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Federal Home Loan Bank Mortgage Purchases: Implications for Mortgage Markets

W. SCOTT FRAME

The author is a financial economist and associate policy adviser in the Atlanta Fed's research department. *He thanks David Feldhaus and Roger Lundstrom at the Federal Home Loan Bank of Chicago and Greg Teare at the Federal Home Loan Bank of Seattle for helpful background discussions. He also thanks Jerry Dwyer, Mark Fisher, Mario Ugoletti, Larry Wall, and Larry White for comments on an earlier draft. In addition, he is grateful for comments from conference participants at the 2003 Loan Performance Risk Summit and at the St. Louis Fed.*

The secondary market for mortgage loans is an important part of the U.S. housing finance system. The Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) have traditionally dominated the secondary mortgage market for conforming loans. However, competition in this market may be increasing as a result of mortgage purchases by Federal Home Loan Banks (FHLBs). Increased competition, in turn, is likely to have implications for interest rates paid by homebuyers and for the risk profiles of the government-sponsored enterprises (GSEs) that dominate this market.

The FHLB System is made up of twelve regional wholesale banks that are cooperatively owned by their member financial institutions.[1] Like Fannie Mae and Freddie Mac, the FHLB System is a GSE created by Congress to support residential housing finance. Historically, the FHLB System has achieved this mission by making loans to its depository institution members secured by residential mortgage loans while Fannie Mae and Freddie Mac have provided credit guarantees on mortgage-backed securities or purchased mortgages for their own portfolios.

In 1997, however, the Federal Home Loan Bank of Chicago began purchasing pools of conforming mortgages under its Mortgage Partnership Finance Program.[2] Today, nine FHLBs offer this program in conjunction with the Chicago FHLB, and the remaining three offer their own Mortgage Purchase Programs. All of these programs use a risk-sharing arrangement whereby member institutions manage most of the credit risk associated with the loans while the FHLB absorbs the market risk.[3] As a result, members now have a more complete menu of alternative ways of funding a pool of conforming mortgages with the three housing GSEs. These options include

1. selling the mortgages to Fannie Mae or Freddie Mac for a one-time cash payment,
2. selling the mortgages to an FHLB in exchange for a one-time cash payment as well as a stream of credit enhancement fees,
3. swapping the mortgages for a security guaranteed by either Fannie Mae or Freddie Mac, or
4. holding the mortgages funded by an FHLB advance.[4]

Each alternative other than the first exposes a depository institution to credit risk, market risk, or both. Furthermore, the specific choice of how to fund a pool of mortgages—including whether to deal with a housing GSE at all—depends on the relative prices of these risks in the context of the GSE programs, regulatory capital requirements, and the cost of issuing liabilities.

The FHLB mortgage programs represent a small but growing part of the secondary conforming mortgage market. In 2002 the FHLBs acquired $45.7 billion in conforming mortgages from their members, about 2.4 percent of the $1.9 trillion in originations that year. However, the year-over-year change in the stock of mortgages held on the consolidated balance sheet of the FHLB System rose 119 percent between 2001 and 2002.[5] Future growth of the FHLB mortgage programs appears to hinge on these cooperatives' ability to effectively manage their required regulatory capital through either new equity offerings or by moving assets off their balance sheets.

The Mortgage Partnership Finance Program allows members to sell conventional or government-guaranteed mortgages to their regional FHLB. In exchange, members receive payment for the assets, plus a monthly fee to manage most of the credit risk.

This article describes the various mortgage programs offered by the FHLB System, analyzes the evolving competitive environment in the secondary conforming mortgage market, and identifies implications for this market. It does not delve into legal and political questions of whether the FHLB System should compete in the secondary mortgage market or whether such participation should be limited.[6] The discussion begins with a brief introduction to the FHLB System.

The FHLB System

The FHLB System was created in 1932, in the midst of the Great Depression, to increase the supply to thrift institutions of long-term funding for mortgage loans. As a GSE, the FHLB System benefits from various provisions in its federal charter that result in lower operating and funding costs, including exemptions from federal, state, and local taxes, a $4 billion line of credit with the U.S. Treasury, and an exemption from federal securities registration requirements.[7] Taken together, these benefits confer a subsidy on the FHLB System, which the U.S. Congressional Budget Office (2001) estimates to be $3 billion in 2000.[8] The Federal Housing Finance Board (Finance Board) regulates the FHLB System for both mission compliance and safety and soundness.

Over time, membership in the FHLB System has been liberalized and is now open to all depository institutions as well as certain other financial institutions. A stock purchase is required for membership, and while this stock is not tradable, it is redeemable at par after a notification period.[9] As of year-end 2002, total membership in the FHLB System stood at 8,011 institutions: 5,886 commercial banks, 1,390 thrifts, 660 credit unions, and 75 insurance companies.

The FHLBs are wholesale financial institutions, which offer credit products, investment products, payments services, and custody services.[10] As of December 31, 2002, the consolidated balance sheet for the FHLB System reported total assets of almost $764 billion. Advances to members were the largest category of assets ($490 billion), followed by investments ($206 billion) and mortgage loans ($61 billion).[11] Although mortgages are only about 8 percent of total assets, this share represents a significant increase from year-end 2001, when they were just 4 percent of total assets.

The principal funding source for the twelve FHLBs' operations are consolidated obligations issued in the form of bonds and discount notes. The FHLBs' Office of Finance issues this debt, for which all of the FHLBs are jointly and severally liable.[12] As of year-end 2002, the FHLB System had consolidated obligations outstanding of almost $674 billion; the majority of these were fixed-rate issues.

By year-end 2002, the FHLB System had equity capital totaling $36 billion, or 4.7 percent of total assets.[13] The Gramm-Leach-Bliley Financial Modernization Act of 1999 established capital requirements and a new capital structure for the FHLBs.[14] This legislation required the Finance Board (1) to promulgate new capital regulations establishing regulatory risk-based and leverage capital requirements for the FHLBs and (2) to outline the different classes of stock that an FHLB may issue and to establish the various rights and preferences associated with each class. The Finance Board published its final capital rule on January 30, 2001, and all twelve FHLBs have filed their new capital plans and had them approved by the Finance Board.[15] Each institution has up to three years from the approval date of its respective capital plan to implement its new capital structure.[16] Box 1 describes the new capital structure and minimum regulatory capital requirements for the FHLBs.

