay fees to the Federal Reserve for being a transfer agent, and we do not have a basis to estimate the potential enterprise cost advantage that may be above and beyond these fees.

The Enterprises' MBS
Might More Closely
Resemble Private-Label
MBS

If the markets perceived a decline in the creditworthiness of the enterprises as a result of privatization, one response the enterprises could choose would be to alter their MBS to more closely resemble those now issued by private-label conduits. Under the current structure, the enterprises insure the creditworthiness of their MBS. Without the benefit of the market perception of an implied federal guarantee of creditworthiness, investors could require the enterprises to deal more directly with credit risks in their MBS.¹⁶

The funding mechanism of current private label conduits in the jumbo market provides some information about how MBS might be structured with privatization.¹⁷ The enterprises provide credit enhancement for their MBS by requiring mortgage insurance on mortgages with loan-to-value ratios above 80 percent¹⁸ and fully insuring the remaining credit risk on most mortgages. The private-label conduits issue multiple-class MBS in which part of the credit risk is passed onto investors. Providing credit enhancements that limit the credit risk to investors is important to the marketability and liquidity of the MBS.¹⁹

The Enterprises Could
Enter New Markets and
Other Industries

Without their current charter restrictions, the enterprises would be allowed to enter the current jumbo mortgage market. They would also be allowed to engage in business activities that complement their existing businesses—for example, the proprietary information technology developed by the enterprises could lead to nonmortgage securitization and provision of automated financial transactions services.

The Enterprises and Other
Conduits Could Participate in
Related Real Estate Activities

The residential mortgage market consists of a vertical stream of entities beginning with home buyers and mortgage originators and continuing with mortgage underwriters, insurers, conduits, and investors. Privatization would allow the enterprises to enter different vertical segments of the

¹⁶The funding advantage the enterprises have over private-label issuers of MBS is not directly observable because private-label MBS have contract features that differ from the enterprises' features. For example, private-label MBS pass credit risk onto at least one class of investors while enterprises MBS retain all the credit risk.

¹⁷Private-label conduits securitize mortgages they purchase; they do not fund mortgages out of retained portfolio.

¹⁸The enterprises are not allowed by statute to purchase mortgages with loan-to-value ratios above 80 percent without mortgage insurance or another form of credit enhancement. The enterprises, however, often require mortgage insurance beyond the minimum statutory level.

¹⁹The funding mechanisms of current private-label conduits, including their credit enhancements, are discussed in chapter 1.

housing finance system, such as origination and mortgage insurance, that their charters now prevent them from entering.

The enterprises compile extensive information on housing and mortgage markets, including home sales prices, housing ownership turnover, and flows of mortgage credit. Currently, private-label conduits, their mortgage banking subsidiaries, and other large mortgage banking businesses are developing products such as real estate appraisal services. The enterprises, private-label conduits, and many mortgage banking businesses have developed expertise in hedging interest rate risks associated with providing mortgage commitments before funding. The enterprises have also developed this expertise as it applies to funding long-term, fixed-rate mortgage products.

One interesting possibility is that the enterprises, private-label conduits, large mortgage bankers, and other industry participants might vertically integrate²⁰ or form networks, including firms specializing in different vertical stages of the process, to provide residential mortgage credit. If this were to occur, the resulting entities might develop large capacities for information retrieval and distribution to effectively compete in the mortgage markets as well as expertise in financial and risk management. These capacities could create synergies in related real estate activities and in nonhousing financial markets. Under privatization, the enterprises would not face the restrictions in their current charters that now prevent them from supplying these alternative services.

Effect of Privatization Would Largely Depend on Market Perceptions

In our analysis of the likely effects of privatization on the enterprises, we assumed that privatization would result in the reduction or elimination of the perception of an implied federal guarantee. While it appears that eliminating the benefits, restrictions, and obligations associated with the enterprises' federal charters would be likely to at least reduce the markets' perception of the implied guarantee, we recognize the uncertainty inherent in any attempt to predict the behavior of financial markets. To the extent that the markets do not perceive that the ties between the enterprises and the federal government are broken, the enterprises' funding advantage may remain. In case little change in the funding advantage occurs, the primary effects of privatization would be to (1) raise some operating costs by eliminating the tax and SEC registration-related benefits that flow directly from the charter, and (2) free the enterprises to do business in

²⁰Vertical integration by a business firm occurs when the firm combines with another firm operating in a different vertical segment of an industry through acquisition or merger.

new areas. In such a case, the enterprises could become even larger and generate even greater potential risk to the government should the government feel the need to rescue a failing enterprise that was “too big to fail.”

Conclusion

The effect of privatization on the enterprises is difficult to predict. First, it is always difficult to predict with much precision how an organization will respond to changes in its environment whether from higher tax liabilities, higher interest costs, or reduced restrictions on its actions. Second, the most important effects depend on changes in market perceptions and the subsequent effect of those perceptions on the funding costs the enterprises would face. If the markets perceive the privatized enterprises' securities as being riskier than the government-sponsored enterprises' securities, they are likely to demand higher returns to pay for the greater perceived risk. This could cause the enterprises' funding costs to rise significantly. The markets would also likely insist on greater capital to maintain a given credit rating. These increased funding costs and any resulting changes in enterprise behavior could bring about substantial change in the overall mortgage market. The enterprises could alter their behavior in a number of areas, including the amount of mortgage financing they do, the way they finance mortgages, and the way they deal with credit risk in their MBS. The potential effect under this scenario also depends on responses of other participants in the housing finance market, as discussed in the next chapter.

On the other hand, if market perceptions do not change, and interest costs do not rise, the primary cost increases from privatization would come from SEC registration fees and state and local taxes. In this case, the cost increases that the enterprises would face may be minor in relation to the potential profitability from their increased business opportunities. Changes in the operating and marketing strategies of the enterprises—whatever the specific changes might be—could also affect behaviors of other industry participants.

Enterprise Comments and Our Evaluation

In oral comments on our draft report, Fannie Mae and Freddie Mac officials disagreed with our analysis of the financial benefits that government sponsorship provides to the enterprises and what they perceived as an implication that the benefits are derived by the enterprises rather than homebuyers. Fannie Mae officials said that the draft report did not provide sufficient context for the estimated range of financial benefits

that government sponsorship provides to the enterprises. For example, the officials said the draft report implied that the benefits are derived by the enterprises rather than homebuyers. Generally, they did not think that it is meaningful to discuss charter-based benefits without discussing their restrictions, obligations, and what is passed thorough to borrowers. Although Fannie Mae officials also said that it is possible to estimate the value of government sponsorship, they said a more appropriate analysis would require a specific identification of who benefits from government sponsorship. Because the Fannie Mae officials believe that homebuyers are the primary beneficiaries of the financial benefits, they said we should have estimated the total value of lower mortgage interest rates to the American public. In addition, Fannie Mae officials said that the enterprises do not pay MBS yields; rather, they only guarantee the timely payment of MBS principal and interest in exchange for a guarantee fee. Therefore, the officials said Fannie Mae does not incur funding costs on MBS, so it would not incur additional costs of 5 to 35 basis points in the event of privatization.

Freddie Mac officials also said that our estimates of the benefits associated with government sponsorship are high and that any financial benefits flow to homebuyers in the form of lower mortgage interest rates. The Freddie Mac officials further stated that we should use the aftertax estimates since a portion of any financial benefits is returned to the federal government in the form of income taxes. In addition, the Freddie Mac officials said that privatization would not eliminate the perception of the federal government's implied guarantee to support the housing finance system. The officials said that the implied guarantee would remain because the federal government has supported a stable, low-cost housing system for 60 years, and the market would still believe that the government would take necessary steps to protect that system, including providing emergency financial support to significant participants in the mortgage finance system.

Officials from both enterprises argued that the Ambrose and Warga study has fundamental flaws and that we should not have relied on it. Fannie Mae officials said that the high-end estimate of \$8.9 billion in 1995 is excessive on its face because the enterprises had a combined beforetax income of only \$4.6 billion that year: the estimated cost savings to the enterprises was about twice their beforetax profits. Moreover, the officials said that there were problems with Ambrose and Warga's analysis of rate of return data. Although the Fannie Mae officials acknowledged that Ambrose and Warga's study also found differences when using yield data,

they said the report had so many flaws we should not use any of its findings to estimate the enterprises' funding advantage.

Freddie Mac officials also said that the Ambrose and Warga study suffers from substantial limitations and questioned our using it as a basis for estimating the enterprises' funding advantage. The following summarizes their concerns regarding our use of the Ambrose and Warga study:

- They believe the weighted average cost of capital methodology is flawed and should not be relied upon in setting the top of our range of the funding advantage on debt.
- One official said Ambrose and Warga relied on debt return data from 1991 to 1994 to estimate that enterprise funding costs would rise 100 to 200 basis points in the event of privatization. However, the officials said that a similar analysis performed for the years 1985 to 1994 would have shown no difference in returns between enterprise bonds and bonds issued by other borrowers.
- One official said that bond yields interact over time, an econometric problem called serial correlation, and that this invalidates Ambrose and Warga's estimates.

Fannie Mae officials commented that the draft report's discussion of the enterprises' capital adequacy was misleading. Contrary to a statement in the draft report, they said that the ratio of equity capital to assets is not a good measure of the enterprises' capital because they are a unique institution that faces risks that are different from depository institutions' risks. In particular, the enterprises can hold relatively less capital against MBS since it presents lower risks than other types of assets. Moreover, Fannie Mae officials said the draft report failed to mention that OFHEO is developing risk-based capital standards to ensure the safety and soundness of the enterprises. These standards are intended to ensure that the enterprises will have adequate capital to protect against interest rate risks and other types of risks.

We do not believe there is sufficient evidence to conclude that all of the benefits derived from government sponsorship flow through to homebuyers, an issue we address more completely in chapter 3. We have concluded, however, that if the enterprises were fully privatized and the perceived guarantee were reduced or eliminated, their funding costs would increase for both MBS and debt. Although in a strict accounting sense, the enterprises charge guarantee fees for guaranteeing the timely payment of principal and interest, the fees the market is willing to bear

depend, in part, on how much higher mortgage interest rates are than the yield investors will accept for investing in MBS. Because of the perception of an implied guarantee, the market is willing to pay higher guarantee fees or accept a lower yield on GSE MBS than on private-label MBS.

The use of beforetax or aftertax measures of the benefits derived from government sponsorship and therefore of the potential costs of privatization is spelled out in the report. The use of an aftertax measure is consistent with a case in which the enterprises would not be able to pass through any extra costs to homebuyers. Therefore, the use of an aftertax measure appears inconsistent with the enterprises' view that existing benefits flow through to homebuyers and that eliminating those benefits would harm borrowers. On the issue of whether it is even feasible to eliminate the perception of the implied guarantee, we do not take a position. We assume that privatization would reduce, if not eliminate, investors' perception, but we acknowledge the possibility that it may not occur and we discuss the implications in chapter 3.

We did not base our estimates on the Ambrose and Warga study in its entirety. Rather, we relied on selected analyses from the study, after satisfying ourselves that those analyses were methodologically sound and appropriate for our use. For example, we relied on part of the study to calculate our ranges for the funding advantage on debt and MBS. The study is technical; therefore, use of their results required some technical judgments. In their first approach to analyzing interest rate spreads on debt, they make estimates using both yield and rate of return data. In prior written comments on the study (see p. 36), Fannie Mae objected to use of return data, largely because it measures both investor returns that are expected upon purchase and unanticipated changes in the value of the bond. We used the results from the yield rather than the return data, because yields are a better measure of expected returns at the time an investor buys a bond.

Because bond characteristics differ between bonds issued by the enterprises and other issuers, and bond yields interact with one another over time (serial correlation), disentangling these effects can be difficult. Ambrose and Warga recognized how difficult their task was and qualified their results on the basis of the statistical complexities. We relied on their results for the mean yield spread between enterprise and others' debt based on their approach using yield data in which they controlled for differences in bond characteristics such as maturity and age. They recognized that interactions between bond yields over time create serial

correlation, a criticism cited by Freddie Mac. We recognize this problem but we also recognize that serial correlation affects only the precision of the estimates. The estimated mean yield spreads, which we relied on, are not biased. Because such estimates lack precision, however, we used a wide range for the funding advantage on debt.

In their second approach, Ambrose and Warga use a weighted average cost of capital (WACC) approach to estimate cost of capital differences. Although we initially employed estimates derived using this approach, we have decided to base our estimates on the more straightforward approach based on yields. In our draft report the upper-range of our estimate for the funding advantage on debt was 120 basis points. We revised this upper-range to 106 basis points. Overall, we do not believe that the statistical estimation problems with the WACC approach or the acknowledged limits of the return-based approach provide sufficient basis to discard the authors' results that were based on yield data.

The Ambrose and Warga estimates based on yield data were higher for the 1991 to 1994 period than for the 1985 to 1990 period. In our view, this most likely reflects imprecision associated with such estimates, changes in the funding strategies of the enterprises, and/or changes in financial markets. We believe it reaffirms our position that a wide range of possible outcomes should be associated with privatization.

Finally, analyzing the capital adequacy of the enterprises is a complicated and largely unanswered question. Our understanding based on past government studies, discussions with financial market analysts, and regulators is that each enterprise would likely require greater capital for its current activities if they were privatized. OFHEO is developing risk-based capital standards to help ensure the safety and soundness of the enterprises. If these standards require the enterprises to increase their capital levels, enterprise funding costs and mortgage interest rates could be affected.

Privatization Could Increase Mortgage Interest Rates and Change Behavior in the Residential Mortgage Markets

The exact effects of privatization on the residential mortgage markets cannot be determined with certainty, in part because of difficulty in knowing how the financial markets would respond to privatization. Our analysis of the effects of privatization on the residential mortgage markets is based on the assumption that privatization would eliminate or substantially reduce the perception of an implied federal guarantee of the enterprises' financial obligations and increase the enterprises' costs (as discussed in ch. 2). Under this assumption, privatization would likely lead to an increase in mortgage interest rates. Privatization would also likely lead to changes in behavior in the mortgage markets, particularly increased competition in the secondary mortgage market. The enterprises' higher cost of funds would likely allow private conduits to compete with the enterprises in purchasing conforming mortgages. In purchasing mortgages, the enterprises may be unable to fully pass their increased funding and other costs to borrowers, since mortgages with other sources of funding would be available to borrowers. The enterprises would also be likely to charge fees more fully risk-based than their current fees; this would cause increases in mortgage interest rates to be greater for borrowers making smaller down payments. In addition, mortgage interest rates could fluctuate more than they have with the demand for mortgage credit. Due to the size and sophistication of the mortgage finance market, significant regional variations in interest rates seem an unlikely result of privatization.

