Government-Sponsored Enterprises and the Transformation of the American Housing Finance System

by Thomas H. Stanton

The residential mortgage market of the United States has been subject to successive transformations in financial institutions and instruments. First came government programs to insure and guarantee long-term self-amortizing mortgages in the aftermath of the Great Depression. Then, in the late 1950s, the conspicuous success of these government activities helped to encourage the growth of private mortgage insurance. In the 1970s, the success of government and private mortgage insurance, combined with new data processing technologies, fostered the development of the mortgage-backed security (MBS) into a major source of mortgage funding.

A significant institutional development over the past two decades has been the emergence of two dominant firms in the secondary mortgage market, Fannie Mae (the Federal National Mortgage Association) and Freddie Mac (the Federal Home Loan Mortgage Corporation). The financial advantage conferred by their federal charters has permitted Fannie Mae and Freddie Mac to hold or securitize literally over a trillion dollars of mortgages, largely fixed-rate mortgages, that earlier would have been held in the portfolios of primary lenders, especially thrift institutions.

Now Fannie Mae and Freddie Mac are beginning to combine their market power with new technologies to transform the system of mortgage finance in the United States in an even more profound way. The mortgage market is undergoing dramatic changes in the processes of origination, servicing and purchasing of home mortgages.

This article looks at the apparent contours of that transformation. It begins by surveying some of the major institutional changes that have occurred in the mortgage market in recent years. These changes include the diminished state of the thrift industry following the debacle of the 1980s and the concomitant growth of Fannie Mae and Freddie Mac to become the dominant institutions in the residential mortgage market.

The second section of the article looks at Fannie Mae and Freddie Mac as institutions created by the government and compares their federal charters to those of primary lenders such as banks and thrifts. The third section examines the nature of emerging mortgage market technologies and suggests some of the possible consequences of those new technologies for the system of residential mortgage finance in the United States.

Many of these changes involve consolidation of previously distinct parts of the loan origination and servicing processes. As the conclusion suggests, they promise to bring positive results to mortgage borrowers in the form of higher quality and lower costs. On the other hand, the new technologies represent an extension of market power of the two dominant firms in the secondary mortgage market; as such, these technologies are likely to accelerate changes among primary market institutions.

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THE ROLE OF FANNIE MAE AND FREDDIE MAC IN SHAPING THE RESIDENTIAL MORTGAGE MARKET

Fannie Mae and Freddie Mac as Government-Sponsored Enterprises (GSEs)

Fannie Mae and Freddie Mac are government-sponsored enterprises. A government-sponsored enterprise can be defined as a privately owned, federally chartered financial institution with nationwide scope and specialized lending powers that benefits from an implicit federal guarantee to enhance its ability to borrow money.[1] As can be seen from this definition, GSEs have many characteristics in common with banks and thrift institutions.

Fannie Mae and Freddie Mac each are chartered by an Act of Congress to serve as a secondary market institution that purchases and otherwise deals in residential mortgages up to a specified size (this year, $203,150 for a single-family mortgage). They are investor-owned companies whose shares trade on the New York Stock Exchange. The two companies are among the largest financial institutions in the world. They purchase roughly half of all residential mortgage debt originated in the United States each year.

It should be noted that the distinction between the primary and secondary markets is rooted in law rather than the marketplace; Fannie Mae and Freddie Mac are authorized to purchase, service, sell and otherwise deal in residential mortgages but are not permitted to originate them.

In return for the limitations upon the business activities in which they may lawfully engage, the GSEs receive special benefits. These include an implicit government guarantee of their debt obligations and mortgage-backed securities, and various tax and regulatory benefits.

Fannie Mae and Freddie Mac have grown dramatically. In terms of their combined assets and mortgage-backed securities, on average they have more than doubled in size every five years since 1970. As can be seen in Figure 1, at year-end 1994, Fannie Mae had assets of $272.5 billion and mortgage-backed securities outstanding of $486.3 billion, for a total size of $758.8 billion. Freddie Mac had assets of $106.2 billion and mortgage-backed securities outstanding of $460.7 billion, for a total size of $566.9 billion. Together, the two GSEs represent a federal contingent liability of over $1.3 trillion.

Fannie Mae and Freddie Mac today are very profitable, with returns on common equity last year of 24 percent and 23 percent, respectively. This return is far superior to the average of thrift institutions, commercial banks or other private lenders. In part, the return on equity relates to the low capitalization of the two companies compared to lenders in comparable lines of business. The high leverage of these companies means that changes in business and the market can have dramatic effects upon the profitability in a given year. This is seen in the contrast of the 1994 returns on equity with the significantly different ROEs ten years earlier.