The FHLBs' new capital structure and capital requirements may have implications for the long-term prospects of their mortgage programs. Before examining these issues, however, the discussion

details the structure of the mortgage programs and their variants.

GSE Secondary Conforming Mortgage Market Programs

As noted in the introduction, the FHLB System offers two broad classes of mortgage programs. The Mortgage Partnership Finance Program represents a single mortgage program offering standardized products with most functions consolidated at the Chicago FHLB. During 2002 the Mortgage Partnership Finance Program purchased $27.9 billion in mortgages, and at year-end there were $42.3 billion of these loans outstanding. The Mortgage Purchase Programs offered by the FHLBs of Cincinnati, Indianapolis, and Seattle are operated individually in the sense that differences in terms and features exist.[17] The Mortgage Purchase Programs funded $17.8 billion in residential mortgages during 2002, and $18.3 billion of these loans were outstanding as of December 31, 2002.

The Mortgage Partnership Finance Program. The Mortgage Partnership Finance (MPF) Program allows members to sell conventional or government-guaranteed mortgages to their regional FHLB. In exchange, members receive payment for the assets, plus a monthly fee to manage most of the credit risk (typically on the order of 10 basis points annually on the outstanding principal balance).[18] Under the MPF Program, the FHLBs hold the

1. The twelve FHLBs are located in Atlanta, Boston, Chicago, Cincinnati, Dallas, Des Moines, Indianapolis, New York, Pittsburgh, San Francisco, Seattle, and Topeka.
2. Conforming mortgages are those with balances below limits established for Fannie Mae and Freddie Mac. For single-family mortgage loans, the conforming loan limit was $300,700 in 2002 and $322,700 in 2003.

   According to Inside Mortgage Finance (2003b), conforming mortgage originations in 2002 totaled over $1.9 trillion, or about 76 percent of all originations. Specifically, conventional conforming mortgage originations in 2002 were about $1.7 trillion, and conforming loans accompanied by government guarantees (either from the Federal Housing Administration or Veterans Administration) totaled $187 billion.
3. In this article, *credit risk* refers to the risk of monetary loss in the event of borrower default, and *market risk* refers to any loss in market value of financial assets due to changes in interest rates.
4. In addition, of course, a depository institution could hold the mortgages and fund them with sources other than an FHLB advance, such as deposits.
5. As of year-end 2001, the FHLB System held $27.7 billion in conforming mortgage loans. This figure increased to $60.6 billion one year later. The difference represents new acquisitions net of repayments and prepayments.
6. A group of thrifts and thrift trade associations located in California, Texas, and Ohio unsuccessfully challenged the legality of the Federal Housing Finance Board's regulatory approval of the Mortgage Partnership Finance Program in 1997. See Bair (2003) for a brief discussion of the legal arguments.
7. See, for example, U.S. Congressional Budget Office (2001) for a discussion of all of the benefits afforded to the FHLBs, Fannie Mae, and Freddie Mac.

   While the FHLB System is exempt from federal income tax, it is obligated to make payments to the Resolution Funding Corporation in an amount equal to 20 percent of net earnings after operating expenses and expenses related to the FHLBs' Affordable Housing Programs.
8. This figure represents the estimated gross subsidy to the FHLB System. The net subsidy retained by FHLB stakeholders for 2000—after accounting for the benefits of lower interest rates accruing to mortgage borrowers—is estimated to be $2.7 billion.
9. This notification period has historically been six months. However, under new FHLB capital regulations, class A stock will retain the six-month notification, but class B stock will require a five-year notification.
10. The specific products and services the individual FHLBs offer can often be found on their respective Web sites. Visit <www.fhfb.gov/FHLB/FHLBS_banks.htm> for links to all twelve FHLBs.
11. Investments of the FHLBs include mortgage-backed securities, federal funds sold, commercial paper, and Treasury and agency (other GSE) debt securities.
12. Like debt obligations issued by Fannie Mae and Freddie Mac, the FHLB System's consolidated obligations benefit from an implicit federal guarantee, which serves to reduce funding costs. Looking at average funding spreads over the 1995–99 period, Ambrose and Warga (2001) estimate that FHLB long-term debt securities trade at 44 basis points below comparable fully private firms.
13. Of this amount, $35 billion was subscription stock, and the remaining $1 billion was retained earnings.
14. See Title VI of the Federal Home Loan Bank System Modernization Act of 1999.
15. See *Federal Register* 66 (20), January 30, 2001, 8262–8321.
16. As of year-end 2002, the FHLBs of Seattle, Pittsburgh, and Cincinnati had implemented their capital plans.
17. The Federal Home Loan Bank of Atlanta also recently announced that it would operate a Mortgage Purchase Program (Inside Mortgage Finance 2002).
18. Seller-members also receive fee income to service the loans sold to the FHLB. These fees, which are the same as those provided to lenders by Fannie Mae or Freddie Mac, are 25 basis points annually for conventional loans and 44 basis points annually on federally guaranteed loans.

BOX 1

Description of New Capital Structure and Capital Requirements for FHLBs

The new FHLB capital structure and capital requirements were established by the Gramm-Leach-Bliley Financial Modernization Act of 1999 and instituted by the Finance Board.[1]

Capital Structure

As a condition of membership in the FHLB System, eligible financial institutions must purchase stock in their regional FHLB. Two classes of stock have been authorized for issuance at FHLBs: class A and class B. This stock is redeemable at par six months (class A) or five years (class B) after written notice from the member of its intention to redeem. The addition of class B stock makes FHLB capital much more permanent because all stock had previously been redeemable at six months' notice.[2] Moreover, each individual FHLB sets its own terms to determine the minimum stock investment for members, but an FHLB must also ensure that such subscriptions are sufficient to meet its minimum capital requirements, which are described below.