Mortgage Interest Rates on Single-Family Housing Could Increase

It is widely accepted that the enterprises, through portfolio investments and securitization, have generated many benefits to mortgage borrowers. These benefits include the reduction of regional disparities in interest rates and mortgage availability, spurring of innovations in mortgage standardization and transaction technology, and lowering of mortgage interest rates. The markets' perception of the implied federal guarantee on the enterprises' financial obligations plays an important—although not singular—role in enabling the enterprises' to lower mortgage interest rates, in that the perception lowers the enterprises' cost of funds. For this reason, the effect of privatization on mortgage interest rates depends critically on the extent to which privatization changes the market's perception of the likelihood the government would come to the enterprises' rescue.

If privatization caused the market to change its perception of an implied tie with the government or substantially weakened it, investors are likely to demand a higher payment for the perceived increase in risk. The

resulting higher cost of funds would lead to higher mortgage interest rates as the enterprises attempt to maintain their profits. However, the enterprises may not be able to fully pass on the higher cost of funds, because competition could increase in the conforming mortgage market.

In a competitive market, cost savings, such as those realized by the special advantages granted to the enterprises, tend to flow through to consumers, in this case residential mortgage borrowers. When competition is limited, businesses can exercise what is often called market power. When such market power is exercised, cost savings are less likely to fully flow through to consumers, and businesses can realize higher profits. Such profits can accrue to stockholders, managers, employees, and others who provide goods and services to businesses possessing the market power. In this respect, privatization poses complicated policy questions. The fact that government sponsorship ensures the dominance of two chartered enterprises in the securitization of conventional, conforming mortgages produces some benefits such as greater market liquidity, but it may also produce costs due to lessened competition.

If the enterprises currently possess and exercise market power, increasing effective competition would tend to cause more of the benefits of government sponsorship to flow through to borrowers. The extent of market power, however, is difficult to determine for a number of reasons. For our purposes, the most important difficulty is defining the relevant product market when alternative distribution systems deliver similar, yet differentiated products.¹ For example, the enterprises state that the share of residential mortgages they have funded—about 30 percent—is too small to convey market power, so the benefits of government sponsorship flow through to borrowers. The study commissioned for this project to analyze the effect of privatization on the mortgage market defined the relevant market for purposes of determining market power as conventional,

¹The enterprises fund mortgages in the predominantly conventional, conforming mortgage market. The secondary market for conventional, conforming mortgages represents the narrowest reasonable interpretation of the relevant product market. With this definition, the market is basically what is known as a duopoly (i.e., all production is by two business firms), and each participant has market power. Depositories fund mortgages in the primary market. The conforming mortgage market (without a distinction between primary and secondary activity) represents the broadest reasonable interpretation of the relevant product market. With this definition, the enterprises have a smaller market share and more competitors are present. The participants in this defined market provide different services and differentiated products. For example, depositories are more likely than the enterprises to lend in local mortgage markets where they have superior information. In addition, the depositories are more likely to fund variable rate mortgages. If one were to accept this broad market definition, a finding of market power would be unlikely.

conforming mortgages securitized in the secondary mortgage market.² The resulting duopoly—a market served by two suppliers—and other characteristics of the secondary market (for example, its offering of a fairly standardized product) led them to conclude that the enterprises “tacitly collude” and earn above average profits.³ They contend that government sponsorship introduces inefficiencies that privatization could eliminate.⁴

Because of insufficient statistical evidence, we do not know whether a broad or narrow product market definition is appropriate in determining the market power of the enterprises. Therefore, we cannot determine the enterprises’ market power or the potential benefits resulting from increased competition. If, under the current structure, the enterprises are not exercising market power and are passing most of the benefits from government sponsorship on to mortgage borrowers, increased competition may have little effect on mitigating the increase in mortgage interest rates in the conforming loan market that could result from privatization. However, if government sponsorship creates market power for the enterprises, conforming interest rates in the current environment may incorporate to some extent the extra profits resulting from the market power of the enterprises. Under this scenario, any increased competition resulting from privatization could provide the potential benefit of putting downward pressure on conforming mortgage rates.

The likely increase in average mortgage interest rates is the broadest, most important market effect of privatization. The results of our analysis indicated that privatization could increase interest rates on fixed-rate, single-family housing mortgages below the conforming loan limits within

²Benjamin Hermalin and Dwight Jaffee, “The Privatization of Fannie Mae and Freddie Mac: Implications for Mortgage Industry Structure,” published by HUD in Studies on Privatizing Fannie Mae and Freddie Mac (forthcoming May 1996).

³Tacit collusion is a term used by economists. Tacit collusion does not mean that the enterprises are directly colluding with one another, an act that is illegal. It means that the enterprises are behaving (e.g., price policies) in a way that is consistent with a situation in which they were directly colluding. Hermalin and Jaffee argue for their narrow market definition and the finding of tacit collusion partially on the basis of the high observed profit rates of the enterprises and indirect statistical evidence found in John L. Goodman, Jr., and S. Wayne Passmore, “Market Power and the Pricing of Mortgage Securitization,” Finance and Economics Discussion Paper, Federal Reserve Board (March 1992).

⁴Hermalin and Jaffee also consider whether government sponsorship, by increasing the resulting size of the enterprises, creates spillover benefits in the form of increased liquidity. They conclude, on the basis of their observations of private-label conduits and the development of credit enhancements by underwriters and credit rating agencies, that such spillover benefits from government sponsorship are low.

an average range of about 15 to 35 basis points.⁵ Assuming that the interest rate increase does not cause a decline in house prices, the monthly payments of a borrower with a \$100,000 thirty-year, fixed-rate mortgage would increase by \$10 to \$25.⁶ We use a \$100,000 thirty-year fixed-rate mortgage to illustrate the increase in monthly payments because the average conventional, conforming loan amount for mortgages purchased by the enterprises is about \$100,000. For \$2 trillion in outstanding conventional conforming fixed-rate mortgages, the aggregate annual increase in mortgage payments would be in the neighborhood of \$3 billion to \$7 billion.⁷

Our estimate of the likely effect of privatization on fixed-rate, single-family mortgage rates is based on a multipart analysis. For a preliminary estimate of how much interest rates might rise with privatization, we first sought to determine the interest rate spread between conforming mortgages (those purchased by the enterprises) and jumbo mortgages (those purchased by private-label conduits). Realizing that the interest rate differential is influenced by some factors specific to government sponsorship (which we assumed would be eliminated through privatization) and some that are not, we sought to adjust the estimated spread, accounting for specific factors unrelated to the enterprises' government sponsorship. The results of this work indicated that it would be reasonable to estimate that the conforming jumbo interest rate spread would be about 20 to 40 basis points. We next considered the need for one upward adjustment to account for the possibility of reduced liquidity and three downward adjustments. The three downward adjustments we considered were to account for (1) the geographic concentration of existing jumbo mortgages, which currently increases credit risk; (2) the possibility that the volatility of loan collateral for jumbo mortgages may exceed that of conforming mortgages; and (3) the likelihood of increased competition and operational efficiencies in the conforming and jumbo markets that could result from privatization. On the basis of this analysis, we estimate that privatization would probably increase average interest rates by about 15 to 35 basis points.

⁵We think that privatization would likely cause an increase in interest rates on variable-rate mortgages, but such increases would not exceed and probably be less than the increase on fixed-rate mortgages. Variable-rate and fixed-rate mortgages are differentiated, competitive products. The benefits to borrowers from government sponsorship and securitization are greater for fixed-rate than for variable-rate mortgages.

⁶It is possible that a permanent increase in interest rates above the trend that would evolve without privatization could force the sellers to discount current housing prices so that buyers could afford to pay mortgages issued at higher interest rates. In this case, existing owners of housing would realize a capital loss. However, such a decline in house prices and loan amounts could partially mitigate the increase in mortgage payments generated from the increase in interest rates.

⁷A Freddie Mac official told us that conventional, conforming, single-family, fixed-rate mortgage debt equals about \$2 trillion.

The Spread of Interest Rates on Conforming and Jumbo Mortgages Is a Gross Measure of Privatization's Impact on Mortgage Rates

Our primary information sources for the gross measure of the impact of privatization on mortgage interest rates included Freddie Mac and the Federal Housing Finance Board. Freddie Mac officials provided us with the interest rate spread between jumbo and conventional mortgage rates for 30-year, fixed-rate mortgages from their Primary Mortgage Market Survey for selected years between 1986 and 1995. The Survey asks mortgage lenders their current commitment rates for a loan with an 80 percent loan-to-value ratio on a monthly basis. Spreads were in the 35 to 55 basis points range in 1988, 1989, 1990, and 1992. Lower spreads ranging from 20 to 25 basis points occurred in 1986, 1993, and 1995.

We also analyzed the interest rate spread for the years 1990 through 1994 using the Federal Housing Finance Board's (FHFB) survey, Rates & Terms on Conventional Home Mortgages. The survey collects interest rates monthly on a sample of closed loans. We relied on spreads reported for fixed-rate loans. Average spreads were 18, 9, 11, and negative 2 basis points in 1990 through 1993, respectively. Reported spreads continued to be negative in most months in 1994.

The Freddie Mac and FHFB data differ in certain respects. The Freddie Mac data do not provide information on mortgage interest rates for borrowers meeting any specific underwriting standard except for loan-to-value ratio. The FHFB survey reports average loan amount, loan-to-value ratio, and term; these averages are generally similar between conforming and jumbo loans.

Adjusting Spread Differences to Account for Differences in Mortgage Characteristics

To estimate the interest rate differential created exclusively by the enterprises' government sponsorship, we turned to a study commissioned for this project. This study analyzed the interest rate spread between conforming and jumbo mortgages by using individual loan level data. For the years 1989 through 1993, the statistical analysis standardized for many individual loan characteristics such as location and loan-to-value ratio.⁸ The results indicated interest rate spreads of about 40 basis points in California and 30 to 35 basis points in the other states studied for 1989 through 1991. The results for 1992 and 1993 found smaller spreads (in the 25 basis point range), and the results for California were similar to those in other states. For the last two quarters of 1993, the results indicated interest rate spreads of about 20 basis points. The study's findings were

⁸Robert F. Cotterman and James E. Pearce, "The Effects of the Activities of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation on Conventional Fixed Rate Mortgage Yields," published by HUD in Studies on Privatizing Fannie Mae and Freddie Mac (forthcoming May 1996).

similar to those of two previous studies employing the same methodology that found spreads in the 30 basis point range.⁹

The authors concluded, on the basis of the results over the entire period, that single-family, fixed-rate jumbo loans had interest rates that were generally 25 to 40 basis points higher than single-family, fixed-rate conforming loan rates, holding other characteristics constant. They concluded that a lowering of the conforming loan limit would likely result in an increase in mortgage interest rates in the lower part of the 25 to 40 basis point range for affected mortgages (i.e., those shifting from conforming to jumbo status), because liquidity in the jumbo market could increase from such expansion. The authors did not reach a numeric conclusion for the effects of privatization, largely because they did not know how much liquidity would be affected by privatization.¹⁰

Primarily on the basis of the results of the commissioned study and the other two studies employing similar methodology, and recognizing that the estimated spreads were volatile, we used 20 to 40 basis points as the estimated average spread between conforming and jumbo mortgages.¹¹ This estimate served as our initial baseline approximation of how much interest rates would rise with privatization.

**Rationale for the Upward
Adjustment to Account for
Possibility of Reduced Liquidity**

As mentioned earlier, we considered four adjustments to the 20 to 40 basis point range—one upward and three downward—in determining the likely effect of privatization on mortgage interest rates. The upward adjustment was to account for the possibility of reduced liquidity. Officials of both enterprises emphasized the importance of this factor, but they also acknowledged the difficulties in measuring the liquidity effect. Officials from Freddie Mac stated that liquidity in a privatized market would tend to

⁹Patric H. Hendershott and James D. Shilling, "The Impact of Agencies on Conventional Fixed-Rate Mortgage Yields," *Journal of Real Estate Finance and Economics* (June 1989) pp. 101-115; and ICF Incorporated, "Effects of the Conforming Loan Limit on Mortgage Markets," Final Report prepared for Office of Policy Development and Research, U.S. Department of Housing and Urban Development (March 1990).

¹⁰The authors presented an earlier version of their paper at a seminar attended by representatives of the four agencies (GAO, CBO, HUD, and Treasury) and the enterprises. The earlier version concluded that the spread between conforming and jumbo mortgages was in the 20 to 35 basis point range, which was their estimate of the effects of privatization. The final version emphasized the uncertainty associated with estimating the impact of privatization on interest rates. Specifically, they state that liquidity effects could cause interest rate changes to be above or below the 25 to 40 basis point range.

¹¹The bottom of our range is 20 basis points because the seminar draft of the commissioned paper includes it and the other two similar studies found spreads in the 30 basis point range, the midpoint of our 20 to 40 basis point spread. We did not rely heavily on the other data, because those data series do not adjust for loan characteristics.

Rationale for a Downward
Adjustment for Potential Gain
in Regional Diversification of
Credit Risk

decrease most when mortgage originations were at their highest levels.¹² We acknowledge that such an effect could result; however, it is our understanding that liquidity in the jumbo market over the past decade has generally been sufficient.¹³ Because the private-label conduits would likely expand and compete with the enterprises in the (current) conforming and jumbo markets with privatization, the share of conventional mortgages that would be securitized with privatization would likely exceed the current share of jumbo mortgages securitized. Such a development would contribute to a higher level of liquidity in the conventional market than exists now in the jumbo market. In summary, there is no convincing evidence that the upward adjustment for reduced liquidity should be significant.

One of the general benefits from mortgage securitization that helps lower interest rates is regional diversification of credit risk. A limiting factor for the private-label conduits that securitize jumbo mortgages is that these loans tend to be concentrated in the northeast region of the country and the state of California. We discussed the impact of this factor with private-label issuers and credit rating agencies. One way they quantified this limiting factor was by relating it to the level of over-collateralization used for credit enhancement. The general consensus was that if a pool of jumbo mortgages that was geographically diversified could be backed by collateral equal to 103 percent of the security issue, a jumbo mortgage pool with similar characteristics but without such geographic diversification would require 106 to 108 percent collateral. Since such limits to diversification are not present in the conforming market and would not be present with privatization, the observed spread should be adjusted downward.

We could not reach a precise statistical estimate of what the downward adjustment for regional diversification should be, but the information on over-collateralization supports a downward adjustment. In addition, the observed difference between the estimated interest rate spread between conforming and jumbo mortgages in California and other states for 1986

¹²We generally agree with part of their analytical claim as it relates to periods with relatively large demands for residential mortgage credit. However, we question the broader claim that market liquidity would be substantially reduced with privatization. In addition, it should be noted that Hermalin and Jaffee concluded that market liquidity would be unlikely to suffer while Cotterman and Pearce concluded that liquidity could suffer from privatization.

¹³A Fannie Mae official told us, based on his conversations with traders, that there have been three temporary disruptions in liquidity in the jumbo market. We discuss this evidence later in this chapter. We also note that the liquidity impact in a privatized market, when demand increases, may depend on whether the increase in mortgage originations is primarily from borrowing for home purchase (purchase money mortgages) or for refinancing existing mortgages. If the primary source is the latter, MBS investors may demand more new MBS to replace MBS that experience more prepayments during times of heavy refinancings.

