A New Housing Finance Option in the USA: MPF vs. MBS

by Alex J. Pollock

The Mortgage Partnership Finance or MPF program is a new home mortgage financing alternative now available to financial institutions in the U.S. market. MPF gives financial institutions which are members of the Federal Home Loan Banks an attractive and more profitable way to finance fixed-rate mortgages.

The housing finance system of the USA is notable for the predominant role of long-term (15- and 30-year) fixed-rate mortgages, which are freely prepayable by the borrowers at par without penalty. This is the home finance instrument of choice by the American public, since it both allows debt service to be fixed and certain, and also gives the opportunity to lower the borrower's interest rate and reduce debt service when long-term interest rates fall.

From the point of view of the mortgage lender, this is a tricky instrument, difficult to fund and hedge, both because of its long-term nature and its complex options characteritics caused by the borrower's freedom to prepay without penalty. It is an asset which cannot be safely funded by a typical short-term deposit base and requires an effective and efficient link to the bond market for sound financing.

Because they represent such an efficient link to the bond market, the government-sponsored enterprises or GSEs, principally Fannie Mae and Freddie Mac, play a very large, indeed dominant, role in the U.S. housing finance system. [For a description of GSEs, see the Appendix.] This dominant role of the GSEs is also a notable feature of U.S. housing finance, and many international discussions focus on whether it should be adopted in other countries.

Fannie Mae and Freddie Mac finance home mortgages both by holding them in portfolio, issuing their own debentures to fund them, and by guaranteeing pools of mortgages which are then sold to investors in the form of mortgage-backed securities or MBS. The scale of these operations is impressive, totaling at the end of 1998 $1.9 trillion (see Table 1).

Along with this size comes excellent profit performance. Fannie Mae's 1998 net profit was $3.4 billion and Freddie Mac's was $1.7 billion.

Principally because of the GSEs, but also reflecting the general evolution of the U.S. financial market toward securitization, the share of home mortgage financing over the last two decades has shifted dramatically away from financial institution portfolios to mortgages in securitized form being held by other investors. As shown in Figure 1, in 1980 financial institutions held almost two-thirds of single family mortgages. By 1997, their share had fallen to less than one-third.

Another GSE

Less well known than Fannie Mae and Freddie Mac is a third GSE: the Federal Home Loan Banks (FHLBs). Like the other GSEs, the FHLBs are efficient links of home

<table>
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<th>Table 1. GSE Assets (in billions of dollars)</th>
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<tr>
<td>Fannie Mae</td>
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<tr>
<td>Total assets</td>
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<td>MBS (off balance sheet)</td>
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<td>Totals (in billions)</td>
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Five years ago, in 1994, the Federal Home Loan Bank of Chicago set out to create a way to increase the competitiveness of financial institutions in the increasingly securitized mortgage market. The result was the MPF program, which after three years of research and development, completed its first transaction at the end of June 1997.

Since then, as shown in Figure 2, MPF has achieved significant market acceptance and growth. As of February 1999, MPF had more than $1 billion in outstanding loans and more than $2 billion in master commitments, with 45 savings institutions and commercial banks approved as participating customers; discussions were under way with more than 100 additional prospective participants.

Although this is still a very small share of the U.S. home mortgage market, MPF has already proved its attractiveness as a competitive mortgage finance alternative and appears to have the potential for substantial future growth.

**THE STRUCTURE OF MPF**

In the MPF program, a partnership of a financial institution and the FHLB creates a more efficient mortgage financing structure. This structure is more profitable for financial institutions than selling loans into the secondary market. It thus provides them an attractive alternative to such sales and increases competition in the secondary market sector to the benefit of mortgage lenders and their retail customers.

With MPF, the financial institution carries out all the mortgage lending functions in which it has a natural competitive advantage. These are everything which touches the retail customer, including the marketing, loan servicing/administration and credit functions. The FHLB carries out those functions which deal with the global bond and hedging markets, in which it has a competitive ad-
Figure 3. Mortgages Are Bundles of Risks

- Marketing Risk
- Credit Risk
- Servicing/Operations Risk

Financial Institution's Comparative Advantage

- Funding Risk
- Interest Rate Risk
- Options/Prepayment Risk

GSE's Comparative Advantage

The partnership of the financial institution and the FHBL thus manages all of the component risks of the mortgage loan. The two groups of risks each contribute to an MPF transaction, creating the complete financing of the mortgage. This division of the component risks of the mortgage loan is summarized in Figure 3.

Because the financial institution is in the best position to understand and manage the credit risk of its customers and its markets, and the FHBL has a superior ability to fund and hedge in the global financial markets, MPF results in an optimal application of risks and greater economic efficiency.

Differences From Secondary Market Sale

MPF is different from a sale to the secondary market, in which the loan first enters the financial institution's balance sheet and then leaves it as an asset sale. In an MPF transaction, the mortgage loan is funded at closing by the FHBL, which is always the owner of the loan. The loan never is on the balance sheet of the financial institution. This results in 100% of the interest-rate and option risk being held by the FHBL.