Fannie Mae and Freddie Mac Compared to Thrift Institutions

In many ways, the legal framework of these government-sponsored enterprises resembles that of savings and loan associations (i.e., thrift institutions) in the United States. Like thrifts, Fannie Mae and Freddie Mac are confined by their charters so that they will serve as specialized lenders in support of the residential mortgage market; like thrifts that receive deposit insurance, Fannie Mae and Freddie Mac benefit from government backing for their liabilities; and like thrifts, Fannie Mae and Freddie Mac are institutions whose activities are considered to embody a public purpose.[2]

There are also some significant differences between thrifts and the two GSEs. Fannie Mae and Freddie Mac are confined by their charters

Figure 1. The Growth of Fannie Mae and Freddie Mac, 1984-1994

	Total Assets	MBS Out-standing	Total Assets + MBS	Equity/ Assets + MBS	Return on Average Equity
Fannie Mae and Freddie Mac, 1984					
Fannie Mae 1984	$87.8 billion	$35.7 billion	$123.5 billion	0.74%	(7.4%)
Freddie Mac 1984	$13.2 billion	$70.0 billion	$83.2 billion	0.73%	52.0%
Fannie Mae and Freddie Mac, 1994					
Fannie Mae 1994	$272.5 billion	$486.3 billion	$758.8 billion	1.26%	24.3%
Freddie Mac 1994	$106.2 billion	$460.7 billion	$566.9 billion	0.91%	23.2%

Source: Office of Federal Housing Enterprise Oversight, *Annual Report to Congress 1995*

to the secondary market and must purchase loans from other lenders, such as thrifts, who originate them. By contrast, thrifts are permitted both to originate and to purchase loans.

On the other hand, Fannie Mae and Freddie Mac may use their government backing to securitize mortgages, while thrifts may securitize mortgages only out of special purpose affiliates and without use of a government guarantee. The law requires that thrifts pay a sizable deposit insurance premium to the government; Fannie Mae and Freddie Mac pay nothing for their government backing. Thrifts are required to hold at least four percent capital to back the residential mortgages that they hold; Fannie Mae and Freddie Mac are subject to much lower capital requirements, especially for the mortgages that they securitize.[3] Perhaps most importantly, the law provides for a competitive primary market, including thrifts, commercial banks and mortgage bankers; by contrast, Fannie Mae and Freddie Mac constitute a duopoly in the secondary market for mortgages under $203,150 and thus may wield considerable market power.

The Impact of Fannie Mae and Freddie Mac Upon the Primary Market

Fannie Mae and Freddie Mac benefit from low transactions costs, especially in the securitization of mortgages, compared to thrift institutions. The Congressional Budget Office (CBO) recently reported on the effects of Fannie Mae's and Freddie Mac's activities upon the thrift industry:

> "The increased competition [from the two GSEs] and lower interest rates . . . have sharply reduced the profitability of certain aspects of thrifts' portfolio lending. Thrifts with average operating costs can no longer earn a market return by holding fixed-rate conforming mortgages. Only the best-run thrifts with the lowest operating costs can possibly remain in this segment of the market."[4]

The CBO adds that, as a consequence, many thrifts earn their profits by holding adjustable rate mortgages or nonconforming loans that are not eligible for purchase by Fannie Mae or Freddie Mac, or that do not meet their underwriting guidelines, or by originating mortgages for sale to one of the secondary market institutions. The proportion of residential mortgages that thrift institutions hold in portfolio has declined markedly in recent years.

Figure 2 gives one indication of this trend. The market has grown several fold, from $203.7 billion in home mortgages originated in 1984 to $773.1 billion originated in 1994. Commercial banks and mortgage companies have increased their shares of this growing market and thus have increased their mortgage origination businesses substantially. By contrast, the market share of thrift institutions has declined dramatically while the dollar volume of their originations has remained fairly flat.

Thrift institutions formerly originated over half of all single-family mortgage loans, but now originate less than one-fifth; mortgage companies, who rely upon Fannie Mae and Freddie Mac to purchase their loans, now originate over half of all home mortgages.

The mortgage banking industry itself, while growing in market share, seems to be undergoing some consolidation into a smaller number of larger companies. As will be discussed below, the emergence of new technologies in the secondary mortgage market is likely to accelerate such consolidation.