Rationale for a Downward
Adjustment for Greater
Volatility of Loan Collateral for
Jumbo Mortgages

through 1991 is suggestive of a 5 to 10 basis point adjustment; the higher estimated spread in California is consistent with the large concentration of jumbo mortgages in that state. We adjusted the spread downward by 5 basis points to account for regional diversification.

The conforming jumbo spread may require a downward adjustment due to the possibility that the volatility of loan collateral for jumbo mortgages may exceed that on conforming mortgages. Borrowers are more likely to default on their mortgage payments if the market value of their residences, the collateral for the loan, falls below the outstanding principal balance on their mortgage loans. One reason why default is more likely on mortgages with relatively high loan-to-value ratios is that relatively small local housing market downturns can trigger default. For any given loan-to-value ratio of a mortgage at the time of origination and the more volatile the price of the residence, the greater the probability of default.

We obtained statistical evidence indicating that during the housing market downturn in the state of California, the percentage decline in house prices was greater for higher priced houses (that is, those with jumbo mortgages) than houses with values below the conforming loan limit. On the basis of our discussions with credit rating agencies, we understand that this is factored into the credit enhancement and pricing of jumbo, private-label MBS. Therefore, a downward adjustment in the estimated conforming jumbo spread, even if the estimate controls for the loan-to-value ratio, may be warranted. However, there is no convincing evidence that the downward adjustment should be significant over the period when interest rate spreads were estimated.

Rationale for a Downward
Adjustment for Increased
Competition Resulting From
Privatization

Privatization would abolish charter restrictions on the enterprises that limit their ability to diversify into other markets and, more importantly, to vertically integrate throughout the different segments of this market, such as residential mortgages, to realize potential efficiencies. Privatization would also likely lead to entry into the current conforming market by existing private-label conduits and other potential entrants. These private label entities could better realize economies of large-scale securitization with privatization.¹⁴

We have already addressed how competitive factors could affect how much the benefits of government sponsorship are passed on to residential mortgage borrowers. Generally, these factors are reflected in the interest rate spread between conforming and jumbo mortgages, because interest

¹⁴The enterprises could potentially lose some scale economies.

rates in the conforming market are currently affected by government sponsorship. However, these potential improvements in operational efficiencies, resulting from increased competition, are not reflected in this interest rate spread, because interest rates in the jumbo market are not currently affected by the potential efficiencies that could result from privatization. Therefore, there is a rationale for a downward adjustment. However, there is no convincing evidence that the downward adjustment should be significant.

**Adjustment Results:
Privatization Would
Probably Increase Average
Interest Rates by About 15
to 35 Basis Points**

From the studies we analyzed, it appears that a reasonable estimate of the conforming jumbo interest rate spread is currently about 20 to 40 basis points. Of the adjustments that need to be made to account for differences between the two markets, the most important appears to be the downward one for the potential gain in regional diversification of credit risk. There is no convincing evidence that the other adjustments should be significant; we assume that the upward adjustment for liquidity does not exceed the combination of the downward adjustments for the higher volatility of jumbo collateral and the effect of operational efficiencies from increased competition during most common mortgage market conditions. This conclusion is largely based on observed liquidity in the jumbo market, observed substitutions by mortgage borrowers and lenders between fixed- and variable-rate mortgages, and Hermalin and Jaffee's analysis of liquidity in the private label market.

Assuming that the sum of the liquidity, house price volatility, and competition adjustments are a wash or near-wash, the estimated interest rate spread could be adjusted downward by 5 to 10 basis points for regional diversification benefits resulting from privatization. Applying this assumption, we adjusted the estimated interest rate spread of 20 to 40 basis points downward by 5 basis points. From this, we concluded that privatization would probably increase average interest rates within an average range of about 15 to 35 basis points.

**Increase in Mortgage
Interest Rates Would
Be Relatively Larger
for Borrowers Making
Small Down Payments**

According to the enterprises' officials, the enterprises take account of credit risk in their treatment of the mortgages they purchase, all of which must meet their underwriting standards. For example, the enterprises share some credit risk with private mortgage insurers and generally require more mortgage insurance on mortgages with loan-to-value ratios above 85 percent.

Both the enterprises and private-label conduits charge guarantee fees for insuring the timely payment of principal and interest on their MBS. The private-label conduits charge risk-based guarantee fees.¹⁵ Although the enterprises have policies consistent with risk-based fees, both the officials from the enterprises and other mortgage industry participants told us that the enterprises do not charge fees that are fully risk-based. Because privatization would likely increase the number of secondary market competitors and change the missions of the enterprises, it would probably motivate the enterprises to implement fully risk-based fee structures. For this reason, the increase in mortgage interest rates associated with privatization would likely be relatively higher for borrowers making small down payments and relatively smaller for borrowers making larger down payments. As discussed more fully in chapter 4, one of the negatively affected groups would be first-time homebuyers, who tend to make relatively small down payments.

Mortgage Interest Rates Could Fluctuate More With Demand for Mortgage Credit

Officials from both enterprises told us that primary and secondary mortgage market liquidity would suffer with privatization, largely because of the loss of the perceived guarantee of enterprise MBS. In addition, the enterprises' increased borrowing costs could sharply curtail or eliminate portfolio lending by the enterprises. Officials from Fannie Mae emphasized that this decline in funding from retained portfolio would reduce liquidity. This could result in less liquidity generally, for particular mortgage products, or for specific geographic markets during different parts of the economic cycle, because the enterprises would not necessarily step into the market to buy products whose price were falling. Officials from Freddie Mac emphasized that the impact of privatization could not only raise the average cost of financial capital to fund mortgages but could also raise it more in periods of high demand for mortgage credit.

Neither we nor the enterprises have quantified this liquidity effect of privatization or estimated how much it would affect the mortgage interest

¹⁵Risk-based fee structures charge based on the expected incremental cost of providing a particular level of insurance for credit risk exposure. For example, with risk-based fees borrowers making large down payments (i.e., borrowers with low loan-to-value ratios) will be charged a lower interest rate than borrowers making small down payments. The enterprises indicated that their mortgage commitment policies move them partially, but not fully, toward a risk-based fee structure. We characterize this policy as one where some cross-subsidy of riskier borrowers from less risky borrowers occurs. To some degree, the enterprises attribute this policy to their housing mission and their efforts to help first-time home buyers. Our understanding is that private-label conduits attempt to fully implement risk-based fees.

rate increase.¹⁶ One reason for the liquidity of the enterprises' securities is that regulatory guidelines governing concentration of any one issuer's securities in the portfolios of investors such as insurance companies and depository institutions do not generally apply to securities issued by the enterprises, because they are considered relatively low-risk government agency securities. If privatization eliminates this agency status, many large mortgage investors, including depositories, would likely have concentration limits¹⁷ on how much they could invest in each of the now private conduits' securities. With privatization it is possible that a relative scarcity of investors willing to accept private credit enhancements of securities that were no longer perceived to have government backing could develop during periods with high demand for mortgage credit. However, as stated earlier, we have found no statistical evidence that privatization would result in a substantial reduction of liquidity in the secondary mortgage market. As a result, mortgage interest rates could fluctuate more than they currently do with demand for mortgage credit, but the extent of such additional fluctuations is unknown.

Significant Regional Disparities in Interest Rates Would Be Unlikely to Develop

Before the creation of the enterprises, mortgages were funded by depositories that primarily served local markets; this created regional disparities in mortgage interest rates, resulting from regional differences in the demand for and supply of mortgage credit. The enterprises established a valuable secondary market mechanism that enabled financial capital to flow to geographic areas with the greatest demand for mortgage credit. This free flow of capital tended to equalize interest rates across regions on mortgages with similar risk characteristics.

Privatization is not likely to result in a return to a mortgage market dominated by depositories holding mortgages in portfolio because of the continuance of existing mechanisms (including the private-label market) and tools to promote securitization, which the enterprises fostered. On the other hand, the enterprises' levels of mortgage funding could decrease, and we cannot be certain of the extent to which other entities would be likely to "make up" this decrease in funding. The possibility, with

¹⁶Officials from Freddie Mac provided statistics from their primary mortgage market survey comparing mortgage interest rates (adjusted for the prepayment option) to yields on Treasury securities over the past 10 years. The statistics indicated that the 1986 refinance boom had a large upward impact on mortgage interest rates, but the 1992-93 refinance boom did not. Officials from Freddie Mac attributed this increased stability to the growth of the enterprises. We attribute this finding primarily to the development of more complex CMOs in the financial community. Privatization could reduce activity by the enterprises, but we question how much it would reduce the potential benefits of newly created multiclass security products.

¹⁷Concentration limit is a limit on the extent to which an investor can hold an individual company's securities. This protects investors from credit risks imposed by undiversified holdings.

privatization, of a decline in the level of mortgage funding by the secondary market raises the question, however, of how much securitization and capital mobility to fund mortgages are necessary to offset potential regional interest rate disparities on mortgages with similar risk characteristics.

To determine the likelihood that privatization would result in regional interest rate disparities, we sought to determine the relationship between the growth of the secondary mortgage market and regional interest rate disparities. First, we analyzed regional interest rate differentials (the difference between the highest and the lowest regional mortgage interest rate) based on data for the years 1980 through 1993 that Freddie Mac officials provided from their Primary Mortgage Market Survey. It is important to note that credit risk variables excluded from the data can create part of the interest rate differentials. The regional interest rate differential declined from 100 basis points in 1980 to less than 20 basis points since 1988. This showed that interest rate disparities had lessened substantially over time. However, the data did not show that the reduction in regional interest rate disparities was due only to greater secondary market activity, because other variables could have influenced regional mortgage interest rates. Nonetheless, Freddie Mac officials attributed this decline to the growth of secondary mortgage markets created by the enterprises.

Evidence presented in a study by Jud and Epley¹⁸ using statistics for the years 1984 through 1987 indicated that after adjustments for loan characteristic factors that affect interest rate differentials, no significant regional differences remained in mortgage interest rates. This evidence is consistent with the hypothesis that the substantial development of the secondary market, facilitated by government sponsorship, helped eliminate the regional interest rate disparities that had existed before 1984. The result that significant regional disparities were all but eliminated even when the enterprises were much smaller than they currently are is also consistent with the idea that the elimination of this disparity did not require the enterprises to be as large as they are today. This result, plus the growth and importance of private-label conduits leads us to the conclusion that significant regional interest rate disparities on mortgages with similar risk characteristics are not likely to reappear with privatization.

¹⁸G. Donald Jud and Donald R. Epley, "Regional Differences in Mortgage Rates: An Updated Examination," *Journal of Housing Economics* 1 (June 1991) pp. 127-139. They controlled for the independent effects of a number of economic variables in measuring regional differences. The Freddie Mac statistics do not control for such variables.

Privatization Is Not Likely to Result in Insufficient Capital Mobility Across Regions

Potential regional disparities in interest rates are also relevant to analyzing the importance of the enterprises' operating "in all markets at all times." Generally, mortgage lenders may be motivated to tighten borrowing standards or charge higher fees in local markets where housing prices are declining. Such behavior is consistent with risk-based fee structures. Officials from Fannie Mae told us that their charter and mission require them to operate in all markets at all times. They said that one benefit of this requirement is that they serve as a cushion in markets experiencing economic decline. As an example, they stated that they continued to operate in and serve the housing market in Texas throughout the economic decline in the middle 1980s.

If Fannie Mae does not restrict credit to regions undergoing recessions while other providers of credit do, Fannie Mae purchases should represent a higher share of mortgage originations in years when a region is in recession.¹⁹ We received annual data on Fannie Mae's market shares and housing price index for the years 1980 through 1994 for the states of Texas, Louisiana, Oklahoma, Colorado, California, and Alaska and the New England region. We agree with Fannie Mae officials in the statement that many factors affect the level of participation of Fannie Mae and other lenders in any year. We analyzed year-to-year correlations between Fannie Mae's share and the housing price index and found no evidence that Fannie Mae provides a cushion during downturns.

However, a Fannie Mae official aggregated data across years and said the results provided evidence that Fannie Mae provides a cushion. While aggregating statistics across years can be appropriate for analyzing long-term trends in economic variables such as funding levels and interest rate spreads, we question how appropriate such aggregation is for analyzing cyclical trends. On balance, we did not find sufficient evidence to determine whether or not Fannie Mae provides a cushion during housing market downturns in specific regions.²⁰

The continued market presence of the enterprises in all geographic markets nationwide has helped to eliminate regional disparities in mortgage interest rates and may provide a cushion for local housing markets experiencing an economic downturn. Other financial institutions

¹⁹Here, we are examining evidence as to whether Fannie Mae provides a cushion during a local housing market downturn. We are not analyzing whether it is economically or socially desirable for Fannie Mae to serve such a function.

²⁰We do not dispute the statement that the enterprises undertake policies that meet their mission and charter requirements to operate in all markets at all times. The analysis here is our attempt to ascertain the importance of such actions to the housing markets during specific downturns.

that fund mortgages and mortgage insurance include those that operate in specific geographic areas and base funding decisions, including decisions on pricing and geographic limitations, on expected profitability of each product in each geographic market. Privatization would likely motivate the enterprises to adopt funding decisions based on criteria more similar to those of other financial corporations. In addition, the potential increase in secondary market competition would reinforce this change in business behavior. Even so, we conclude that significant regional disparities in mortgage interest rates are unlikely to occur with privatization, because securitization activity should provide sufficient capital mobility across regions. Also, we do not think that privatization would eliminate any substantial stabilizing mechanism for local housing markets with declining market prices. In large part, this is because we found little evidence that such mechanisms still require government sponsorship to function effectively.

Privatization Would Likely Change the Behavior of Participants in the Primary and Secondary Mortgage Markets

Currently, conventional mortgages are funded by the enterprises and depositories, while private-label conduits operate primarily in the nonconforming market.²¹ Virtually all conventional mortgages were funded by depositories before the enterprises existed. However, for a number of reasons, privatization would not likely cause a return to this earlier environment.

One reason is the existence of private-label conduits, which were in their infancy in the latter half of the 1980s. Their development is largely attributable to two related factors: (1) the standardization and technological innovation spurred by the enterprises and (2) the general improvement in financial and information technology in the economy. Private-label conduits, which currently specialize in nonconforming mortgages (mostly in the jumbo market), accounted for approximately 18 percent of combined Fannie Mae, Freddie Mac, and private-label MBS outstanding and 13 percent of total MBS outstanding as of September 1995.²²

²¹The enterprises operate almost exclusively in the conventional mortgage market. We examine possible implications for government-insured mortgages, including those guaranteed by the Government National Mortgage Association (Ginnie Mae), in our discussion of social goals in chapter 4.

²²Total MBS outstanding includes Ginnie Mae MBS.