As of July 2002, the Finance Board had approved the capital plans of all twelve FHLBs.[3] While Finance Board regulations give each FHLB up to three years from the approval date to implement its capital plan, as of year-end 2002 three FHLBs had already done so (Seattle, Pittsburgh, and Cincinnati). A review of the twelve FHLBs' capital plans yielded two general insights. First, stock issuance will be heavily concentrated in the more permanent class B stock. In fact, only two FHLBs have elected to issue any class A stock. Second, all FHLBs delineated stock purchase requirements according to both membership and levels of activity. Membership stock requirements are based on total assets or mortgage-related assets while activity-based requirements are based on either advances, acquired member mortgage assets, or some combination of the two.

Capital Requirements

The FHLBs are now subject to statutory capital requirements equaling the greater of either a minimum capital-to-assets ratio or a risk-based capital calculation.

Two minimum leverage requirements are imposed on FHLBs. The unweighted requirement is that total capital (class A stock, class B stock, retained earnings, and general loan-loss allowances) is not to be less than 4 percent of total assets. A weighted requirement sets this standard at 5 percent but multiplies permanent capital (class B stock and retained earnings) by 1.5. The capital plans suggest that the FHLBs will meet their minimum capital requirements primarily with permanent capital.

The risk-based capital standards faced by the FHLBs account for credit risk, market risk, and operations risk, with required capital under the risk-based standard equal to the sum of the charges for the three individual components.

The total credit risk requirement for an FHLB is equal to the sum of credit risk capital charges for all assets, off-balance-sheet items, and derivative contracts.[4] In the regulation, these individual capital charges are presented in tabular form for advances, mortgages, rated exposures (that is, tradable assets, off-balance-sheet items, and derivative exposures), and unrated assets. For advances, which are overcollateralized, capital requirements vary according to term: four years or less (7 basis points), four to seven years (20 basis points), seven to ten years (30 basis points), and over ten years (35 basis points). For mortgages, or acquired member assets, the requirement is based on the level of external credit support (so as to create securities ratings equivalents) and subordination. Capital requirements for rated assets are delineated according to eight asset quality categories and five maturity buckets. Finally, all unrated assets, except

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1. The new capital structure and capital requirements can be read in their entirety at 12 C.F.R. (Code of Federal Regulations) 930. The U.S. General Accounting Office (2001) provides a more complete discussion and analysis of the new capital structure and capital requirements.
2. Under the previous capital subscription requirements, each member was to purchase FHLB stock in an amount equal to the greater of 1 percent of the member's total mortgage assets or 5 percent of total advances. Further, by law, thrift institutions were required to be members of their regional FHLB.
3. The Finance Board provides a link to each of the twelve capital plans on its Web site at <www.fhfb.gov/PressRoom/Pressroom_capplans.htm>.
4. For assets, these charges are based on book values while off-balance-sheet items are converted into balance sheet equivalents.

cash, receive a capital charge of 800 basis points (8 percent).

The market risk requirement for an FHLB is computed as the sum of two parts. The first part is the market value of the institution's portfolio at risk from movements in market prices (that is, interest rates, foreign exchange rates, commodity prices, and equity prices) that could occur during periods of market stress; in such cases a Finance Board–approved internal market risk model determines market values.[5] The internal model is required to provide an estimate of the market value of the portfolio at risk such that the probability of greater loss is no more than 1 percent (that is, at or above the 99 percent confidence interval). Further, the model must incorporate movements previously observed over 120-day periods of economic stress. The second part of the market risk capital calculation is the amount, if any, by which the FHLB's current market value of total capital is less than 85 percent of its book value.

The capital requirement for operations risk is generally 30 percent of the total capital charge for credit and market risk. However, with Finance Board approval, an FHLB can reduce this charge to between 10 percent and 30 percent by either providing an alternative methodology for calculating operations risk or by purchasing insurance against such risks.

5. An FHLB may elect to substitute an internal cash flow model in place of the market risk model.

mortgages on their books, and the market risks associated with long-term fixed-rate mortgages, including the funding risk and prepayment risk, are borne by the FHLB.

In the MPF Program, the credit risk associated with conforming mortgage loans is structured into several layers, or tranches. This approach, similar to that for many private-market asset securitizations, involves concentrating credit risk in lower tranches that are subordinate to the claims of senior tranches. As a result, each lower-level tranche acts as a credit enhancement for all the higher-level tranches. The FHLB maintains credit exposure only by holding the most senior tranche in an MPF transaction.

Any loan sold into the MPF Program is secured by residential real estate and must have either a loan-to-value ratio below 80 percent or else primary mortgage insurance. In a default situation, the homeowner's equity is tapped first as a method of reducing losses. In this sense, the homeowner's equity always acts as the most subordinate tranche, or the first-loss position. If the original loan-to-value ratio of the mortgage exceeds 80 percent, any losses beyond the homeowner's equity up to 20 percent of the home's value will be covered by a required primary mortgage insurance policy purchased by the homeowner up to the amount consistent with the 80 percent loan-to-value ratio.[19] Taken together, the borrower's equity and primary mortgage insurance ensure that both the lender and the FHLB are covered for the first 20 percent of losses of the original purchase price in a default.[20] While this most subordinate tranche in an MPF transaction depends on individual loan performance, each of the more senior tranches is evaluated at the pool level.

In the MPF Program, the seller-member provides the second layer of credit protection in the form of a First Loss Account. For most MPF products, this account is set at 1 percent of the original size of the loan pool. Credit losses exceeding the borrower's equity and primary mortgage insurance, if any, accrue to the First Loss Account and are realized as discounts in the monthly credit enhancement fee paid by the FHLB to its member.

In the event that the First Loss Account is exhausted, the seller-member provides the third layer of protection for the FHLB by absorbing losses up to a prespecified amount such that the probability of losses in excess of this layer are no more than those faced by investors in AA-rated securities.[21] The seller-member is required to hold risk-based capital against the amount of this "secondary

19. Primary mortgage insurance refers to insurance purchased by the homeowner. For nongovernment guaranteed loans, private mortgage insurance companies sell such insurance. Information about private mortgage insurers can be found at <www.privatemi.com>.