Figure 3 presents statistics that help to illustrate the profound transformation of the system of mortgage finance over the longer term. It compares market share, in terms of the dollar volume of mortgage debt held by the various housing finance institutions in 1970, with market shares in 1994. 1970 was the year that Freddie Mac was created and that Fannie Mae was first permitted to pur-

Figure 2. Mortgage Originations: Changes in Market Share

	Volume	Market Share
Single-Family Originations by Lender, 1984		
Thrift Institutions	$108.9 billion	53.5%
Mortgage Companies	$47.6 billion	23.4%
Commercial Banks	$41.9 billion	20.6%
Other Lenders	$5.3 billion	2.6%
Total	$203.7 billion	100%
Single-Family Originations by Lender, 1994		
Thrift Institutions	$150.6 billion	19.5%
Mortgage Companies	$408.1 billion	52.8%
Commercial Banks	$206.1 billion	26.7%
Other Lenders	$8.2 billion	1.1%
Total	$773.1 billion	100%

Source: U.S. Department of Housing and Urban Development, *U.S. Housing Market Conditions*, May 1995

chase conventional (i.e., privately insured) mortgages; it therefore provides an appropriate benchmark for looking at longer term trends.

In 1970, total outstanding single-family home mortgage debt amounted to $294.4 billion. Thrift institutions held 55.7 percent of this amount ($164 billion), followed by banks with 14.4 percent ($42.3 billion) and life insurance companies with 9.1 percent ($26.7 billion). Government-sponsored enterprises were a small part of the market, holding 5.3 percent ($15.5 billion) of the total. Mortgage pools, largely mortgage-backed bonds of Ginnie Mae and the Farmers Home Administration, two U.S. government agencies, amounted to only one percent ($3.0 billion) of total mortgage debt outstanding.

By year-end 1994, these proportions had changed completely. The market had grown about elevenfold, to a total of $3.3 trillion of mortgage debt. 47.5 percent of outstanding mortgage debt ($1.6 trillion) is now financed through MBS securities, including MBS pools of Fannie Mae and Freddie Mac ($985 billion), Ginnie Mae ($441 billion), and private mortgage conduits ($184 billion).

Together, Fannie Mae and Freddie Mac hold or securitize well over a third (36.2 percent) of the outstanding market, followed in the private sector by commercial banks (18.3 percent), thrift institutions (14.3 percent) and the private mortgage conduits (5.5 percent). Life in-surance companies are virtually out of the market.

In 1993, Fannie Mae and Freddie Mac together purchased over half of all mortgages originated ($610 billion out of total single-family mortgage originations of $1.01 trillion, or 60.3 percent); the drop in the volume of new mortgage originations in 1994, combined with an increase in the proportion of adjustable rate mortgages originated that year, resulted in a decline in the volume of loans purchased by Fannie Mae and Freddie Mac and in their share of the market in 1994.

Figure 3. Mortgage Holdings: Changes in Market Share

Type of Holder	Volume	Market Share
Single-Family Mortgage Debt Outstanding, 1970		
Thirft Institutions	$164.0 billion	55.7%
Commercial Banks	$42.3 billion	14.4%
Life Insurance Companies	$26.7 billion	9.1%
GSE Portfolios	$15.5 billion	5.3%
Ginnie Mae MBS Pools	$3.0 billion	1.0%
Household and Other Holders*	$42.9 billion	14.6%
Total Mortgage Debt	$294.4 billion	100%
Single-Family Mortgage Debt Outstanding, 1994		
GSE MBS Pools	$984.7 billion	29.5%
GSE Portfolios	$224.8 billion	6.7%
Ginnie Mae MBS Pools	$441.2 billion	13.2%
Commercial Banks	$609.5 billion	18.3%
Thrift Institutions	$447.1 billion	14.3%
Private Mortgage Conduits	$183.6 billion	5.5%
Households and Other Holders*	$418.3 billion	12.5%
Total Mortgage Debt	$3.34 trillion	100%

* Other holders include mortgage companies, REITs, state and local credit agencies, pension funds, credit unions, finance companies and U.S. government agencies.

Source: Federal Reserve Board, *Flow of Funds Accounts: Annual Flows and Outstandings, Supplement, 1946-1993,* September 20, 1994; and *Federal Reserve Bulletin,* June 1995.