The Enterprises and Other Conduits Are Likely to Compete in Both Jumbo and Conforming Mortgage Markets

If privatization were to lead to the enterprises' loss of both their direct and indirect benefits—especially their funding advantage, this would allow private-label conduits to operate on a more level playing field with the enterprises in the conforming market. Because privatization is likely to remove many, if not all, of the enterprises' restrictions, the enterprises are likely to take the opportunity to operate in the current jumbo market along with the other conduits.²³

Should the enterprises' cost of funds rise from privatization, it is likely that the overall amount of mortgage funding they provide, whether out of retained portfolio or as MBS, would decline. However, if the overall level of mortgage interest rates in the unified (post-privatization) mortgage market rises, there would be incentives generated for increased funding by private-label conduits in the conventional market. If this increased funding occurs, it should partially offset the enterprises' reduced funding.

To compete successfully in this new privatized market, it may be necessary for any conduit to be a large organization. First, it appears that there are financial and technological cost efficiencies in the securitization process from operating on a large scale. Second, such conduits would need regionally diversified loan pools to keep the costs of their risks at a competitive level. Third, there may be both incentives to and additional advantages from innovation for firms that are a significant part of the mortgage market. For example, it may improve efficiency and profitability to vertically integrate or form networks within the housing finance system. This could lead to further improvements in technology and advantages from information sharing. As a result, we would not anticipate that a large number of major firms would compete in this market.

Competition Could Spur or Inhibit Innovation

While the possibility of additional competition in the housing finance market could be a spur to increased innovation, the possibility that the enterprises could lose their dominant position may reduce their incentives to innovate. As government-sponsored enterprises, Fannie Mae and Freddie Mac currently have cost advantages (mostly funding) over potential rivals in the development of efficiency generating innovations. In addition, their cost advantages may have sheltered them from potential competitors in the secondary market. Because of their market dominance, the financial returns from developing innovations are likely to accrue to

²³Jumbo mortgages are relatively more prevalent in the state of California and the northeast region, where housing prices are higher than in other areas in the country. Therefore, geographic diversification, which would decrease credit risk, would be facilitated for any conduits operating in both market segments.

the enterprises rather than to a multitude of competitors. To the extent the enterprises' market share declines, privatization could cause the enterprises to innovate less. The incentives to innovate by other market participants, however, would increase with privatization. For example, our discussions with industry participants and experts indicated that large mortgage bankers would be more likely to develop automated underwriting, appraisal, and mortgage servicing innovations if the enterprises were privatized. Because of these offsetting incentives, the net effect on the overall level of innovation is impossible to predict.

Credit Enhancement
Mechanisms Could Be the Key
Determinant of Levels of
Conduits' Mortgage Funding

An increase in the ability of private-label conduits to diversify credit risks across a wider range of housing prices and geographic locations could facilitate their expansion and could be a determining factor in whether and to what extent these conduits would be able to replace the expected decline in funding by the enterprises. As with many financial products, credit enhancement mechanisms, such as pool insurance and parent guarantees, have evolved over time. To the extent this evolution takes advantage of enhanced efficiencies, it is more likely to improve the overall functioning of the mortgage market. The recent development of private-label MBS has motivated development of credit enhancement mechanisms by issuers and underwriters. Privatization could motivate even greater development. One of the major uncertainties associated with privatization, however, is how well market participants can develop credit enhancement mechanisms that can provide the assurances required by a wide range of mortgage investors. This uncertainty complicates the task of estimating the growth of private-label conduits with privatization of the enterprises.

With Privatization,
Depositories Would Likely
Fund More Mortgages
Through Variable-Rate
Loans

Competition between the enterprises and private-label conduits is unlikely to fully offset the overall reduced availability of secondary mortgage market financing that would likely result from the enterprises' increased funding costs. To some extent, the need for secondary mortgage market financing would also likely be less, because the increased profit potential of mortgages resulting from the expected rise in mortgage interest rates could induce some banks and thrifts to hold more of the mortgages they originate in portfolio rather than to sell them in the secondary market. To offset the interest rate risk associated with fixed-rate mortgages, these banks and thrifts could also be induced to originate more variable-rate mortgages. Such mortgages are not sold as frequently as fixed-rate mortgages in the secondary market. If banks and thrifts would hold more

of the mortgages they originate in portfolio, it could lead to depositories' greater use of Federal Home Loan Bank (FHLB) System advances.²⁴

Data show the depositories' increased use of variable rate mortgages. Before the thrift crisis in the late 1980s, depositories tended to originate long-term, fixed-rate mortgages funded by short-term liabilities. About 6 percent of all mortgage holdings by thrifts were variable rate in 1980. In 1993, about 47 percent of all jumbo mortgage originations were variable rate; further, about two-thirds of all mortgage holdings by thrifts and nearly 40 percent by commercial banks were variable rate as of June 1995.

Unlike fixed-rate mortgages, variable-rate mortgages tend to be funded by depositories rather than securitized, because they can be held in portfolio with less interest rate risk. In 1993, less than half of all jumbo originations—45 percent—were securitized, compared to nearly 60 percent of conforming mortgage originations. However, with privatization, to the extent that private-label conduits would be better able to diversify risks geographically, the share of mortgages that are securitized is likely to be greater than that in the current jumbo mortgage market, although possibly smaller than that currently observed in the conventional market.

Conclusion

Privatization would likely change the behavior of market participants and increase average interest rates on fixed-rate, single-family mortgages within an average range of about 15 to 35 basis points. However, privatization would not mean the end of the secondary mortgage market, a return to regional disparities in mortgage interest rates that were not based on differences in risk, or a lack of mortgage credit in the economy during parts of the business cycle. It would probably mean that mortgage rates would increase in areas with higher risks, for houses with higher loan-to-value ratios, and in periods of high mortgage demand.

Enterprise Comments and Our Evaluation

In oral comments, Fannie Mae and Freddie Mac officials disputed several issues included in the draft version of this chapter. The officials said that

²⁴The Federal Home Loan Bank System is another government-sponsored enterprise that assists the residential mortgage market. While privatization of Fannie Mae and Freddie Mac could reduce the likelihood that the federal government might feel the need to rescue these organizations, increased use of FHLBank advances could raise that System's exposure. Our mandate did not ask us to evaluate the impacts on the FHLBank System. Discussions of the System are contained in Federal Home Loan Bank System: Reforms Needed to Promote Its Safety, Soundness, and Effectiveness (GAO/GGD-94-38, December 1993; GAO/T-GGD-95-244, testimony delivered September 27, 1995); and our correspondence to the Honorable James A. Leach on proposed legislation entitled The Federal Home Loan Bank System Modernization Act of 1995 (Oct. 11, 1995).

privatization would result in higher mortgage interest rates than stated in the draft, and Fannie Mae officials said they did not fully understand the methodology we used to estimate the potential mortgage rate increase. Enterprise officials also disagreed with statements in the draft that they said implied the housing markets may lack competition and that the enterprises exercise market power. Moreover, enterprise officials said that privatization would generate significant regional variations in mortgage costs, and they disagreed with our contention that there is no sufficient evidence for concluding that the enterprises provide a cushion during housing market downturns in specific regions. In addition, Freddie Mac officials said that the increased use of adjustable-rate mortgages (a form of variable-rate mortgage) would result in higher mortgage foreclosure rates.

Fannie Mae officials said that privatization would likely raise mortgage interest rates more than the 15 to 35 basis points estimated in the draft report. They said that one reason for this disagreement is that we did not adequately consider the impact that privatization would have on the liquidity of the home financing system. On the basis of discussions with private sector jumbo MBS traders who were asked to list periods of illiquidity, a Fannie Mae official said that the traders listed three periods of illiquidity over the past decade. The traders told the Fannie Mae official that increasing interest rates in 1994, combined with observed differences in jumbo prepayment speeds by issuers, led to a period during which pricing existing jumbo securities became extremely difficult. Because the jumbo market has experienced such periods of illiquidity, the Fannie Mae officials said it is not unreasonable to predict that the larger mortgage market would experience similar illiquid periods and higher mortgage rates in the event of privatization. In addition, they thought that greater use of private-label credit enhancements would result in higher mortgage rates. They did not, however, predict the potential impact of reduced liquidity on mortgage interest rates.

Freddie Mac officials said that mortgage rates would increase by more than 15 to 35 basis points; in fact, they predicted an increase of 55 to 86 basis points. The officials said that the spread between conforming and jumbo rates ranged from 11 to 70 basis points between 1986 and 1996, with a mean spread of 43 basis points. They stated that several factors resulting from privatization would cause interest rates to increase by 55 to 86 basis points. For example, they said that in the event of privatization, private-label issuers would have to increase the volume of subordinated securities by 500 percent to replace the role of the enterprises. Freddie Mac estimated that this change alone would add 25 basis points to the

estimated increase in mortgage rates. In addition, they said that the commercial mortgage market, in which Freddie Mac does not participate, experiences substantial periods of illiquidity.

Fannie Mae officials also said that we did not clarify our methodology for estimating the spread between conforming and jumbo loans prior to adjustments; we estimated a spread of 20 to 40 basis points before adjustments. The Fannie Mae officials said that the Cotterman and Pierce paper estimated a spread of 25 to 40 basis points between conforming and jumbo loans and could not understand why we used an estimated range of 20 to 40 basis points.

A Fannie Mae official also said that there is no evidence that the enterprises exercise market power, and that the secondary market for conforming loans is not a relevant market for analyzing market power. Therefore, there is no meaningful duopoly consisting of Fannie Mae and Freddie Mac. The enterprises are participants in the mortgage financing market along with many other players, such as banks and insurance companies, that also buy and sell mortgages. Additionally, the Fannie Mae official stated that there were substantial flaws in the Hermalin and Jaffee paper which contended that the enterprises tacitly collude. For example, he said the authors reviewed data only from 1989 to 1993 when an analysis of 1985 to 1995 would have produced contrary results. The Fannie Mae official also said that Hermalin and Jaffee ignored evidence that shows, on a monthly basis, that the market share data of Fannie Mae and Freddie Mac are quite volatile. He cited this as evidence that the enterprises do not engage in tacit collusion.

Freddie Mac officials stated that there is no evidence of a lack of competition in the mortgage markets. They said there is no basis for excluding all firms that buy and sell mortgages from the definition of the relevant market. Further, the Freddie Mac officials stated that the guarantee fees the enterprises charge for securitization services have declined since the early 1980s. They said that declining fees are inconsistent with arguments that the enterprises exercise market power. The Freddie Mac officials also reemphasized comments they made on the chapter 2 draft that the financial benefits of government sponsorship flow to homebuyers in the form of lower interest rates and are not retained by the enterprises.

Fannie Mae officials also disagreed with an assertion in the draft report that privatization would not result in significant regional variations in

mortgage interest rates. The officials said the report acknowledged that privatization would result in risk-based pricing: for example, homebuyers making relatively low down payments would pay higher mortgage rates and fees. The Fannie Mae officials said they could not understand why the draft report did not seem to consider the possibility that with privatization, specific regions of the country experiencing economic downturns would also experience relatively higher mortgage costs. The Fannie Mae officials said that this “risk premium” would probably become permanent in regions of the country that are perceived to have volatile home prices. The officials said this contrasts sharply with the current conforming mortgage market where lenders nationwide can get the same posted cash price for loans and homebuyers nationwide have access to the same rates.

Freddie Mac officials also said that privatization would result in significant regional variations in mortgage interest rates. For example, they said that the regional variations observed in today’s jumbo mortgage market would likely be replicated in the larger mortgage market. Freddie Mac officials also said that evidence from regions of the country that have suffered economic downturns in recent years, such as New England, indicate that lenders and borrowers in these areas experience disparities in the cost and availability of credit.

Fannie Mae officials also said the draft report ignored substantial evidence that the enterprises currently provide a substantial “cushion” to the housing markets regions of the country experiencing economic downturns. For example, the officials said that the enterprises’ market share increased in such regions during economic downturns. The officials also found that there was a significant negative correlation between changes in the housing price index and Fannie Mae’s market share in California and New England between 1984 and 1994. In other words, when housing prices declined in these areas, Fannie Mae’s market share tended to increase, which officials said demonstrates the regional cushion.

Freddie Mac officials disputed the draft report’s analysis of correlated annual data for 1980 to 1994, by state, on Fannie Mae’s market share and a house price index; this analysis found “no evidence” that Fannie Mae provided a regional cushion. The officials said that including early 1980s data ignores substantial changes in the secondary market that occurred during those years. The officials said that the data for the early 1980s is skewed because the enterprises dramatically increased their mortgage purchase volume during those years, particularly as a result of the introduction of the Guarantor and Swap program in 1981 and CMOS in 1983.

The officials said that changing the beginning of the sample period from 1980 into 1985 changes the results. The officials stated that such an adjustment showed, for example, a strong negative correlation between declining house prices and Freddie Mac's market share in three states that experienced substantial economic downturns: California, New York, and Texas.

In addition, Freddie Mac officials said that the expected increase in adjustable-rate mortgages at the expense of fixed-rate mortgages would result in more mortgage foreclosures. The Freddie Mac officials provided data on Freddie Mac purchased mortgages that show the foreclosure rate on adjustable-rate mortgages between 1990 and 1995 was at least twice the foreclosure rate on fixed-rate mortgages, even though adjustable-rate mortgages have higher down payment requirements.

We explained how important the enterprises are to the housing markets and we analyze the connection between the benefits conferred on that market through the enterprises and benefits received by households. We do not, however, believe that we can state how much of the benefits generated flow to households. Nor can we say exactly how privatization would affect the housing market.

Even so, we made a change to our draft report to address the enterprises' concerns that we did not provide an overall measure of the effects of lower interest rates on the mortgage market as a whole. Using an estimate provided by Freddie Mac for the outstanding value of conforming, conventional, fixed-rate mortgages, we calculated the total benefit as ranging from \$3 billion to \$7 billion. We also clarified how we derived the spread between jumbo and conforming fixed-rate mortgages. We also added more precise language to indicate that we would not expect significant regional variations in mortgage costs across regions on mortgages with similar risk characteristics.

We have included information provided by a Fannie Mae official on temporary disruptions in liquidity in the jumbo market. The official did not know how serious these disruptions were. We continue to conclude that the share of conventional mortgages that would be securitized with privatization would likely exceed the current share of jumbo mortgages securitized, and such a development would contribute to a higher level of liquidity in the conventional market with privatization than exists now in the jumbo market.