20. This same protection is also afforded to Fannie Mae and Freddie Mac when mortgages are sold or securitized.

21. A software program called LEVELS, developed by Standard & Poor's and used by the Chicago FHLB, determines these amounts.

credit enhancement" since it is considered a contingent liability. Finally, any residual losses would be borne by the FHLB.

A simple example can be constructed to illustrate how credit losses are allocated in an MPF transaction. Assume that a member sells 100 loans to its FHLB, each secured by properties valued at $300,000 and with a loan-to-value ratio of 85 percent. This transaction also involves the establishment of a First Loss Account totaling $300,000, or 1 percent of the original loan pool size of $30 million. If a loan defaults in this case and if the house is sold (net of expenses) for $225,000, the $75,000 in losses accrues as follows. First, the borrower will lose her 15 percent equity, or $45,000. Second, the primary mortgage insurer will pay the FHLB $15,000. Finally, the remaining $15,000 in losses will be credited to the FHLB from the First Loss Account and debited on the credit enhancement fees paid to the seller-member. In this example, losses do not exceed the value of the First Loss Account and hence (1) the seller-member does not bear direct losses related to the secondary credit enhancement and (2) the FHLB bears no losses.

The risk-sharing arrangements inherent in the Mortgage Purchase Programs are similar to those for the MPF products: the seller-member manages most of the credit risk, and the FHLB manages the market risk.

Currently, the MPF Program offers four products for conventional mortgage loans (Original MPF, MPF 100, MPF 125, and MPF Plus), which are summarized in the table on page 24.[22] These products are distinguished by differences in (1) the required minimum size of the master commitment, (2) the monthly credit enhancement fees paid to the seller-member by the FHLB, (3) whether closed loans or loans made on a flow basis are delivered,[23] (4) the structure of the seller-members' secondary credit enhancement, and (5) the seller-members' risk-based capital treatment. While the differences among the products primarily reflect refinements in the MPF Program over time, some products may appeal to only certain groups of FHLB members.[24]

The first difference among the MPF products is that the required size of the master commitments varies from $5 million to $100 million. The master commitment is the minimum amount of mortgage loans that will be delivered during a specific period of time. According to officials at the Chicago FHLB, this size variation is related to the fixed costs. For example, the MPF Plus product requires that the seller-member purchase supplemental mortgage insurance for which volume-based discounts may be available from mortgage insurers.

Second, credit enhancement fees paid by the FHLB to seller-members are negotiated and vary somewhat depending on the size of the deal, the characteristics of the underlying mortgages, and the performance of the underlying mortgages over time. Product-specific differences reflect these mortgage pool characteristics as well as possibly a greater appreciation over time on the part of the FHLBs about providing incentives to seller-members to provide quality loans. Indeed, for most MPF products, part of the credit enhancement fee is guaranteed while another portion is positively related to loan performance.

Third, lenders may elect to sell previously closed loans or originate loans on a flow basis on behalf of their FHLB. The Original MPF, MPF 125, and MPF Plus products are all geared toward closed loans while MPF 100 is for flow purchases. Prior to a November 2001 final rule published jointly by the federal banking agencies,[25] closed loan sales were treated as recourse transactions, and flow loan sales received direct credit substitute status for purposes of risk-based capital treatment.[26] Recourse transactions required a lender to maintain risk-based capital equal to the lesser of (1) 8 percent of the original principal balance of the transferred loans or (2) 100 percent of the retained credit exposure. In contrast, direct credit substitutes were subject to an 8 percent capital requirement but only on the face amount of the transaction. The rule enacted in 2001 equalizes the treatment of similar risks, irrespective of whether they are recourse or a direct credit substitute.[27] Presumably, these regulatory changes have significantly reduced the appeal of MPF 100 to FHLB members.

Fourth, while First Loss Accounts generally are 1 percent of the original pool amount, the secondary credit enhancements provided by seller-members vary substantially. For all the conventional MPF products, the secondary credit enhancements are established based on a proportion of the loan pool at closing (20–200 basis points).[28] The variation in the size of the enhancement is based primarily on the quality of the underlying loans since this protection is established in such a way that the expected credit loss accruing to the FHLB is no worse than that for

a AA-rated security. In lieu of the off-balance-sheet credit guarantee, MPF Plus requires supplemental mortgage insurance, the cost of which is also tied primarily to the underlying loan quality.

Finally, MPF programs reduce regulatory risk-based capital charges to seller-members, with the reduction depending on the type and amount of secondary credit enhancement provided, which in turn depend on the quality of the underlying loans. Using MPF 125, for example, a seller-member faces a 25 basis point risk-based capital requirement for credit risk, reflecting the total amount of the secondary credit enhancement. Larger members are more likely to actively manage their risk-based capital position and hence be more sensitive to the required capital associated with MPF products.

Mortgage Purchase Programs. The risk-sharing arrangements inherent in the Mortgage Purchase (MP) Programs are similar to those for the MPF products: the seller-member manages most of the credit risk, and the FHLB manages the market risk. Nevertheless, there are important differences: the MP Programs permit only closed loan sales and generally do not provide monthly credit enhancement fees to seller-members.

Under the Mortgage Purchase Programs, credit risk is segmented into four tranches. Just as in the MPF Program, the first layer of protection in a mortgage default is at least 20 percent of the house's value as provided by the borrower's equity and supplemented by primary mortgage insurance, if necessary. A Lender Risk Account acts as the second layer of protection against losses on MP Program loans in excess of borrower equity and primary mortgage insurance. The Lender Risk Account is maintained by the member at the FHLB in an amount of 30–50 basis points of the original loan balance. If the Lender Risk Account is exhausted for a particular mortgage pool, additional losses are covered by a supplemental mortgage insurance policy, which acts as the third layer of protection.[29] As in the MPF Program, the probability of losses in excess of the supplemental mortgage insurance policy is no more than that faced by investors in AA-rated securities. The FHLB accepts this remaining credit risk.

Unlike MPF Programs, the MP Programs do not guarantee credit enhancement income to their seller-members. However, if the loans are performing after five years, seller-members may receive monthly dividends from the Lender Risk Account based on a predetermined scale. Discussions with the Seattle FHLB indicate that it interprets federal banking regulations pertaining to risk-based capital as requiring seller-members to treat Lender Risk Accounts as assets and hold capital against their fair values on a dollar-for-dollar basis.