NEW DEVELOPMENTS IN THE RESIDENTIAL MORTGAGE MARKET

There have been two types of recent development in the residential mortgage market. First, the secondary mortgage market institutions have been able to relax some of the statutory and regulatory constraints that traditionally have confined their activities. Second, Fannie Mae and Freddie Mac have begun to deploy new information technologies that have the potential virtually to erase the financial distinction between the primary and secondary markets.

Changes in the Law and Supervisory Authority with Respect to Business Activities of Fannie Mae and Freddie Mac

The growth of Fannie Mae and Freddie Mac in the marketplace has been accompanied by a growth in their political power. The Secretary of the Treasury raised this issue in a 1991 report:

"The principal GSEs are few in number; they have highly qualified staffs; they have strong support for their programs from special interest groups; and they have significant resources with which to influence political outcomes."[5]

Fannie Mae and Freddie Mac are now applying this influence to loosen the terms of the law and regulations that traditionally had constrained their permitted business activities. An important development in this regard was included in the FIRREA legislation enacted in 1989. In that law, the Congress amended Fannie Mae's charter authority by deleting language that had limited the GSE to providing only "supplementary assistance to the secondary market for home mortgages."

Fannie Mae's regulator, the Department of Housing and Urban Development (HUD), had relied upon that language as the basis for denying approval for Fannie Mae to engage in some forms of new business activity. FIRREA made conforming changes to Freddie Mac's charter as well so that neither GSE would be limited to mere "supplementary assistance."

In 1990 Fannie Mae asked the Secretary of Housing and Urban Development to permit Fannie Mae to purchase debt obligations secured by conventional mortgages or securities backed by such mortgages. This would have permitted Fannie Mae to offer advances (i.e., collateralized loans) to thrift institutions, commercial banks and other mortgage lenders on quite favorable terms compared with those offered by the Federal Home Loan Bank System (FHLBS) to its members. In particular, while the FHLBS has based much of its business upon the practice of making advances that are highly over-collateralized (to control credit risk), Fannie Mae proposed to reduce over-collateralization. This change would appear to make the proposed Fannie Mae advances quite attractive compared with those currently offered by the FHLBS. The Department of Housing and Urban Development refused to approve Fannie Mae's 1990 request.

This year Fannie Mae and Freddie Mac are taking steps to confine or eliminate HUD's authority to approve new business activities.[6] Freedom from the need to obtain government approval for new business activities would permit the GSEs to expand their services in new directions. One possibility would be the entry of the two GSEs into the business of providing advances to primary lenders who are currently eligible to be served by the FHLBS. Other possibilities involve the application of new technologies to real estate settlement services and to the provision of services to support origination and servicing of mortgages. The realities of the financial marketplace are such that displaced firms are unlikely to be effective in their complaints.[7]

The Impact of Emerging Technologies

Application of the new technologies to mortgage finance has been well described in a recent analysis.[8] Fannie Mae and Freddie Mac today are dynamic investor-owned institutions that combine market power with an impressive ability to deploy these new technologies to reshape the American mortgage market in ways that few of today's market participants may completely appreciate.

The new mortgage origination products that the two companies are developing include the Freddie Mac Loan Prospector automated underwriting system and a new Fannie Mae group of "Desktop" technologies, currently including Desktop Originator and Desktop Underwriter. These and related products can be expected to permit Fannie Mae and Freddie Mac to reduce the cost structure of the primary mortgage market.

The new technologies are likely to have a significant impact upon federal government programs. Take the Federal Housing Administration (FHA) single-family mortgage insurance program. Today, FHA mortgage insurance helps to facilitate the flow of mortgage credit to lower income and first-time borrowers—including a disproportionate number of racial and other minorities—who otherwise might not be served by the privately insured (i.e., conventional) mortgage market.