Our discussion indicates that we placed more emphasis on studies such as the commissioned one by Cotterman and Pearce that use individual loan level data and control for loan characteristics than we did on other data sources reporting the interest rate spread between jumbo and conforming mortgages. Officials from neither Fannie Mae nor Freddie Mac criticized the Cotterman and Pearce study. Freddie Mac estimated the spread using a data source different from the one they had originally used and provided to us when we met in the course of this assignment. Both data sources are based on telephone surveys of lenders. We cannot determine why the spreads they now report are larger than those they reported previously, but we continue to rely primarily on the studies by Cotterman and Pearce and the other two studies employing similar methodology. Freddie Mac officials adjusted this spread upward by 25 basis points, on the basis of their estimate of the effect on rates of an increase in the use of subordinated securities used to finance many private mortgage pools. We did not make such an adjustment because, in our view, it is likely that interest rate spreads between jumbo and conforming mortgages already reflect the impact of subordinated securities on jumbo mortgages. Finally, we do not see how the commercial mortgage market, a market in which loan underwriting decisions and standardization are very different from the single-family residential mortgage market, provides reliable information on the level of liquidity that could result from privatization of the enterprises.

Our draft report did not take a position on whether the enterprises do or do not have market power, because we could not, from our analysis of the data, make such a determination. While the enterprises would like us to conclude that they do not exercise market power, we continue to conclude that there is insufficient statistical evidence to reach such a conclusion. Both enterprises emphasize that they compete vigorously both with each other and with depository institutions. We think this evidence is insufficient to conclude an absence of market power, because depository institutions fund a higher share of variable-rate mortgages while the enterprises fund relatively more fixed-rate mortgages. These products have differing characteristics, and their competitive impacts on one another depend on how highly substitutable they are to borrowers.²⁵

Both enterprises also criticize the commissioned study by Hermalin and Jaffee, stating that the study does not consider how monthly shares of secondary market purchases fluctuate between the enterprises. Hermalin

²⁵See, for example, Dennis W. Carlton and Jeffrey M. Perloff, Modern Industrial Organization (1990) page 738.

and Jaffee attributed the stability of annual shares to their finding that the enterprises are tacitly colluding duopolists in the (narrowly defined) secondary mortgage market for conforming loans. In competitive markets the process of rewarding the relative efficiency of one or more sellers tends to create instable market shares measured over long periods of time.²⁶ The evidence the enterprises presented showing market shares that fluctuated was based on monthly data and we believe it could just reflect random or seasonal fluctuations in mortgage originations that affect each enterprise differently (e.g., because the regional distribution of their mortgages differ). Finally, Freddie Mac officials argued that the general decline in guarantee fees by both enterprises since 1985 indicates a competitive market where all of the benefits to the enterprises flow through to borrowers.²⁷ The data provided by Freddie Mac show that fees have declined, but they do not show whether they are high or low compared with a competitive market. The competitive process the enterprises have described was largely in place in the 1980s, when fees were higher. Thus, the decline in fees reflects either cost changes or an increase in competition or potential competition. The private-label conduits, in their infancy in the middle 1980s, may have provided a source of potential competition.²⁸ CBO emphasized the possible impact of potential competition on the enterprises when it stated: “Some empirical evidence suggests that the GSEs may not have priced their services at fully

²⁶See, for example, Richard A. Posner and Frank H. Easterbrook, Antitrust: Cases, Economic Notes, and Other Materials (Second Edition, 1981) p. 339.

²⁷Average guarantee fees declined from the early 1980s until 1990, remained relatively stable in 1991 and 1992, and increased slightly in 1993 and 1994. Overall, there has been a decline from over 25 basis points to about 22 basis points.

²⁸As we state in the report, we think the enterprises have played critical roles in establishing and maintaining a nationwide secondary mortgage market. We think that the development of the private-label market has resulted, in part, from the success of the enterprises. This development is integral to our assessment of how privatization would affect the mortgage markets.

competitive levels in the 1980s.”²⁹ Even if there were evidence of some increased competition from private-label conduits or other sources, we still do not know whether the market is competitive enough to cause all or a large part of the benefits from government sponsorship to flow through to households with mortgages.

After considering the enterprises’ comments, we clarified our discussion to indicate that we do not think privatization would lead to significant regional disparities in mortgage interest rates that were not based on risk differences. However, we did not change our overall conclusion that privatization is not likely to significantly reduce capital mobility across regions. We analyzed year-to-year correlations between Fannie Mae’s share of originations and their housing price index in the states of Texas, Louisiana, Oklahoma, Colorado, California, and Alaska, and in the New England region. A negative correlation indicates that Fannie Mae could be providing a cushion in declining markets. When we did the analysis using data for the 1984 to 1994 period, as suggested by enterprise officials, we found negative correlations in Texas and Oklahoma and positive correlations in the remaining areas. We also reanalyzed the data for the 1984 to 1994 period by estimating correlations between changes in Fannie Mae’s share and changes in the housing price index. In addition to Texas and Oklahoma, the correlation for Colorado was also negative. These results are also consistent with our original conclusion that the evidence is ambiguous.

Finally, we have no evidence on what effects privatization would have on foreclosure rates. We have no basis to evaluate the various factors that may be associated with foreclosure rates on adjustable-rate mortgages purchased by Freddie Mac.

²⁹CBO, The Federal Home Loan Banks in the Housing Finance System (July 1993) p. 9.

Privatization Would Likely Remove One Mechanism for Channeling Residential Mortgage Funding to Targeted Groups

Privatization would likely remove one of the federal mechanisms for channeling residential mortgage funding to those borrowers and geographic areas that lawmakers have deemed worthy of special consideration (targeted groups). In our review of the enterprises' activities that were designed to meet their social goal obligations as established by HUD, we found little definitive evidence of how housing affordability and homeownership opportunities for targeted groups would be affected by privatization. The effects on targeted groups of eliminating the enterprises' social goal obligations are uncertain for three primary reasons. First, the effects would depend largely upon whether other federal mechanisms that support housing affordability and homeownership are maintained or expanded after privatization and the impacts of those mechanisms. Second, it is difficult to judge whether and how well the enterprises have achieved their goals, because 1993 was the first year for which the enterprises provided HUD the data necessary to monitor the amount of funding provided to targeted groups under HUD's interim goals, and the permanent goals HUD has recently promulgated have a new measure of underserved areas. Third, neither we nor the enterprises were able to quantify the impacts of the enterprises' social goal efforts on housing affordability. Assuming that privatization leads to the elimination of the enterprises' social goal requirements without any change in other government mechanisms, the likely increase in mortgage interest rates for single-family housing (the broad market effects discussed in chapter 3) would make homeownership less affordable. In particular, the increase in mortgage interest rates could cause a delay in homeownership, primarily for young households with low but rising incomes. Because the enterprises play such a small role in the multifamily housing market, it is unlikely that privatization would have a significant effect on mortgage interest rates for multifamily housing or on housing affordability for residents of such rental housing.

Privatization Would Likely Remove Enterprises' Obligation to Channel Residential Mortgage Credit to Targeted Groups

Privatization would likely eliminate one of the federal government's means of channeling residential mortgage credit to borrowers and geographic areas that lawmakers have designated for special consideration. More specifically, privatization would likely eliminate the enterprises' affirmative obligations as set forth by The Housing and Community Development Act of 1992 (the 1992 Act): "to facilitate the financing of affordable housing for low- and moderate-income families in a manner consistent with [the enterprises] overall public purposes, while

maintaining a strong financial condition and a reasonable economic return.”¹

If the enterprises were privatized, HUD’s regulation of the enterprises to achieve social goals would likely have to be eliminated for the following reasons:

- The enterprises would have new charters that would eliminate both privileges and restrictions specific to their housing finance missions, and the social goals are now an integral part of this overall organization.
- If social goal requirements remained, the financial marketplace might continue to perceive an implied federal guarantee for the enterprises.
- If the enterprises continued to face social goal requirements and the new competitors that entered the secondary market did not, there would not be a level playing field among the secondary market entities.

We discussed one option that would continue HUD’s social goal regulation of the enterprises with HUD officials. It would involve retaining some social goal regulation of the enterprises because of possible residual advantages they would still have due to the period of government sponsorship.² This issue is related to whether the enterprises should pay some sort of exit fee (directly or indirectly in the form of social goal requirements) upon privatization for benefits received during the period of government sponsorship. However, based on our discussions with industry participants and regulators, it seems likely that social goal regulation of the enterprises by HUD would not continue following privatization. As discussed in chapter 5, if Congress decides to privatize, it could be important to convince the markets that links between the enterprises and the government are broken, in order to change investors’ perceptions about any implied guarantee. It could be harder to convince the markets if some residual social goals remained for the privatized entities.

¹Pub. L. No. 102-550 § 1302(7).

²In other words, the enterprises have developed technology and operating systems over an extended period of time during which they had certain advantages. If the enterprises were privatized, it could take potential competitors time and resources to effectively catch up to and effectively compete with the enterprises.

The Impacts on Targeted Groups of the Enterprises' Social Goals Activities Are Difficult to Measure

In our review of the enterprises' activities to meet social goal requirements, we found little definitive evidence of how housing affordability and homeownership opportunities for targeted groups would be affected by privatization. Fannie Mae has devoted extensive resources to special programs to meet social goal requirements and help fulfill its housing mission. Freddie Mac has devoted extensive resources to pilot programs and related activities, such as its Underwriting Barriers Outreach Group program, to expand housing opportunities both generally and for underserved areas and groups. However, quantification of the enterprises' efforts at the time of our review was generally a measurement of resource commitments rather than outcomes.

The Purposes of the Enterprises' Social Goals Were Established by the Federal Housing Enterprise Financial Safety and Soundness Act of 1992

As discussed in chapter 1, two of the statutory purposes of the enterprises are

- to provide ongoing assistance to the secondary market for residential mortgages (including activities relating to mortgages on housing for low- and moderate-income families³ involving a reasonable economic return that may be less than the return earned on other activities) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing; and
- to promote access to mortgage credit throughout the nation (including central cities, rural areas, and underserved areas) by increasing the liquidity of mortgage investments and improving the distribution of investment capital available for residential mortgage financing.⁴

The 1992 Act required HUD to promulgate rules that set forth goals for the enterprises to meet in purchasing mortgages made to designated income groups and in geographic areas defined as underserved. The motivation for promulgation and enforcement of the social goals was partially attributed by individuals we interviewed, to the perception that the enterprises' distribution of conventional, conforming loan funding going to low- and moderate-income borrowers was lagging behind the primary mortgage

³Household borrowers are defined as low-income if income does not exceed 80 percent of area median family income. Moderate-income includes household borrowers with incomes that do not exceed area median family income. The relevant geographic areas are the metropolitan area for metropolitan residents and non-metropolitan counties in the state for rural residents. Households who reside in rental housing units count toward the goals based upon whether the rent level in the housing unit is affordable to a very low-, low-, or moderate-income resident, whichever is relevant.

⁴12 U.S.C. § 1716.

market's funding of such mortgages. A Federal Reserve Board study using 1992 Home Mortgage Disclosure Act data supported this perception.⁵

The purpose of the goals is to increase the total supply of residential mortgage funds to targeted borrowers, which in turn could reduce mortgage costs for such borrowers. The impact on mortgage costs depends on how much the social goals serve to increase enterprise funding levels to targeted borrowers and how mortgage originations by other lenders (namely depository institutions that undertake portfolio lending and mortgage bankers who originate federally insured mortgages for Ginnie Mae mortgage pools) are affected. It is easier to quantify how the social goals affect enterprise activities than it is to quantify the final market outcomes of such activities.

**Expectations Regarding
the Nature of the
Enterprises' Social
Policy-Related Activities
Are Unclear**

The broad purposes of the 1992 Act do not answer a number of questions about legislative expectations of HUD and the enterprises in their implementation of these social goal requirements. For example:

- Should the enterprises' promotion of access to mortgage credit throughout the nation provide remedies to alleviate possible imperfections in private mortgage markets such as those created by racial discrimination? Or, should the enterprises improve the distribution of investment capital using some different standards?
- Should HUD promulgate separate subgoals for central cities and rural areas, or specify one or more geographic areas that it considers underserved?⁶

**HUD Goals Have Changed
With Shifts in HUD
Objectives**

The 1992 Act directed HUD to promulgate regulations setting annual goals for each enterprise for the purchase of mortgages relating to each of the following three categories:

- housing for low- and moderate-income families;
- housing located in central cities, rural areas, and other underserved areas; and

⁵Glenn B. Canner and Wayne Passmore, "Residential Lending to Low-Income and Minority Families: Evidence from the 1992 HMDA Data," Federal Reserve Bulletin (February 1994) pp. 79-108. The authors state that their results may reflect the relatively high rates of residential mortgage refinancing in 1992.

⁶Section 1334 of the 1992 Act requires HUD to establish "an annual goal for the purchase by each enterprise of mortgages on housing located in central cities, rural areas and other underserved areas." The section further authorizes HUD to establish "separate subgoals within the goal" under the section but specifies that the subgoals are not enforceable.

- rental and owner-occupied housing for low-income families in low-income areas and for very low-income families.

These goals were set in part to bolster HUD's monitoring and enforcement of goals for both enterprises that previously had been established only for Fannie Mae.⁷

The 1992 Act established a transition period of calendar years 1993 and 1994 to allow time for HUD to collect data and implement these requirements and provided interim annual purchase goals for each enterprise during the period. Under these goals, 30 percent of the total number of dwelling units financed by mortgage purchases of each enterprise during the year were to be from mortgages serving low- and moderate-income families and likewise 30 percent of dwelling units were to be for housing located in central cities designated as such by the Office of Management and Budget (OMB). The amounts were essentially the same as the percentage goals (known as the "30/30 goals") that had been previously established for Fannie Mae under HUD's regulations. Authority for the twin 30/30 goals was contained in the 1968 chartering legislation for Fannie Mae, but they were not promulgated until 1979. These goals were not based on any analytical studies, and, as we understand, they were never monitored or enforced. In addition, the 1992 Act established interim "special affordable housing goals" for each enterprise to acquire mortgages serving low-income families in low-income areas and very low-income families.⁸ Under these goals, Fannie Mae was to purchase at least \$2 billion in such mortgages during the period, while Freddie Mac was required to purchase a volume of at least \$1.5 billion.⁹

⁷See 24 C.F.R. Part 81 (1992). Part 81 set goals for purchases by Fannie Mae of mortgages by very low-, low-, and moderate-income families and mortgages for residential properties in central cities. These goals essentially targeted 30 percent of Fannie Mae's annual mortgage purchases for low- and moderate-income mortgages and 30 percent for mortgages in central cities. HUD was granted regulatory authority over Freddie Mac in 1989 under the Financial Institutions Reform, Recovery, and Enforcement Act of 1989 (FIRREA), Pub. L. No. 101-73 § 731(c). However, prior to the 1992 Act, HUD had not extended the housing goals to Freddie Mac. Also before the 1992 Act, HUD had not consistently enforced the housing goals and had not collected mortgage data sufficient to monitor compliance with the goals. HUD's new Part 81 goals are discussed later in this report.

⁸Generally, the affordable housing goals define low-income households as having income not exceeding 80 percent of area median income and very low-income households as having income not exceeding 60 percent of area median income. Multifamily rental units count toward the goals based on the affordability of rent levels for low- and very low-income households.