Fannie Mae and Freddie Mac. Fannie Mae and Freddie Mac operate two lines of business: a credit guarantee business and an investment portfolio. The credit guarantee business involves insuring the timely payment of principal and interest on the mortgage-backed securities they issue. The investment portfolio consists primarily of mortgages and mortgage-backed securities that they purchase and hold.

The two GSEs create mortgage-backed securities by pooling mortgage loans together in a trust and then selling interests in the trust. Payments to security holders are made in the following way: a servicer (often the lender) collects the mortgage payments from borrowers, and, after deducting fees,[30] payments are passed on to the trustee, who

22. There is also an MPF product for loans guaranteed by either the Federal Housing Administration or the Department of Veterans Affairs.
23. *Closed loans* refer to loans already on the balance sheet of the seller-member. By contrast, *flow loans* refer to those in which an FHLB provides the funding at closing and legally owns the loan at its inception.
24. Unfortunately, the Chicago FHLB was unwilling to share information related to either the number of institutions using each product or the volume of mortgages purchased by participating FHLBs under each product.
25. See Capital Treatment of Recourse, Direct Credit Substitutes, and Residual Interests in Securitizations, *Federal Register* 66 (230), November 29, 2001, 59614. This rule was effective January 1, 2002.
26. *Recourse* generally refers to the credit risk that a banking organization retains in connection with the transfer of its assets; a *direct credit substitute* generally refers to any arrangement in which a banking organization assumes credit risk from third-party assets or from other claims that it has not transferred.
27. Under the new rules, assets with a public rating of BBB or higher require 8 percent risk-based capital, those rated BB require 16 percent risk-based capital, and unrated exposures require 100 percent risk-based capital. While the secondary credit enhancements in an MPF transaction are not publicly rated, the Chicago FHLB has petitioned the Federal Financial Institutions Examination Council to allow them to be rated internally using Standard & Poor's LEVELS software.
28. The exception to this is the Original MPF, under which the First Loss Account is funded at 4 basis points times the annual interest payments in the loan pool.
29. Many of the largest mortgage insurers offer this pool-level coverage.
30. The applicable fees would include Fannie Mae and Freddie Mac credit guarantee fees, servicing fees, and trust expenses.

TABLE

Comparison of FHLB Mortgage Partnership Finance Program Products

	Original MPF	MPF 100	MPF 125	MPF Plus
Loan Pool Characteristics				
Loan term	Up to 30 years fully amortizing	Up to 30 years fully amortizing	Up to 30 years fully amortizing	Up to 30 years fully amortizing
Maximum loan-to-value ratio	95 percent	95 percent	95 percent	95 percent
Loan limits	Conforming	Conforming	Conforming	Conforming
Occupancy	Owner-occupied (1–4 units) and second homes	Owner-occupied (1–4 units) and second homes	Owner-occupied (1–4 units) and second homes	Owner-occupied (1–4 units) and second homes
Property type	All types except co-ops and investment	All types except co-ops and investment	All types except co-ops and investment	All types except co-ops and investment
Underwriting[1]	MPF origination guidelines (LP/DU decisions considered)	MPF origination guidelines (LP/DU decisions considered)	MPF origination guidelines (LP/DU decisions considered)	MPF origination guidelines (LP/DU decisions considered)
Origination	Closed	Flow	Closed	Closed
Master commitment size (minimum)	$5 million	$5 million	$50 million	$100 million
Credit Enhancements[2]				
Credit enhancement fees (earned by seller-member)	8–10 bps annually (guaranteed)	7–10 bps annually (performance based)	10 bps annually for three years and then performance based	14 bps annually: 7–10 bps performance based, 4–7 bps used to fund supplemental mortgage insurance
Credit enhancement obligations (paid by seller-member)[3]	200 bps times the size of the loan pool at closing	100 bps times the size of the loan pool at closing	25 bps times the size of the loan pool at closing	20 bps times the size of the loan pool at closing plus supplemental mortgage insurance (180 bps)
First Loss Account (funded by FHLB)	4 bps times the annual interest payments of the loan pool	100 bps times the size of the loan pool at closing	100 bps times the size of the loan pool at closing	100 bps times the size of the loan pool at closing
Risk-based capital requirement under Basel I	100 percent of the credit enhancement obligation (200 bps)	8 percent of the credit enhancement obligation (8 bps)	100 percent of the credit enhancement obligation (25 bps)	100 percent of the credit enhancement obligation (20 bps)

[1] Loan Prospector (LP) and Desktop Underwriter (DU) are automated underwriting systems developed, distributed, and maintained by Fannie Mae and Freddie Mac, respectively.
[2] Credit enhancements are given in basis points (bps).
[3] Amounts are estimates. Actual fees are negotiated on a case-by-case basis so that the catastrophic (residual) risk held by the FHLB will be equivalent to a AA-rated security.

Source: Author's discussions with staff at the Federal Home Loan Banks of Chicago and Seattle as well as analysis in Buonafede, Hirani, and Yonker (2002)

in turn pays investors. The securities created by Fannie Mae and Freddie Mac are either pass-through securities or real estate mortgage investment conduits (REMICs). The pass-through structure is most common and involves security holders owning undivided interests in the pool. REMICs, by contrast, are multiple-class securities in which security holders have varying payment priorities (short, intermediate, and long) based on the realization of prepayments.

Fannie Mae and Freddie Mac acquire mortgage credit risk by a swap program and a cash program. Under the swap program, a lender selects and pools a group of mortgages and swaps them for mortgage-backed securities issued and guaranteed by Fannie Mae or Freddie Mac that represent an interest in the same pool. Under the cash program, Fannie Mae and Freddie Mac simply purchase mortgage loans from lenders in exchange for cash. Subsequently, Fannie Mae or Freddie Mac may elect to pool some of these mortgages as collateral for a mortgage-backed security offering or simply hold the loans in their portfolio as an investment.