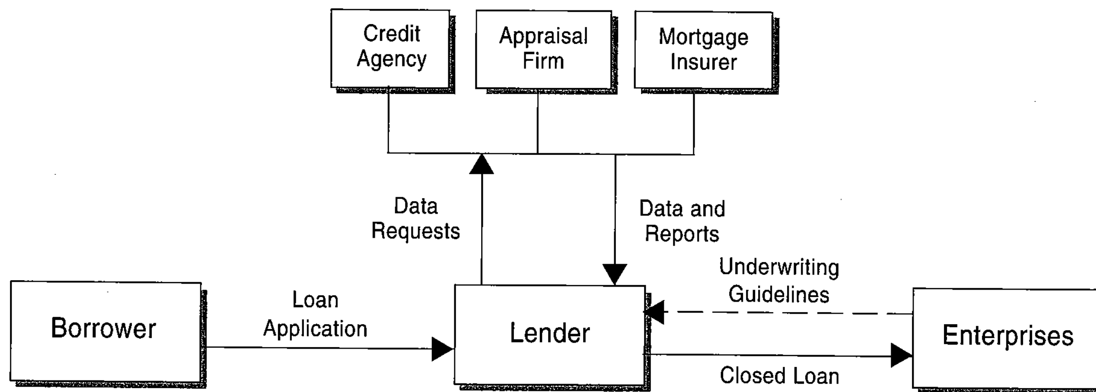
The mortgage borrowers served by FHA are of two types: (1) largely creditworthy borrowers who exhibit some form of nontraditional profile that makes private lenders reluctant to extend credit, but who are good credit risks, and (2) people who are poor credit risks and who are likely to default in disproportionate numbers and thereby cause financial losses to the government program. The FHA program can only remain financially sound if it serves the creditworthy borrowers in sufficient numbers to permit payment for the losses from defaulting borrowers. FHA-insured mortgages must carry higher fees than conventional mortgages because of the higher overall default rate on FHA mortgages. The result is a form of cross-subsidization, with the creditworthy borrowers paying higher than market rate fees as a way to help pay for the defaults of the other FHA borrowers who are not creditworthy.

As the conventional mortgage market has grown, it has benefitted from a process of attracting the more creditworthy borrowers away from FHA. This process is likely to accelerate once Fannie Mae and Freddie Mac implement their new automated underwriting systems. The new systems are likely to identify many new creditworthy FHA-type borrowers who will then be able to receive a conventional mortgage with lower fees than they would have to pay for an FHA-insured mortgage. The new systems will also prompt reductions in closing costs that will increase the affordability of conventional mortgage loans.

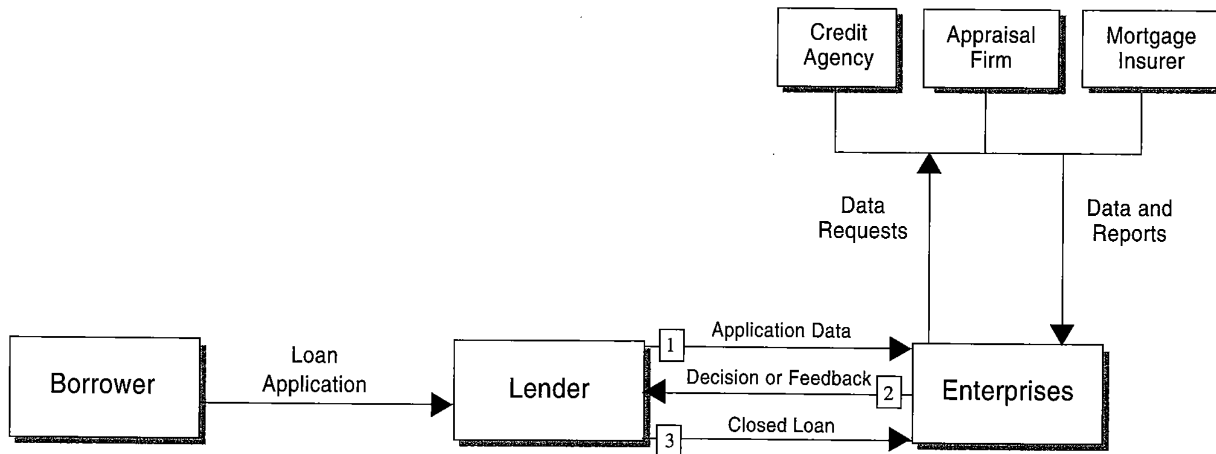
One possible result would be an increase in the number of creditworthy borrowers who leave FHA for the conventional mortgage market and a consequent increase in the percentage of FHA mortgages made to less creditworthy homeowners. Any resulting increase in the average credit risk of the FHA single-family mortgage portfolio would increase the pressure upon the financial soundness of the FHA program. Federal

Figure 4. The Effect of Automated Underwriting on the Enterprises' Role in the Loan Origination Process

Traditional Role of the Enterprises in Underwriting a Loan



Alternative Enterprise Role Using Automated Underwriting



Note: Lender has the option to do business directly with appraisal firms and mortgage insurers.