An essential element of MPF is a credit enhancement of the mortgage loan by the financial institution, which gives it a principal interest in the credit risk for the life of the loan. The enhancement is a second loss, limited obligation, however, since the first credit loss position is taken by a spread account provided by the FHBL. This spread account covers the expected losses of the mortgage pool, which average only about three or four basis points per year of outstanding principal.1 Because the expected losses are covered by the spread account, the financial institution's credit enhancement will be triggered only if losses exceed the recent historical norm.

Additional credit enhancement comes in the form of subordination. The size of the enhancement is determined by the credit quality of the mortgage pool. The enhancement is equal to the amount of subordination that would be required by major rating agencies in order to create a AA senior position in the pool. This typically results in an enhancement of from 3% to 5% of the mortgage pool. Because of the enhancement, the FHBL has AA credit quality and extremely low likelihood of any credit losses beyond the spread account, but manages all of the interest rate and options risk.

Credit Enhancement Fee

In exchange for its credit enhancement, the financial institution receives from the FHBL a credit enhancement fee. This represents a key contrast to a sale to the secondary market GSEs. With a secondary market sale, the financial institution pays a guarantee fee to Fannie Mae or Freddie Mac in order to divest the credit risk of its own customer. With MPF, the financial institution receives a credit enhancement fee for managing the credit risk of its customer, the core competence of any lending institution.

Put in quantitative terms, the average guarantee fee charged by Fannie Mae and Freddie Mac is 22 basis points per year. Small financial institutions pay 25 basis points per year. However, the actual credit losses of the GSEs are only a fraction of the fee: in 1998, they were only 3.4 basis points for Fannie Mae and 4 basis points for Freddie Mac. In other words, the guarantee fees, which are a credit insurance premium, are about six times the related losses. The underlying idea of MPF is that it makes more financial sense for financial institutions that originate high quality credit to retain this risk and receive the corresponding fees, instead of paying them.

Effective risk management depends upon relevant knowledge. The core knowledge of financial institutions concerns the credit quality of their own customers in their own markets. The FHBLs, which have always been lenders to financial institutions, have as core knowledge the credit quality of their financial institution members.
In contrast, the investors in Fannie Mae and Freddie Mac MBS need no knowledge of the underlying loan quality, but can simply rely on the guarantee of the GSE which supports the MBS. The greater profitability for financial institutions from the MPF program reflects this difference in utilization of their credit knowledge.

Bruce A. Morrison, Chairman of the Federal Housing Finance Board, the regulator of the FHLBs, has characterized MPF as follows:

"MPF is conceptually elegant and is a true modernization of the means by which the Federal Home Loan Bank System can meet its housing finance mission."

EVOLUTION OF U.S. MORTGAGE FINANCE AND THE GSE SECTOR

The long-term evolution of U.S. housing finance has had two historical phases. In the first phase, which we call traditional lending, mortgage finance was primarily carried out by savings institutions, which kept all risks of the mortgage loan on their own balance sheet. The dominance of traditional lending lasted for over a century, until approximately 1980.

Traditional savings institution lenders held both the credit risk, and the interest-rate and options risk for their own account. The credit risk of mortgage loans was seldom an issue, but the interest rate volatility of the 1970s and early 1980s, as is well known, caused widespread insolvencies and failures, and brought the dominance of traditional lending in the U.S. to an end.

The secondary mortgage market had been developing throughout the 1970s but became dominant in the 1980s and remains so today. Fannie Mae and Freddie Mac have been emphasizing growth in their on-balance-sheet mortgage portfolios in recent years. In this form of secondary market transaction, both the credit risk and the interest-rate/options risk move from the lending institution to the GSE.2

MPF represents a new and different structure, with the financial institution and the FHLB dividing the risks, as has been discussed. Thinking of this in the manner of Hegelian philosophy, one could say that traditional lending represents the thesis, secondary market dominance represents the antithesis, and MPF represents the synthesis. The allocation of risks in these different relationships is summarized in Table 2.

MPF Introduces New Competitive Factor

MPF is receiving a significant amount of discussion in U.S. mortgage finance circles. This is in part because of its growth potential as a new financing alternative and in part because of the increased competition it is bringing to the GSE sector.

The secondary mortgage market, which dominates the U.S. mortgage finance system, is dominated in turn by what is generally called the "duopoly" of Fannie Mae and Freddie Mac.

Fannie Mae and Freddie Mac are superb companies. They have excellent management, high professional skills, very advanced technology, huge size and a sustained high rate of profitability—an after-tax return on common equity in the 23% per year range every year.