The swap program allows a mortgage lender to shed the credit risk associated with a pool of mortgages in exchange for the lender paying Fannie Mae or Freddie Mac a guarantee fee on the order of 20 basis points annually of the outstanding principal balance of the loan pool. The swap program allows for a significant break in the lender's risk-based capital requirements and has thus created a significant incentive for lenders to hold mortgages in the form of a security instead of as individual loans. The cash program allows the lender to remove all of the credit and interest rate risk associated with the loan pool because the lender simply sells the loan. Under either program, a lender can continue to service the loans.

Competition in the Secondary Conforming Mortgage Market

Fannie Mae and Freddie Mac together became responsible for the credit risk on almost $1.5 trillion in conforming mortgages originated in 2002 through their swap and cash programs (Inside Mortgage Finance 2003a). This amount was 78 percent of the $1.9 trillion in conforming mortgage originations that year (Inside Mortgage Finance 2003b). This tremendous concentration of credit risk at Fannie Mae and Freddie Mac is due in large part to existing risk-based capital treatment of mortgage-related credit risk by the federal banking agencies. Box 2 summarizes the regulatory capital standards for banks.

As noted in Box 2, adequately capitalized banks are required to hold at least 400 basis points of risk-based capital against mortgage loans and 160 basis points of capital against AAA-rated mortgage-backed securities. Fannie Mae and Freddie Mac themselves are also subject to a minimum capital requirement of 45 basis points for mortgage credit risk.[31] As a result, under the current risk-based capital rules, when a pool of mortgages is securitized with Fannie Mae or Freddie Mac with no change in aggregate risk, the financial system is required to hold only 205 basis points of capital, or about half as much.[32] Nevertheless, market participants view the actual credit risk associated with conventional conforming mortgages to be significantly less than these regulatory capital requirements. For example, realized loss rates on Fannie Mae's and Freddie Mac's mortgage portfolios were only 1 basis point (0.01 percent) in 2000 and 2001.

The mispricing of mortgage credit risk in terms of regulatory capital requirements allows a depository institution to securitize loans and free up capital to acquire more assets. This process can be illustrated by a simple example in which a lender holds a $25 million pool of thirty-year fixed-rate loans with a 7 percent interest rate. The lender may either (1) hold $1 million of capital against the $25 million in loans earning 7 percent interest or (2) hold $400,000 in capital against $25 million in GSE mortgage-backed securities that earn 6.75 percent.[33] Thus, the lender could free up $600,000 in capital through securitization.

While regulatory capital requirements appear to shape depository institutions' incentives to share risk with the secondary mortgage market, the FHLB mortgage programs may ultimately affect the way in which

31. The statutory minimum capital requirement has been the binding capital requirement for both Fannie Mae and Freddie Mac since its implementation in 1996. Their risk-based requirements, which became effective in 2002, have not yet served as a constraint.

The 45 basis point capital requirement for Fannie Mae's and Freddie Mac's off-balance-sheet mortgage credit guarantees is lower than the credit risk charge for depository institutions in part because the GSEs benefit from nationwide diversification in their credit risk portfolios.

32. Jones (2000) discusses this type of "regulatory capital arbitrage" in greater detail.

33. The reduction in the interest rate from 7 percent to 6.75 percent reflects a 25 basis points guarantee fee. Further, the actual coupon on the mortgage security would be 6.5 percent, but the lender would earn an additional 0.25 percent from servicing.

BOX 2

Regulatory Capital Standards for Banks

This summary of bank capital requirements focuses particularly on requirements for residential mortgage loans.[1] The summary begins with a discussion of the capital definitions and minimum and risk-based capital requirements, which are implemented and enforced by the three federal banking agencies: the Federal Reserve Board (FRB), the Office of the Comptroller of the Currency (OCC), and the Federal Deposit Insurance Corporation (FDIC). This discussion draws heavily from the appendix in U.S. Treasury (2001). The specific changes to international risk-based capital standards being proposed by the Basel Committee on Banking Supervision that relate to residential mortgages also are explained.

The federal banking agencies define total capital as the sum of core capital (tier 1) and supplementary capital (tier 2).[2] Tier 1 capital includes common stock, noncumulative, perpetual preferred stock; and minority interests in the equity accounts of consolidated subsidiaries. Tier 2 capital is made up of cumulative perpetual preferred stock, allowances for loan and lease losses, and hybrid instruments that combine debt and equity features. Tier 2 also includes subordinated debt and limited amounts of unrealized gains on equity securities. Deductions from capital include goodwill and other intangibles and investments in certain subsidiaries.

Banks are required to meet two minimum capital requirements: (1) a minimum leverage ratio, which is a ratio of tier 1 capital to total assets of 4 percent, and (2) a total risk-based capital ratio, which is a ratio of total capital to risk-weighted assets of 8 percent.[3] The risk-based system assigns each class of assets a risk weight of 0 percent, 20 percent, 50 percent, or 100 percent. Under this scheme, residential mortgage loans have a 50 percent risk weight, and AAA-rated mortgage-backed securities are weighted at 20 percent.

All FDIC-insured depository institutions are also subject to a regulatory system of prompt corrective action, which classifies depository institutions into five capital categories: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized. These capital categories are defined in terms of four capital measures: a total risk-based capital ratio, a tier 1 risk-based capital ratio, a leverage ratio, and a statutory tangible equity ratio of 2 percent, below which a bank is deemed to be critically undercapitalized. To be well capitalized, a bank must have a total risk-based capital ratio of 10 percent, a tier 1 risk-based capital ratio of 6 percent, and a leverage ratio of 5 percent.[4]

The Basel Committee on Banking Supervision is also in the process of implementing a new capital accord, commonly referred to as Basel II. According to Ferguson (2003), the U.S. federal banking agencies propose that only banks with significant foreign exposures be subject to the new accord—all under the "advanced internal-ratings-based approach."[5] However, any bank meeting the infrastructure requirements of the advanced ratings-based approach would be allowed to choose to be subject to Basel II. At this time, it appears that only ten of the largest U.S. banks will be subject to the new capital rules, with about another ten expected to opt in. Nevertheless, these twenty large banks account for 99 percent of the foreign assets and two-thirds of all domestic banking assets held by U.S. banks.