⁹The special affordable housing goal for 1993 and 1994 was, in effect, an increase above each enterprise's estimated 1992 purchases fulfilling the definition. The goal targets lending to low- and very low-income borrowers and therefore is primarily geared to rental housing. We were told by HUD officials that HUD relied heavily on input from Fannie Mae and a number of housing advocacy groups in developing this goal.

According to HUD officials, HUD had originally begun research on social goal regulations for the enterprises as early as 1989. The agency's approach to this area, at that time, was to ensure that the benefits from government sponsorship were equally distributed across all borrowers. Following passage of the 1992 Act and the beginning of the Clinton administration in January 1993, this approach shifted somewhat. HUD's policy became one in which the enterprises should lead the market for lending to low- and moderate-income and other underserved borrowers, rather than simply mirroring the primary, conforming, conventional mortgage market. HUD officials are presently considering the appropriate scope of this shift. If mirroring the market means that the enterprises fund a share of mortgages benefiting a targeted group equal to the share observed in the overall primary market, "leading the market" could be interpreted to mean that the enterprises should devote larger shares of their funding to targeted groups. If social goal regulations were to require leading rather than mirroring the market, it would be more likely that housing opportunities and affordability for targeted borrowers would be improved.

**The Permanent Goals
Promulgated by HUD
Require the Enterprises to
Mirror the Primary,
Conforming Market**

The goals established for the enterprises are based, in part, on the targeted groups' shares in the primary, conforming, conventional market. The relevant comparison was the primary market because the secondary, conforming, conventional market is so dominated by the enterprises that they would always mirror it. In 1993, HUD published a notice of proposed housing goals under the 1992 Act that included interim goals for the enterprises for 1993 and 1994.¹⁰ Final goals were promulgated on December 1, 1995, effective January 2, 1996.¹¹ For low- and moderate-income housing, the goals are 40 percent of mortgage purchases during 1996 and 42 percent yearly during 1997 through 1999. The special affordable housing goals (for mortgages of low-income families in low-income areas and very low-income families) are 12 percent of all mortgage purchases in 1996 and 14 percent yearly during 1997 through 1999.

The underserved area component replaced the old central city requirement.¹² Purchases are to count toward the goal if the census tract has median income below 120 percent of median income for the overall

¹⁰58 Fed. Reg. 53048 (Fannie Mae), 53072 (Freddie Mac) (October 13, 1993).

¹¹60 Fed. Reg. 61486 (Dec. 1, 1995).

¹²See footnote 7 on Part 81 requirements.

metropolitan area (nonmetropolitan areas in the state if a rural census tract) and at least 30 percent of the residents are minority. Purchases also count if census tract median income is below 90 percent of median income for the overall metropolitan area and, in rural areas, if census tract median income is below 95 percent of median income for nonmetropolitan areas in the state. For purchases of mortgages on housing located in underserved areas, the goals are 21 percent of purchases in 1996 and 24 percent yearly during 1997 through 1999.

Fannie Mae's Production Levels Exceeded Goals; Freddie Mac's Performance Was Mixed

HUD estimated the percentage of each enterprise's purchases in 1994 that met the income, special affordable, and underserved area components in the new final rule (see table 4.1). Fannie Mae's 1994 production levels exceeded the goals set for the remainder of the decade in the final rule. Freddie Mac's 1994 production exceeded the underserved areas goal but fell short of the low- and moderate-income and special affordable goals set for the remainder of the decade.¹³ Each enterprise's production toward each goal in 1994 exceeded the share attained the previous year.¹⁴

Table 4.1: Enterprise Performance in Relation to Newly Established HUD Requirements

Requirement	1994 Share		1996 Goal	1997-99 Goal	Estimated share of primary market
	Fannie Mae	Freddie Mac			
Low- and moderate-income	46%	37%	40%	42%	48-52%
Special affordable	17	11	12	14	20-23
Underserved areas	29	24	21	24	25-28

Source: HUD.

¹³Fannie Mae met the central city goal in 1994 with 31.5 percent of its purchases; Freddie Mac did not meet the goal with 25 percent of purchases from central cities. The special affordable housing goal for the 2-year period beginning in 1993 had a multifamily and single-family component. Fannie Mae met each component and the total requirement. Freddie Mac met the single-family and total requirement but did not meet the multifamily component.

¹⁴Fannie Mae officials attributed their increased percentages, in part, to increased efforts to reach out to targeted borrowers. In contrast, Freddie Mac officials told us that their improved performance statistics for 1994 were more affected by changes in economic conditions than HUD's regulatory oversight. Specifically, measures of homeownership affordability were favorable at the same time mortgage refinancings were declining. These events increase the share of borrowers who are first-time homebuyers, and borrowers who refinance tend to have above-average incomes.

The Enterprises Differ in Their Approaches to Implementing Social Goal Obligations

Officials of both enterprises told us that their charters and the 1992 Act are consistent with their mission requirements to be in all markets at all times. Both enterprises emphasized that their standard programs are designed to benefit all homebuying borrowers—including those that are low- and moderate-income, minority, or underserved area residents, and both have targeted lending programs to support homeownership and housing affordability for targeted groups. The enterprises, however, have differing perceptions of how they should respond in meeting the regulatory social goals.

Fannie Mae's Targeted Lending Programs

Fannie Mae has a number of special programs that are designed to reach out to central city, low-income, and minority and ethnic group borrowers who may feel disenfranchised from the housing finance market and the attainment of homeownership. Fannie Mae officials stress the importance of their outreach efforts with community groups in this process. These efforts are reflected in Fannie Mae's strong support for a central city lending goal, which they argue is legally required by the 1992 Act. Fannie Mae also has consistently purchased mortgages supporting multifamily rental housing, which is reflected in its support for the special affordable housing goal. Fannie Mae officials generally view the low-income, central city, and special affordable goals as a reaffirmation, in part, of their housing finance mission.

Fannie Mae officials told us that their standard business practices, in addition to their special programs, provided benefits to customers with characteristics similar to the targeted groups. For example, because the fees they charge on MBS may not be risk-based, borrowers who make high down payments may be charged more and those who make low down payments less than they would be charged if fees were truly risk-based. Fannie Mae officials said that the general intent of such a cross-subsidy would be to facilitate first-time homeownership. They also indicated that this form of cross-subsidy is not systematically related to borrower income.¹⁵

Fannie Mae officials said that whatever cross-subsidization affected their targeted lending programs was due to the extra administrative costs of

¹⁵In other words, in an analysis of total Fannie Mae purchases the distribution of loan-to-value ratios among borrowers is similar among low- to moderate-income and higher income borrowers. We obtained statistics from HUD for each of the enterprises' total book of business in 1993 on loan-to-value ratios by income group. The statistics are consistent with the notion that loan-to-value ratio was not systematically related to borrower income.

these programs.¹⁶ About 8 percent of Fannie Mae's 1994 purchases were accounted for by targeted lending programs. They stated that the benefits for targeted borrowers tend to be textural compared to explicit subsidy programs where benefits can be more easily quantified.¹⁷ The expected benefit of many of these outreach efforts is to bring more households, including future generations, into the housing finance and homebuying system.

Freddie Mac's Targeted Lending Programs

Freddie Mac has a number of pilot programs designed to identify cost-effective methods to expand housing opportunities. The intent is to identify such methods for subsequent implementation into standard Freddie Mac mortgage products. The programs' primary emphasis is on identifying inefficiencies in mortgage markets that could result from possible discrimination and arbitrary underwriting standards. Freddie Mac officials said they generally view HUD's social goal regulatory enforcement as a monitoring device to verify that the enterprises are serving all parts of the primary mortgage market rather than as a device that has a substantial independent effect on their allocation of mortgage credit.

Freddie Mac officials emphasized the role of their special affordable targeted lending initiatives as pilot programs meant to identify cost-efficient methods to expand homeownership opportunities. For example, Freddie Mac officials emphasized their Underwriting Barriers Outreach Group (UNBOG) activities in reaching out to prospective homebuyers and expanding homeownership opportunities. UNBOG created focus groups comprising members of organizations involved in community lending issues. They were asked what Freddie Mac underwriting standards were perceived as being barriers to community lending, especially in communities that could be considered underserved. On the basis of the responses of the focus group participants, Freddie Mac clarified underwriting standards that were perceived as creating barriers to lending in particular communities. The clarifications apply to Freddie Mac's standard purchase programs. This effort appears to be consistent with Freddie Mac's philosophy that its major mission is to make sure that all parts of the primary mortgage market are served by its products.

¹⁶We were told by Fannie Mae officials that Fannie Mae accounting data are not sufficiently detailed to explicitly compare administrative costs among lending programs.

¹⁷An example of a textural benefit for targeted borrowers is literature produced by Fannie Mae, such as Choosing the Mortgage That's Right For You, which the enterprise printed in seven different languages.

**The Impacts on Targeted
Groups of the Enterprises’
Social Goal Activities Are
Difficult to Measure**

Fannie Mae is devoting extensive resources to special programs to meet social goal requirements and help fulfill its housing mission. Freddie Mac is devoting extensive resources to pilot programs and related activities, such as its Underwriting Barriers Outreach Group program, to expand housing opportunities generally and in areas and to groups that are perceived to be underserved. Privatization would likely cause a decline in such efforts by the enterprises. However, neither we nor the enterprises are able to quantify the impacts of these efforts on housing affordability and homeownership opportunities among different borrowers. Whatever quantification of these efforts exists is generally a measurement of resource commitments and not outcomes, such as the impacts on mortgage interest rates and housing affordability for targeted groups.

A recent Federal Reserve Board study estimated the amount of credit risk on lower income and minority borrower mortgages taken on by different participants in the mortgage market.¹⁸ Although the study does not measure outcomes related to housing affordability and homeownership opportunity, it does estimate the supply of one of the more important inputs, namely the ability and willingness to undertake credit risk, affecting the supply of mortgage credit. The authors expected that the enterprises would promote homeownership among lower income households more than entities such as depository institutions. They found, however, that depositories take on more of the total credit risk associated with lower income lending than the enterprises.¹⁹ From this they concluded: “The difference [in taking on credit risk] may arise because Fannie Mae and Freddie Mac, unlike depositories, generally have no interactions with borrowers and are not located in the neighborhoods where the mortgages are originated; thus they lack the opportunity to look beyond traditional measures of risk.” Thus, the enterprises, as secondary market participants, may not be as well situated as a primary lender to effectively distinguish more creditworthy targeted groups from less creditworthy targeted groups.

¹⁸Glenn Canner and Wayne Passmore, “Credit Risk and the Provision of Mortgages to Lower-Income and Minority Homebuyers,” *Federal Reserve Bulletin* (November 1995).

¹⁹A Fannie Mae official stated that the study (1) ignored the big role Fannie Mae plays in extending credit to the underserved, (2) relied on incomplete data, (3) relied on 1994 data even though 1994 was a year with an unusually high share of mortgages that were variable-rate mortgages funded by depositories, (4) included federally insured FHA and Veterans Affairs (VA) mortgages, and (5) did not take into account the credit risk taken by Fannie Mae on mortgages with private mortgage insurance (PMI). The authors’ response stated that their general finding that depositories take on more credit risk than the enterprises holds with inclusion or exclusion of federally insured loans and with private mortgage insurers or the enterprises taking on the credit risk on mortgages with PMI.

There are other reasons why knowing the extent of the enterprises' resource commitments is not sufficient to allow quantification of the program outcomes for targeted borrowers. First, it is necessary to determine how much the social goals serve to increase enterprise funding levels to targeted borrowers compared to what they would have been without the goals. On this score, we observe that the enterprises have increased mortgage funding to targeted groups. Even if some of this increase is due to other economic factors, the goals have likely caused part of this expansion. Second, it would be necessary to determine how mortgage originations by other lenders, namely depository institutions who undertake portfolio lending and mortgage bankers who originate federally insured mortgages for Ginnie Mae mortgage pools, are affected and respond to this change in funding. On this score, we are uncertain.

The Market Effects of Privatization Could Result in a Delay of Homeownership for Some Low-Income Families

Assuming privatization and no adjustments or change in any federal mechanism supporting housing affordability and homeownership, it is likely that mortgage interest rates could increase by about 15 to 35 basis points on average, with larger increases likely for homebuyers making relatively small down payments (as discussed in ch. 3). One of the five studies commissioned to help assess privatization analyzed the implications of higher mortgage interest rates on housing affordability and homeownership.²⁰ The authors developed an economic model in which underwriting requirements created constraints (such as minimum downpayments or monthly payment to income ceilings) that would keep some prospective borrowers from purchasing a home of the size and value they would be expected to prefer on the basis of household characteristics and expected future income patterns.

The authors performed a statistical simulation to estimate the impact of a 50 basis point increase in mortgage interest rates on homeownership. They used 50 basis points as an upper bound of how much privatization could affect mortgage rates.²¹

²⁰Susan Wachter, James Follain, Roberto G. Quercia, Peter Linneman, and George McCarthy, "Implications of Privatization: The Attainment of Social Goals," published in Studies on Privatizing Fannie Mae and Freddie Mac (forthcoming May 1996).

²¹The 50 basis points represent the total impact from privatization on the mortgage interest rates paid by households from different income, race and ethnic, and age groups. The 50 basis points is meant to include the interest rate impact from the expected decline in targeted lending programs by the enterprises associated with privatization.

The authors estimated that their baseline homeownership rate²² of 63.6 percent would have been about 1.2 percentage points lower if mortgage interest rates had been 50 basis points higher as a result of privatization (see table 4.2). The estimated impacts on minority, low-to-moderate income, and young households²³ would have been more pronounced; the respective estimated downward impacts on the homeownership rate would have been about 2.8 (from a baseline of 43.9 percent), 2.6 (from a baseline of 45.7 percent), and 3.5 percentage points (from a baseline of 33.7 percent).

Table 4.2: Estimated Impacts of Privatization on Homeownership Rates

Household group	Baseline (1989) homeownership rate	Estimated homeownership rate with privatization
All	63.6%	62.4%
Minority	43.9	41.1
Low-to-moderate income	45.7	43.1
Head under 30 years old	33.7	30.2

Source: Wachter, Follain, et al.

The authors' statistical analysis indicated that the primary impact of the interest rate increase associated with privatization on homeownership rates was due to an increase in the relative cost of homeownership compared with the cost of rental housing. The remainder was accounted for by the estimated impacts of privatization on down payment and monthly payment to income constraints associated with underwriting standards. For example, with higher mortgage interest rates, more potential homeowners would find that their ratio of mortgage payments to income would be above current underwriting standards. Because the authors are comparing the cost of homeownership to the alternative of renting, the relative cost impact depends on the authors' analysis of the impacts of privatization on multifamily housing.

²²The homeownership rate equals the percentage of households residing in owner-occupied housing.

²³Young households are defined in the study as those with a head of household under 30 years old.