For example, as then Fannie Mae Chairman James Johnson recently pointed out to the New York Society of Securities Analysts, 1998 was Fannie Mae's 12th consecutive year of double digit growth in operating earnings per share, and this remarkable earnings growth has a very low volatility, one of the lowest in American business. Mr. Johnson further noted that since 1996, Fannie Mae is the only company among its peer group that has achieved EPS increases in every quarter and that "there is no other financial institution in America with such a significant share of such a huge market."

To bring more competition to the GSE sector requires a competitor with financing capability and access to the global capital and hedging markets equal to Fannie Mae and Freddie Mac. In other words, to compete with a GSE, you have to be a GSE. The FHLBs are the ideal candidate to provide the needed competition, based on the innovation of MPF.

Benefits of Competition

More competition will make the mortgage market more efficient, to the benefit of the

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Table 2. Efficient Risk Allocation

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<th>Allocation by Mortgage Program</th>
<th>Traditional Lending</th>
<th>Secondary Market</th>
<th>MPF Program</th>
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<tbody>
<tr>
<td>Interest Rate and Options Risk</td>
<td>Lender</td>
<td>GSE</td>
<td>FHLB</td>
</tr>
<tr>
<td>Credit Risk</td>
<td>Lender</td>
<td>GSE</td>
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customers. These customers are first the financial institutions which create mortgage loans and second the families who are buying homes. More competition in this market, as in every market, will drive down economic rents and cause the value of the GSE charter to be passed on to the customers.

We should note in this context that there is a theoretical economic position which suggests that it would be best to have no GSEs at all. However, even if you find this correct in theory, in the U.S. context it has no practical significance. The fact is that the GSEs are the dominant forces in the mortgage market, are growing rapidly in size and market share, and are fundamental to the structure of the mortgage market—which is the second largest credit market in the world, exceeded only by U.S. government debt.

For other countries, with other housing finance systems, the question about government sponsorship may be different, but the realistic question in the U.S. context is not whether you are going to have GSEs: you are. The question is whether you are going to have a more competitive GSE sector or a less competitive GSE sector.

The goal of MPF is to create a more competitive and economically efficient GSE sector, which brings increased benefits to the customers of mortgage finance and also creates a more profitable and more competitive position for the financial institutions that are the FHLBs' members. MPF is still at an early stage of its development—but so far, so good.

NOTES

1 Nationwide portfolio loss experience from residential single-family mortgages held by thrift institutions over the past six years. Source: Federal Home Loan Bank of Chicago.

2 In contrast, funding through issuance of pass-through securitization subjects them to credit risk only (through their guarantee). Interest-rate and option risk are borne by the investor.
APPENDIX

CHARACTERISTICS OF GOVERNMENT-SPONSORED ENTERPRISES IN THE U.S.

Government Sponsored Enterprises (GSE) are financial institutions chartered by the federal government to facilitate the flow of credit to areas of public policy importance: housing, agriculture and higher education. The creation of the GSEs was motivated by a perceived failure of the financial markets in the past to allocate sufficient capital for these high priority activities.

The enterprises are privately owned, federally chartered financial institutions with specialized powers and securities law exemptions. The GSEs in the U.S. are the Farm Credit System, the Federal Agricultural Mortgage Corporation (Farmer Mac), the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), the Federal Home Loan Bank (FHLB) System and the Student Loan Marketing Association (Sallie Mae). Sallie Mae is being privatized over a ten year time period.

The GSEs access the financial markets to raise large amounts of capital at attractive rates through the sale of securities. The GSEs’ preferential access to capital stems in part from government sponsorship. Although there is no explicit government backing, the financial markets perceive that the federal government will not let one of these enterprises fail.

This perception is bolstered by their special government charters, the presence of public appointees on their boards of directors and small lines of credit to the U.S. Treasury. These privileges allow them to borrow at rates lower than the highest rated private corporations and operate on a more highly leveraged basis than such corporations. In addition, their securities enjoy several advantages which lower investor required yields and issuance costs. These advantages translate into lower rates for borrowers.

A significant feature of GSEs is their private ownership. Fannie Mae and Freddie Mac are publicly traded, shareholder-owned corporations. The Federal Home Loan Banks are mutual organizations, owned by member financial institutions (banks, thrifts, credit unions and insurance companies). These organizational structures bring several benefits to the government in its efforts to facilitate the flow of credit to particular users. The reliance on private capital allows these activities to be “off-budget.” Thus, taxpayers do not directly fund the GSE activities.

In order to attract private capital on a competitive basis these institutions must operate efficiently. Thus the government benefits from the application of private sector management skills for designated public policy purposes. Also, the GSE concept allows provision of credit to a broader spectrum of borrowers than through direct government loans, enhancing the portfolio quality and political appeal of the enterprises.

The GSEs were all formed at a time in which the nation’s financial markets were segmented, private capital markets were less developed and depository institutions were prohibited from operating on a nationwide basis. The markets have fundamentally changed since the creation of GSEs, and arguably there is no longer a need for government backing. However, the GSEs enjoy significant political support and it is unlikely that their status will be changed any time soon.