The treatment of residential mortgages under Basel II's advanced internal-ratings-based approach requires estimates, derived from statistical models, of the probability of default, loss given default,

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1. Capital definitions and requirements for thrifts are generally similar to those for banks, but those faced by credit unions are quite different. See U.S. Treasury (2001, appendix) for a side-by-side comparison.
2. The capital definitions can be found in 12 C.F.R. at part 3, app. A (OCC); part 325, app. A (FDIC); and part 208, app. A (FRB).
3. The capital requirements can be found in 12 C.F.R. at part 3, app. A (OCC); sec. 325.103(b)(2) (FDIC); and sec. 208.43(b)(2) (FRB).

   Tier 2 capital may count toward meeting the 8 percent risk-based capital requirement but only up to 50 percent of the total capital requirement.
4. The prompt corrective action provisions can be found in 12 C.F.R. at sec. 1831o; part 6 (OCC); part 325, subpart B (FDIC); and part 208, subpart B (FRB).
5. The Basel II proposal includes three different approaches: the standardized approach, the foundation internal- ratings-based approach, and the advanced internal-ratings-based approach. The Bank for International Settlement's Web site at <www.bis.org> includes a number of consultative papers that provide both background and technical details related to Basel II.

exposure at default, and maturity for pools of these loans. These estimates are used, in turn, to construct capital charges. In its most recent proposal, the Basel Committee on Banking Supervision is setting a floor for the loss-given default parameter at 10 percent (Basel Committee on Banking Supervision 2003, 15). To the extent that Basel II allows banks to hold regulatory capital more commensurate with the economic risk of loss, it should reduce the largest banks' incentives to share conforming mortgage risk with the secondary market. However, the extent to which this sharing will occur is dependent on whether regulatory restrictions placed on the internal models are binding and force banks to hold excess capital against the credit risk inherent in their mortgage portfolios.

mortgage credit and market risks are shared. By paying seller-members credit enhancement fees, the FHLB mortgage programs essentially put FHLB members in competition with Fannie Mae and Freddie Mac in the mortgage credit guarantee business.

To understand the options for FHLB members, one can compare the FHLB mortgage programs with the cash programs offered by Fannie Mae and Freddie Mac. In both cases, the member sells the market risk associated with a mortgage pool and retains the servicing rights. The difference is whether the credit risk is sold (as in the Fannie Mae and Freddie Mac cash programs) or retained (as in FHLB mortgage programs). The choice between the two depends on the credit insurance fees and regulatory capital charges associated with the respective alternatives.

At first glance, it would seem that the pricing of mortgage guarantees varies significantly between the MPF Program and Fannie Mae and Freddie Mac. On average, Fannie Mae and Freddie Mac charge about 20 basis points annually while depository institutions participating in the MPF Program charge about 10 basis points. However, there are two reasons why a direct comparison of these figures is misleading.

To begin this comparison, it's useful to think about the components of an insurance premium: provisions for expected losses, administrative costs, and profit. The premium charged by Fannie Mae and Freddie Mac includes all of these components. But premiums charged by FHLB members in an MPF transaction do not include expected losses; losses are instead attributed to the First Loss Account and realized as discounts on the credit enhancement fee paid by the FHLB. If the member were to directly pay out annual expected losses, the average credit enhancement fee charged to the FHLB would be slightly larger than 10 basis points.[34]

A second reason that the pricing differential could be misleading is that the FHLBs are retaining the residual credit risk in the mortgage purchase transactions. The risk of loss is extremely low—to date, equivalent to a AA-rated security. Still, this risk is not as low as the blanket insurance coverage provided by Fannie Mae and Freddie Mac, whose credit standing exceeds that of AAA-rated private firms. If the seller-member also accepted the residual credit risk, it would likely serve to raise the credit enhancement fees charged to the FHLBs.

Besides the differences in risk and the treatment of expected losses, there are at least two other reasons for the disparity in mortgage-credit guarantee prices. First, unlike a depository institution insuring the credit quality of its own mortgages, Fannie Mae and Freddie Mac face potential adverse selection as a third-party guarantor. The risk associated with financial institutions' providing riskier loans to the secondary mortgage market could result in higher insurance premiums being charged by Fannie Mae and Freddie Mac.[35] Second, some pricing disparity may reflect market power. Hermalin and Jaffee (1996) suggest that the federal benefits embedded in the charters of Fannie Mae and Freddie Mac and the attendant subsidy have limited competition in the secondary conforming mortgage market by erecting barriers to entry. If true, this argument would suggest that the guarantee fees charged by Fannie Mae and Freddie Mac exceed their marginal costs.

34. For example, Fannie Mae's and Freddie Mac's average losses of about 1 basis point per year suggest an adjusted average price of 11 basis points for mortgage pools guaranteed by FHLB mortgage program participants. Thus, the price differential would narrow from 10 basis points to 9.

35. Fannie Mae and Freddie Mac attempt to mitigate adverse selection through their underwriting guidelines and automated underwriting systems, which use credit bureau data to construct credit scores that rank order the riskiness of loan applicants. In fact, preliminary empirical evidence by Ambrose, LaCour-Little, and Sanders (2003) suggests that securitized mortgage loans experience lower defaults than those retained on a depository institution's portfolio.

Looking at the average prices charged for conforming mortgage guarantees, the price of credit risk using FHLB mortgage programs appears to be less than that offered by Fannie Mae and Freddie Mac. This observation suggests that FHLB members have an incentive to retain the credit risk and receive servicing and credit enhancement income. Whether they actually do this will depend on how much capital they are required to hold to reap the additional benefit.

The FHLB mortgage programs allow depository institutions to hold risk-based capital only up to the amount of their actual credit exposure.[36] For example, using MPF 125, an FHLB member may be required to hold 25 basis points of regulatory capital against its secondary credit enhancement. Thus, its return on this equity is the ratio of the discounted present value of the credit enhancement income (net of credit losses and prepayments) to the required regulatory capital. Buonafede, Hirani, and Yonker (2002) provide this type of profitability analysis for the FHLB mortgage programs and their variants.[37]

Standard economic theory suggests that increased competitive pressure applied by the FHLBs will lower costs to mortgage originators—and ultimately homebuyers—by increasing the supply of mortgage credit.