Source: Office of Federal Housing Enterprise Oversight, *Annual Report to Congress 1995*, p.4.

policymakers have not yet devised an approach that will deal with this issue.

The new technologies will also affect the conventional mortgage market. As the new technologies drive down the cost of originating and servicing mortgages, they are likely to hasten the process of consolidation of mortgage lenders in the primary market. Lenders will face the need to re-engineer the mortgage origination system of the United States. Also, the new automated systems will prompt change in the real estate settlement system and its myriad of expensive services that could usefully be bundled with the loan origination process.

One should not underestimate the impact of applying new technologies to the massive data bases represented by mortgages held in the secondary market. For example, the GSEs may be able to use statistical models and streamlined verification procedures to substitute for the detailed home appraisal that traditionally has been conducted for each individual house at the time of closing of the mortgage loan. Similarly, the GSEs are likely to dispense with the traditional requirement that lenders use independent credit reporting services to analyze borrowers' creditworthiness. Instead, they would rely upon merged computerized files and statistical models, combined with more detailed analysis only in marginal cases.

The Office of Federal Housing Enterprise Oversight (OFHEO) is the government financial supervisor of Fannie Mae and Freddie Mac. OFHEO recently released a report[9] that documents these trends. Underwriting decisions and relationships with settlement service providers and mortgage insurers are likely to migrate from the primary market to the two secondary market GSEs.

Figure 4, taken from the OFHEO report, shows how the two government-sponsored enterprises may absorb an increasing amount of the loan origination process into their own operations. Ultimately, OFHEO reports, "The Enterprises will soon give lenders the ability to sell loans at the point they are closed, thereby eliminating the need to manage the interest rate risk associated with loans before selling them . . ."[10]

The Office of Federal Housing Enterprise Oversight reports that many of these developments are likely to be popular with home buyers. OFHEO reports that application of the new technologies will translate into lower loan origination costs, possible improved credit quality of loans sold into the secondary market and increased ability to reduce disparate treatment of members of minority groups who apply for conforming mortgage loans.

We are only beginning to piece together the changes that these technologies, backed by the market power of the two government sponsored enterprises, will bring to the American system of housing finance, including private firms and government housing programs. Stay tuned.

NOTES

[1] Ronald C. Moe and Thomas H. Stanton, "Government Sponsored Enterprises: Reconciling Private Management with Public Accountability," *Public Administration Review,* July/August 1989, pp.321–329, at p.321.

[2] Banks, thrifts and government-sponsored enterprises also appear to follow similar lifecycles. See Thomas H. Stanton, "Non-quantifiable Risks and Financial Institutions: The Mercantilist Legal Framework of Banks, Thrifts, and Government Sponsored Enterprises," in Charles A. Stone and Anne Zissu, eds., *Global Risk Based Capital Regulations,* Vol. 1 (Homewood, IL: Irwin Professional Publishing, 1994), pp.57–97.

[3] 1992 legislation imposes minimum capital requirements for Fannie Mae and Freddie Mac of 2.5 percent of total on-balance sheet assets plus 0.45 percent of mortgage-backed securities issued or guaranteed by the GSE. The statute imposes additional risk-based capital that is to be determined by application of a stress test whose parameters are specified by law. The moderate nature of that stress test can be seen in its specification of interest rate stresses that are less severe than those that have actually occurred in the past twenty years. It is not certain when the federal regulator will develop and apply the stress test to establish risk-based capital requirements for the two GSEs.

[4] Congressional Budget Office, *The Federal Home Loan Banks in the Housing Finance System,* p.9 (Washington, DC: 1993).

[5] U.S. Department of the Treasury, *1991 Report of the Secretary of the Treasury on Government-Sponsored Enterprises,* p.8 (1991).

[6] John Connor, "HUD to Revise Proposed Rule for Two Firms," *Wall Street Journal,* June 5, 1995, p.A9.

[7] The *Washington Post* recently reported on Fannie Mae's use of market power to enlist political support: "Builders, real estate brokers and bankers across the country rely so heavily on Fannie Mae for mortgage funds that they live in fear of offending the firm and routinely defend it in Washington."

David A. Vise, "The Money Machine: How Fannie Mae Wields Power," January 16, 1995, p.A14.

[8] Jeff Lebowitz, "Technology and Mortgage Banking in the United States," *Housing Finance International,* March 1995, pp.36–43.

[9] Office of Federal Housing Enterprise Oversight, *Annual Report to Congress 1995,* June 15, 1995.

[10] *Ibid.,* p.5.