**Privatization Would Be
Unlikely to Have a
Significant Impact on
Mortgage Interest Rates on
Multifamily Housing**

On the basis of limited statistical information, the authors found that privatization would not have a significant impact on mortgage interest rates on multifamily housing.²⁴ As a result, they concluded that multifamily housing concerns should not be the basis of policy decisions on privatization. In addition, this conclusion affected the authors' estimates of the effects of privatization on homeownership because the most important variable used to estimate the homeownership impact is the relative cost of owning versus renting a housing unit. Their estimates assume that privatization would increase single-family mortgage interest rates, and therefore the cost of owning, but not have any significant effect on multifamily mortgage interest rates, and therefore the cost of renting. If the cost of rental housing were affected by privatization proportionally to the cost of owner-occupied housing, the relative cost of owning versus renting would be unaffected, and most of the estimated impacts on homeownership rates would have disappeared.²⁵ In addition, privatization could cause mortgage interest rates on single-family rental housing, and thus rental costs on such housing, to increase.

The primary reason why it appears unlikely that the supply of multifamily housing would be affected by privatization is that the enterprises currently finance little multifamily activity and with privatization are more likely to do less than more.²⁶ The enterprises' purchases of multifamily mortgages represent a small share of their total purchases.²⁷ Fannie Mae's purchases of multifamily mortgage purchases accounted for \$4.8 billion in 1994,

²⁴For various reasons, a larger share of multifamily units than single-family units contribute toward fulfillment of the housing goals. Renters who reside in multifamily housing units generally have lower incomes than homeowners; also, the preponderance of multifamily housing is also greater in central cities than in other geographic locations. Therefore, the general increase in requirements promulgated by HUD for 1996 through the remainder of the decade creates incentives for expanded multifamily purchases by the enterprises.

²⁵An official from Fannie Mae stated at the Wachter and Follain seminar that lowering multifamily housing financing costs may be the next frontier for the enterprises to bring additional benefits to the housing market. If such events occur in the future, households could benefit from lower rental costs. In the context of the Wachter analysis, however, the relative cost impact from privatization that lowers the expected homeownership rate would partially disappear. It should also be noted that the Wachter analysis assumes that the cost of multifamily housing (i.e., housing units in structures with five or more units) determines the cost of rental housing. Over half of the rental housing stock in the nation is accounted for by single-family housing (i.e., housing units in structures with one to four housing units).

²⁶Here we are not reaching any conclusion with respect to whether more financial capital should be committed to multifamily housing. In the absence of privatization, we assume that social goal regulation would likely motivate increased funding of multifamily mortgages by the enterprises in the future.

²⁷HUD officials told us that they are developing programs in which the enterprises and FHA would cooperate in risk-sharing arrangements for multifamily housing. We do not know whether such cooperative arrangements would improve housing affordability for lower income rental housing tenants.

about 3 percent of total Fannie Mae purchases. Fannie Mae officials told us that the \$4.8 billion was about 11 percent of total 1994 multifamily mortgage originations. They added that Fannie Mae's 1995 multifamily purchases were \$6.5 billion, which were about 20 percent of total multifamily originations. Freddie Mac purchased \$913 million in multifamily loans in 1994, less than 1 percent of total purchases.²⁸ Unlike the jumbo market, there are no prohibitions or constraints keeping the enterprises from expanding in this area. It is their existing and prospective social goals that are motivating much of the multifamily financing they are currently doing or are contemplating for the future.²⁹ Without those goals, they would probably do less. However, due to their limited role, such a reduction or withdrawal is not likely to have much effect on either the supply or the rental cost of multifamily housing.

**Study Found That
Privatization Could Delay
First-Time Homeownership
of Low-Income
Households**

The authors also distinguished between the impacts of privatization on current ownership and when households first become homeowners.³⁰ Borrowing constraints created by mortgage underwriting standards can be overcome over time if households save for a downpayment over a longer period of time. In addition, borrowing constraints tend to be greater for households with low current income who have relatively high levels of expected income in the future, because the optimal house that first-time homebuyers purchase is dictated in part by their expected future incomes. The authors found that a majority of the households with low current income had relatively high levels of expected future income. Therefore, it can be expected that one of the primary impacts of privatization on homeownership would be to delay rather than permanently preclude homeownership for the group of households with low current income and relatively high expected future income.

Even if privatization's effect on interest rates were only to delay and not preclude homeownership, such a delay could still have social costs. Among the many reasons stated by Members of Congress for providing

²⁸Freddie Mac experienced substantial losses in its multifamily business in the late 1980s, discontinued new multifamily activity for a number of years, and did not begin new business until December 1, 1993. Freddie Mac's March 1, 1995 report to HUD states: "Freddie Mac now underwrites multifamily loans individually and treats them in a fashion more similar to commercial business loans than to single-family loans."

²⁹A Fannie Mae official said that Fannie Mae has always funded multifamily mortgages. He said that the social goals change the focus of this activity toward targeted groups.

³⁰They use the terms the "current homeownership rate" and the "ever-own rate." The latter is a measure of the percentage of households who at some time become homeowners. Fannie Mae comments on the Wachter analysis argued that the ever-own rate was a rather meaningless theoretical construct and policy decisions should be based on the impacts of privatization on the current homeownership rate.

favorable tax and financial treatment to homeownership is the belief that owning a home fosters wealth accumulation and family stability. If so, then attaining homeownership at a younger age by households with relatively low but rising incomes could help promote such social goals. Furthermore, the attainment of homeownership by households with low incomes that are not expected to increase could include the accrual of wealth accumulation and family stability over protracted time periods as well as other benefits, such as fostering stronger community ties among neighborhood residents.

The Federal Government Has a Number of Mechanisms to Support Housing Affordability and Homeownership

HUD's social goal regulation of the enterprises represents one of a number of federal government mechanisms that support housing affordability and homeownership.³¹ Various federal agencies support homeownership. For example, FHA and VA lower ownership costs by guaranteeing mortgages with favorable terms for qualified individuals. Ginnie Mae guarantees timely payment of principal and interest from mortgage pools of FHA- and VA-insured mortgages. The Federal Home Loan Bank System lends to mortgage lenders so they can originate and fund mortgages. Federal financial institution regulators also have responsibilities under the Community Reinvestment Act to encourage banks and thrifts to help meet the credit needs in all areas of their communities, including low- and moderate-income areas. These regulators also enforce fair lending laws that prohibit discriminatory lending practices.

With Privatization, Enterprises Are Likely to Reduce or Eliminate Special Programs to Aid Targeted Groups

Privatization would likely provide the enterprises with new incentives, including an altered cost structure and few if any restrictions on their activities. As discussed in chapter 3, the resulting secondary market entities would likely operate as conduits rather than operate directly in the primary market or hold many mortgages in portfolio. They would also not be likely to develop low down payment mortgage products or purchase and securitize multifamily mortgage products.³²

The enterprises' programs aimed at targeted groups, in general, are more costly than their standard business. Fannie Mae officials told us that most of their targeted lending products were more costly than standard mortgage products. For example, in our review of the enterprises' targeted lending programs, we found that default rates were substantially higher on

³¹Our discussion here is on federal programs rather than provisions in the tax code.

³²This finding is based on our interviews with enterprise officials and our analysis of private-label conduits in the secondary market.

purchases through those programs. We examined Fannie Mae mortgage default and borrower targeting statistics comparing targeted lending programs and standard business for mortgages purchased in 1994.³³ The difference in the default rates appears to result from the higher loan-to-value ratios and the easing of other underwriting restrictions in the targeted lending programs. This finding is consistent with preliminary analysis at the Office of Federal Housing Enterprise Oversight (OFHEO) indicating that enterprise funded loans with loan to value ratios above 90 percent, in census tracts in which incomes are below metropolitan area median income, and where more than 30 percent of residents are minority group members default more often than other mortgages purchased by the enterprises. As designed, Fannie Mae's targeted lending programs purchase larger shares of loans made to low-income, central city, minority, and first-time homebuyer borrowers compared to standard business.

As a result, privatization is likely to reduce the significant resources the enterprises are currently expending on these targeted borrower programs. Because neither we nor the enterprises have been able to quantify the impact of these efforts, however, it is difficult to know whether privatization would have a significant effect on affordability or homeownership opportunities among targeted groups.

Net Effect on Social Goal Attainment Depends on Whether Other Programs Are Maintained or New Programs Are Established

The potential impacts of privatization on social goal attainment depend, in part, on how well targeted borrowers would be able to obtain financing from depository institutions and primary lenders who originate FHA-insured loans. The FHA single-family mortgage insurance program serves many lower income, minority, and central city borrowers and these loans are securitized in Ginnie Mae MBS. It is not clear how well these FHA programs serve or could serve targeted borrowers compared with how the enterprises, without privatization, would serve similar borrowers. Likewise, the FHA multifamily insurance program is a possible policy alternative to multifamily products now being developed by the enterprises.³⁴ However, the potential increased reliance on FHA and VA programs resulting from privatization could increase the total risk of these programs.

³³Fannie Mae's National Housing Impact Division runs the enterprise's targeted lending programs. Therefore, we use Housing Impact initiatives and targeted lending programs synonymously. Purchase money mortgages finance the purchase of a housing unit (i.e., refinancings are excluded).

³⁴We did not make a separate examination of FHA operations in the course of this mandated study, but we have relied upon publicly available information and interviews with HUD officials and other policy experts on FHA programs. In addition, we did not examine FHA risk-sharing programs with the enterprises.

If privatization occurred and alternative policy levers could not be developed for the ensuing secondary market participants, there are other mechanisms available for achieving such goals. For example, financial institution regulators could develop new Community Reinvestment Act requirements that improve the incentives depository institutions face for originating mortgages to targeted groups that are sold in the secondary market.

Mortgage bankers are not subject to regulations such as the Community Reinvestment Act (CRA). Some mortgage bankers have entered into agreements with HUD concerning the distribution of their mortgage origination activities. The current social goal regulations motivate the enterprises to compete for loans originated by mortgage bankers to designated borrowers. Privatization may sever this tie. Therefore, if privatization occurred, it may be that some new mechanism could be created to give mortgage bankers incentives to originate mortgages to these targeted groups.

Enterprise Comments and Our Evaluation

In oral comments on a draft version of this chapter, a Fannie Mae official said that Fannie Mae appreciates the report's recognition of the commitment that the organization has made to affordable housing and targeted financing overall. However, he said that the draft report was inexplicably reluctant to draw unqualified conclusions about the success of the enterprises' efforts in promoting homeownership for targeted groups. Additionally, he said that privatization would result in higher rental costs for occupants of multifamily residences, and he said that Home Mortgage Disclosure Act (HMDA) data has substantial limitations for assessing the enterprises' efforts to promote homeownership among targeted groups. The Fannie Mae official also said that the draft report neglected to mention that increased reliance on other federal programs designed to promote homeownership, such as FHA and VA, will increase the risks of a taxpayer rescue. Fannie Mae officials also provided technical comments, which we have incorporated where appropriate. Freddie Mac officials said that privatization would result in higher rental costs because owners of single-family rental housing would pass increased mortgage rates on to their tenants.

The Fannie Mae official said that the draft report ignored substantial evidence that the enterprise's commitment to the housing goals has increased homeownership opportunities for targeted groups. For example, he said that Fannie Mae provided tracking data for the years 1993 to 1995

that clearly show the enterprise's overall share of business serving low- and moderate-income groups has increased consistently. He also said that there are quantifiable measures of the success of Fannie Mae's efforts to make mortgage financing more affordable for certain targeted groups; for instance, the use of higher debt-to-income and loan-to-value ratios means that targeted groups can more easily qualify for mortgages. Moreover, he said there is no reason to expect that the social goals would be retained in any form in the event of privatization. He noted that private sector conduits that perform similar functions as the enterprises are not subject to social goal requirements.

The Fannie Mae official also disputed the Wachter and Follain finding that privatization would not have a significant effect on mortgage interest rates for multifamily housing. He said that Fannie Mae's commitment to this market predates the social goals, but its extensive innovation and outreach efforts would likely be curtailed in the event of privatization. He said that this would have genuine effects on capital availability for affordable rental housing development. In addition, the Fannie Mae official said that the enterprise would probably respond to privatization by curtailing more flexible credit tests and higher loan-to-value ratios which the enterprise currently use to increase its participation in the market for multifamily housing.

The Fannie Mae official further commented that HMDA data is not a reliable basis for determining, as the draft report stated, that the enterprises lagged other mortgage market participants in providing credit to low- and moderate-income groups. For example, he said that many such mortgages that the enterprises purchase are not credited by the HMDA data. He attributed this shortcoming to the fact that only the first mortgage sale is recorded by HMDA, and some mortgage lenders are not covered and this can be a mortgage affiliate or other player that eventually sells the mortgage to Fannie Mae or Freddie Mac.

The Fannie Mae official also commented that the FHA and VA mortgage programs and other options we listed could not possibly substitute for the dollar volume commitments that the enterprises make each year to purchase low- and moderate-income mortgages. Moreover, he said that relying on these programs further does not necessarily represent good public policy because it would shift potential loss liabilities directly to the federal government and the taxpayers and the options are not viable. He also said that it is highly speculative to assume that Congress would enact CRA-type requirements for the enterprises in the event of privatization.

Freddie Mac officials also said that potential taxpayer risks would increase with privatization due to increased reliance on the FHA and VA programs, as well as insured depository institutions. Further, they stated that privatization would result in depositories increasing their use of FHLB advances and generating additional taxpayer risks. The Freddie Mac officials also said that renters would likely face higher housing costs in the event of full privatization because the owners of single-family rental properties would pass increased mortgage costs on to their tenants.

We believe it is still too early to measure the impact of the enterprises' social goals on the provision of additional housing finance to targeted groups. For that reason, in the report we presented information we obtained during this assignment on the resource commitments the enterprises are making to fund mortgages serving targeted borrowers. In addition to not being able to draw unqualified conclusions about the effects of existing programs, it is even more difficult to predict the effect of privatization largely because we do not have enough information to predict (1) how eliminating the enterprises' social goal obligations will interact with other federal mechanisms, (2) what requirements HUD would have set in the future without privatization, and (3) the market impact of eliminating social goals on housing affordability. We do not have a basis for knowing whether the limited coverage of HMDA biases estimates of the enterprises' contributions to funding mortgages to targeted borrowers. The increased reliance on FHA and VA programs resulting from privatization could increase the total risk of these programs, although it could also lower their average level of risk if the enterprises' expanded efforts are taking away the more, rather than the less, profitable business of these federal insurance programs. We acknowledge that privatization could cause mortgage interest rates on single-family rental housing, and thus rental costs on such housing, to increase.

The report indicates that the enterprises' overall share of business serving low- and moderate-income groups has increased consistently. We do not know how much this has increased homeownership opportunities for targeted groups, although the results from the commissioned study by Wachter and Follain, as discussed, indicated that privatization could reduce homeownership opportunities.

The best evidence we have available to assess the enterprises' impact on mortgage interest rates for multifamily housing is from the Wachter and Follain study, which concludes that privatization would not radically alter the current situation.

We do not think it is clear how well other federal programs and other mortgage providers could fill the void that could result from privatization. The enterprises fund many mortgages, including those serving targeted groups. With privatization, some of this activity would be curtailed. The Federal Reserve Board study on credit risk referred to in this report suggests that depository institutions may be able to profitably serve some of these affected borrowers. We do not know how much extra business FHA programs could be faced with if the enterprises were privatized.

Transition Issues and Alternative Policy Options

Privatization of the enterprises would clearly be a major policy change. As such, it would require a careful examination of the benefits and costs and involve difficult policy choices that only Congress can make. Should Congress decide that privatization is worth pursuing, there are a number of ways it could structure the transition to privatization. Each of these has advantages and disadvantages. For example, an approach designed to be least disruptive to the mortgage market might leave institutions that were still perceived as too big to fail. As a result, such an approach might not fully break the government ties that cause the market to perceive an implied guarantee. Alternatively, an approach that more effectively broke those ties by breaking up the privatized enterprises into smaller companies could reduce some of the potential benefits from mortgage standardization and maintenance of liquidity in the market.

Privatization is only one alternative to the status quo. There are other policy options, short of privatization, that would adjust the activities or responsibilities of the enterprises in such a way that the potential public benefits generated by government sponsorship could potentially increase or the size of enterprise activity or the riskiness of that activity to the government could be decreased. The latter could reduce the potential cost should the federal government ever decide to bail out a failing enterprise. We selected alternatives from among what appeared to be the most frequently mentioned in the available literature while attempting to identify a variety of approaches. The four alternatives we discuss include:

- lowering or freezing the conforming loan limit,
- increasing minimum requirements for mortgage insurance coverage,
- charging the enterprises for the government's risk exposure, and
- authorizing another government-sponsored enterprise to compete with Fannie Mae and Freddie Mac.

Transition Would Involve Difficult Choices but Would Hold the Key to Making Privatization a Success

Should Congress decide to privatize the enterprises, it would be important to achieve a clear and deliberate elimination of the special benefits and restrictions the enterprises have under their current federal charters. To be successful, the legal transition to privatization would need to be structured to eliminate investor perceptions of an implied federal guarantee so that other private companies could compete in the secondary mortgage market on a level playing field. This perception is key to the fact that the enterprises are the only two important competitors in the conventional, conforming secondary mortgage market. Privatization

would be more likely to lead to more secondary market competitors if the enterprises' special advantages were clearly removed.

Several Possible Approaches to Restructuring Could Be Considered

A transition to privatization would have to deal with a number of trade-offs. First, the number of successful competitors would be determined in part by the structure of the transition. If Congress were to create more competitors initially, this could act to reduce market liquidity and standardization. However, the number of competitors that ultimately prevail in the secondary market would be partly limited by market forces, including how much investors value market liquidity. Second, the newly privatized enterprises must have the managerial, capital, and other resources necessary for them to be successful going concerns without preventing entry into the conforming secondary mortgage market by potential competitors. Engineering the restructuring necessary for the transition would require extensive expertise by legal and financial experts. This engineering would also involve trade-offs among competing objectives and create policy challenges. Generally, the larger the new enterprises are, the greater the risks that

- investors would continue to perceive an implicit federal guarantee, because the enterprises could be considered too big to fail and there would be increased potential cost to taxpayers if the enterprises were rescued by the government; and
- the enterprises, because of their size and the possible remaining perception of an implicit federal guarantee, would exercise market power in business activities outside of the secondary mortgage market for conventional, conforming residential mortgages.

One approach would be to make each enterprise a holding company with two subsidiaries—one subsidiary conducting liquidation of old (that is, preprivatization) business and the other, conducting new business. The proposed privatization of the Student Loan Marketing Association (known as Sallie Mae) contains such a structure.¹ Segregation of securities created under government sponsorship and new private entity securities would help sever the perceived implied federal guarantee on post-privatization business, although it could strengthen the tie on old business. If

¹The current Sallie Mae proposal includes the notion that the perception of the implied federal guarantee would remain for the liquidating old company subsidiary. One possible policy option could be the granting of an explicit federal guarantee for the liquidating subsidiary's debt and MBS. A holding company structure with old and new business subsidiaries would require strict regulation to limit the capital and other resources from the liquidating old company subsidiary from transferring to assist the new, privatized entity.

outstanding debt and MBS previously issued by the enterprises as government-sponsored entities were to be segregated, market stability and liquidity are less likely to be jeopardized, because the liquidating subsidiary's securities would be more likely to keep their current government-sponsored status.²

In addition to this option, the study commissioned by CBO assessed other possible approaches to restructuring.³ These included creating

- two separate privatized companies that receive an allocation of resources along with government actions to liquidate the terminating government-sponsored enterprises; and
- a number of separate privatized companies, which would break up Fannie Mae and Freddie Mac into smaller operating companies, followed by restructuring to remove government- sponsorship from the successor companies.

The first of these options may be more likely than the “old company new company” approach to prevent the perception of an implied federal guarantee on new business, because all of the old obligations that were thought to have the implied guarantee would be liquidated. However, liquidating such a large amount of existing debt and MBS could disrupt financial markets. The second option could be the most conducive to insuring competition and to eliminating the “too big to fail” perception, because there would presumably be a larger number of smaller companies created out of the current enterprises. However, forcing the new companies to be small could reduce efficiencies associated with standardization and liquidity.

An Analysis of Four Policy Alternatives to Increase Benefits and/or Reduce Risk to the American Public

To address adjusting the activities or responsibilities of the enterprises to increase the public benefits and/or reduce the overall size of enterprise debt or the probability that the government may have to rescue a failing enterprise, we examined four policy options. We identified a range of policy alternatives from our examination of the policy literature. The following four alternatives we chose to discuss involve trade-offs among competing policy interests, should not be construed as our proposals, and

²The perception of an implied federal guarantee has affected how the enterprises fund themselves. As we have noted, after privatization the enterprises would likely change how they fund mortgages to create financial instruments that do not require the GSE form of credit enhancement.

³Thomas Stanton, “Restructuring Fannie Mae and Freddie Mac: Framework and Policy Options ” (October 1994).

by no means exhaust the possible policy alternatives Congress may want to consider. The list includes

- (1) lowering or freezing the conforming loan limit,
- (2) increasing minimum requirements for mortgage insurance coverage,⁴
- (3) charging the enterprises for the government's risk exposure, and
- (4) authorizing another government-sponsored enterprise to compete with Fannie Mae and Freddie Mac.

Lowering or Freezing the Conforming Loan Limit

It appears that a lowering or freezing (i.e., not allowing inflationary adjustments) of the conforming loan limit would have a number of effects. First, it could reduce the amount of enterprise activity without greatly limiting the ability of the enterprises to diversify risk and thereby should reduce the potential taxpayer risk in the event of a government bailout. This reduction could be offset somewhat, because some of the activity that currently fits under the conforming label but would not fit under the tighter ceiling may end up in the portfolios of depositories rather than being securitized. To the extent this occurs, there could be an increase in potential taxpayer exposure. For example, depositories taking on more credit risk could raise the risk exposure of the deposit insurance funds. If the depositories are members of the Federal Home Loan Bank System that receive additional advances, the potential taxpayer exposure of this system could increase.

Second, mortgage interest rates for borrowers that would shift from conforming to jumbo mortgage status would probably increase. There is currently an interest rate spread between fixed-rate conforming and jumbo mortgages. The study commissioned by HUD examining this spread predicted that a 10-percent decline in the conforming loan limit would likely lead to an increase in mortgage interest rates on affected mortgages near the lower end of the 25 to 40 basis point range.⁵

Third, there could be a decline in mortgage interest rates for the remaining jumbo market to the extent that private-label conduits would choose to

⁴We define mortgage interest rates as including mortgage insurance payments by the borrower.

⁵Cotterman and Pearce, op. cit., pages 63-64. The authors state that the expansion in the private-label market might increase the liquidity of private-label securities, which would put downward pressure on interest rates in the jumbo market.

expand and become better able to geographically diversify their funding.⁶ The expected decline in mortgage interest rates would still, however, probably leave jumbo rates above those on conforming mortgages.

Increasing Minimum Requirements for Mortgage Insurance Coverage

The enterprises are not allowed to purchase mortgages with loan-to-value ratios above 80 percent unless the borrower obtains mortgage insurance. In 1995, the enterprises changed their underwriting guidelines and now require greater insurance coverage on mortgages with loan-to-value ratios exceeding 85 percent. If Congress legislated higher requirements for mortgage insurance coverage, the enterprises would be exposed to less credit risk. Simply put, when mortgage defaults occurred, more of the burden would fall on private mortgage insurers that have no federal ties and less would fall on the enterprises. The reduced risk taken on by the enterprises would reduce the likelihood that the enterprises would need to be bailed out, and the potential risk to the taxpayer would be reduced as well.⁷

Mortgage interest rates would likely increase. If for no other reason, the capital costs of private mortgage insurers tend to be higher than the enterprises' costs because private insurers have no federal ties. Mortgage interest rates would likely increase more for borrowers making downpayments below any legislated minimum, because private mortgage insurers charge fees that are more fully risk-based than the guarantee fees charged by the enterprises.

Enterprise Payment for Taxpayer Risk Exposure

An alternative type of policy approach would charge the enterprises to compensate, in whole or in part, for the risk exposure that their activities generate for the government and taxpayers. One such alternative is a fee, sometimes referred to as a user fee, that could provide a full or partial offset for the estimated benefits received from government sponsorship. Levying user fees on the value of enterprise debt and MBS issuance could be thought to compensate taxpayers for the possibility that they might be

⁶This effect contributes to our expectation that potential contingent liabilities would decline; we would expect more of the shift in funding activity to accrue to the now more competitive private-label conduits.

⁷As stated earlier, we define mortgage interest rates as inclusive of mortgage insurance payments.

asked someday to come to the rescue of a failing enterprise.⁸ User fees could be passed onto borrowers in part or in whole and result in higher interest costs. The net effects would depend on the level of user fees. User fees on the enterprises could help level the playing field between the enterprises and private-label conduits and motivate these conduits to securitize conforming mortgages, because the cost of funds differential would be reduced.

CBO analyzed the federal revenue consequences of user fees on enterprise debt and MBS.⁹ CBO's revenue projection was based on estimates indicating that the enterprises probably save more than 30 basis points on their debt and more than 5 basis points on their MBS. Annual revenue from a user fee equal to half of the dollar amount of estimated funding cost savings was estimated to be about \$700 million. The passing on of part or all of this payment to borrowers would raise mortgage interest rates.

Determining the correct level of such a fee would be difficult because of problems associated with measuring the value of the funding cost savings resulting from investors' perception of an implied guarantee. Another difficulty is determining the possible interaction between a user fee and regulatory capital charges.

OFHEO told us that user fees that are set through legislation are a fairly blunt instrument, while the risk-based capital requirements that OFHEO is developing could be flexible over time. Both user fees and capital requirements increase the cost of capital to the enterprises, which can, in turn, pass on to borrowers some or all of these costs in the form of higher guarantee fees and interest rates. If Congress legislated user fees, OFHEO's ability to set capital charges to manage enterprise risk taking could be affected, because both actions would increase enterprise costs and could contribute to higher mortgage interest rates. In other words, user fees and capital requirements must be viewed in conjunction with one another to determine cost impacts on the enterprises and residential mortgage borrowers.

⁸The enterprises view a user fee as a tax on homebuyers rather than as an offset for the value of benefits provided by the government to the enterprises. CBO states that a user fee has characteristics of both a user fee and a tax, and the ambiguity makes it unclear whether the proceeds should be shown on the revenue side of the budget as governmental receipts or on the spending side as offsetting collections. On balance, CBO thinks that the charge seems closer to a fee for services than a tax.

⁹U.S. Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options* (February 1995) pp. 318-319. CBO defined the user fee as a cost-of-capital offset fee on Fannie Mae and Freddie Mac.

A somewhat different approach to compensating the government for its risk exposure would attempt to make that exposure more symmetrical than it is currently. If the government felt the need to rescue a failing enterprise, clearly it would face “downside” risk. However, when the result of enterprise risk-taking is additional income, the government shares only to the same extent it shares with any private company, that is through increased corporate income tax revenue. One way to make the government’s payoff more symmetrical would be for the government to receive a greater share of income in good times to make up for the possibility it will have to come to the rescue if the enterprises face bad times. The effects of such a payment would depend on how it was structured. For example, if it were simply a surtax on corporate income, it could end up being passed on to borrowers in the mortgage market or be passed back to shareholders. It could also raise the relative cost of equity capital compared to debt capital and further reduce the incentives of the enterprises to hold equity in the absence of safety and soundness regulation.

Authorizing Another Government-Sponsored Enterprise to Compete With Fannie Mae and Freddie Mac

Privatization would in essence eliminate the enterprises as government-sponsored entities. The three preceding alternatives to privatization would either decrease the government’s risk exposure from enterprise activities or compensate the government in whole or in part for that exposure. A fourth alternative would attempt to increase the public benefits from enterprise activity by lowering mortgage rates through increased competition among enterprises. This alternative would entail authorizing another government-sponsored enterprise with a similar charter and subject to the same regulatory requirements to compete with Fannie Mae and Freddie Mac. This could increase the overall size of enterprise activity in the mortgage market and, as a result, raise the potential at risk in case of a government bailout. It could also increase the level of enterprise risk because entities operating in new markets often have greater managerial and operations risk than those operating in established markets. In addition, there could be increased credit risk if the new entity attempted to establish market share by lowering underwriting standards. Any other potential effects of a third competing enterprise would depend on whether Fannie Mae and Freddie Mac do or do not have market power. If they do not, there is little in the way of efficiency gain to expect from a new competitive force in the market. However, to the extent there is market power, a third competing enterprise could put pressure on the existing enterprises to lower mortgage rates. In addition, because increased competition could motivate fuller use of risk-based guarantee

fees, it could reduce the ability of the enterprises to achieve social goals to the extent attainment requires charging targeted groups less than fully risk-based fees.

HUD could still set performance measures to attain social goals with increased competition.¹⁰ The possible decline in profit levels and increased use of fully risk-based guarantee fees, however, could lessen (1) HUD's ability to set demanding performance measures to attain social goals and (2) the ability of the enterprises to unilaterally cross-subsidize funding activities to help achieve their missions.

¹⁰As an analogy, federally insured depository institutions operate in competitive markets and are subject to regulations that they, in part, respond to by creating cross-subsidies across their business lines.

Major Contributors to This Report

General Government Division

Thomas J. McCool, Associate Director
William B. Shear, Assistant Director
Mitchell Rachlis, Senior Economist
Wesley Phillips, Evaluator

Office of General Counsel

Paul Thompsen, Attorney

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