The FHLB mortgage programs appear to offer attractive pricing for credit risk and have become increasingly popular with members. Nevertheless, it is unclear whether they can become significant competitors to Fannie Mae and Freddie Mac because their continued growth will require the FHLBs to restructure their balance sheets by either selling more equity stock to members or selling assets.

Additional stock issuance may not be an attractive option for the FHLBs for a couple of reasons. First, stock issuance is generally considered to be costly relative to debt issuance because of asymmetric information, agency costs, and taxes. This cost differential is especially true for depository institutions that enjoy access to the federal safety net and GSEs that benefit from an implied federal guarantee of their debt obligations. Second, only members are eligible to purchase an FHLB's relatively illiquid stock, suggesting that potential buyers may demand a premium. Some of the FHLBs anticipated the relationship between expanded mortgage programs and required capital by including activity-based stock purchase requirements as a part of their new capital plans required by the Gramm-Leach-Bliley Act.[38] FHLB members could perceive this requirement as an additional cost to participating in an FHLB mortgage program.

FHLBs' asset sales could take the form of either selling marketable securities held in their portfolios, mortgage assets, or both. While the former alternative is straightforward, the latter has only recently been proposed. In December 2002, the Finance Board approved an application by the Chicago FHLB to operate a Shared Funding Program, under which the institution may acquire collateralized mortgage obligations and sell interests in such assets to other FHLBs or FHLB System members.[39]

The first Shared Funding transaction occurred on March 21, 2003.[40] According to the Chicago FHLB, this transaction involved privately placed multiple-class certificates issued by One Mortgage Partners Corporation, a subsidiary of Bank One, which in turn is a member of the Chicago FHLB. The certificates are backed by approximately $475 million in conventional, conforming mortgages provided by affiliates of National City Mortgage and Wells Fargo Home Mortgage. The Chicago, Des Moines, and Pittsburgh FHLBs purchased the two senior tranches, which were rated AAA and AA, while a Bank One affiliate acquired the subordinate tranches. Thus, the structure of the inaugural Shared Funding deal was akin to a private-label REMIC transaction.[41]

Like the other FHLB mortgage programs, the Shared Funding Program allows an FHLB to take on market risk through its purchase of the senior securities, or those rated at least AA, while the member takes on most of the credit risk through the subordinated securities. However, two important distinctions are that (1) the member retains some market risk by holding the subordinate securities and (2) liquidity is improved by holding the mortgage pool in the form of a marketable security. Today, the market risk associated with mortgages is available to investors primarily through mortgage-backed securities issued by Fannie Mae, Freddie Mac, and Ginnie Mae.[42] However, in the future, securities like the Shared Funding Certificates may provide investors with another choice for investing in and thereby exposing themselves to the market risks associated with conforming mortgages.

Potential Effects of Competition

This analysis suggests that the FHLBs have the ability to become competitors to Fannie Mae and Freddie Mac in the secondary conforming

mortgage market. This competition can affect both mortgage interest rates paid by consumers and GSE risk profiles.

Effect on interest rates. Standard economic theory suggests that increased competitive pressure applied by the FHLBs will lower costs to mortgage originators—and ultimately homebuyers—by increasing the supply of mortgage credit. This process may occur in a couple of ways.

First, entry into the credit guarantee market by FHLB seller-members will put downward pressure on the guarantee fees charged by Fannie Mae and Freddie Mac, at least for depository institutions that are eligible for FHLB membership. Primary mortgage market participants will, in turn, pass such savings on to consumers. As the earlier discussion illustrates, any savings should be relatively small for a given consumer although this savings could ultimately be substantial in aggregate.[43]

Second, the operation of a viable securitization program may eventually have additional implications for conforming mortgage market interest rates. The extent of any such effect will depend on the liquidity of these securities because, as securities become more liquid, the interest rate demanded declines because of the erosion of a liquidity premium. For asset-backed securities in a competitive market, these lower secondary market interest rates are then passed through to the primary market.[44] The liquidity of FHLB-issued mortgage securities will be predicated on having sufficient mortgage volumes and the pool of eligible investors being sufficiently large, or at least having significant aggregate investment capacity to purchase these assets. Federally insured banks and thrifts—all of which are eligible for FHLB membership—together held $2.7 trillion in residential mortgages and mortgage-backed securities as of year-end 2002. If these figures are indicative of ongoing demand for mortgage-related assets, the membership requirement for purchasing FHLB-issued mortgage securities is unlikely to be a significant barrier to liquidity.[45]

To the extent that the Mortgage Partnership Finance and Mortgage Purchase Programs lower mortgage costs to conforming mortgage borrowers and are a substitution in the funding choice by FHLB members away from Fannie Mae and Freddie Mac, consumer welfare may improve. However, to the extent that lower mortgage costs induce increased investment in housing, there may be some partially offsetting negative welfare effects. Such reductions in economic welfare arise when subsidies (like the interest rate subsidies provided by the three housing GSEs) encourage investment in certain sectors of the economy at the expense of less investment in other sectors. Frame and Wall (2002) discuss the economic implications of housing finance subsidies in greater detail.

36. Like a swap securitization with Fannie Mae or Freddie Mac, the FHLB mortgage programs also allow for regulatory capital arbitrage. For example, using MPF 125, an FHLB member could sell the market risk and retain the credit risk, holding 25 basis points of capital. Using the proceeds of the sale, it could then purchase a mortgage-backed security based on a similar pool of loans and hold 160 basis points of capital against this asset. In this case, the FHLB member has reassumed both credit and interest rate risk but is required to hold only 185 basis points of regulatory capital instead of 400 basis points.
37. However, Buonafede, Hirani, and Yonker (2002) incorrectly state that the Mortgage Purchase Programs do not require seller-members to hold risk-based capital.
38. In the context of the mortgage programs, activity-based capital requirements could require members to purchase stock in an amount equal to a fixed percentage of the dollar value of mortgages sold to their FHLB. A review of the individual capital plans indicates that eight of the twelve FHLBs will have an activity-based requirement tied to their mortgage programs.
39. However, the proposal does not seem to preclude an FHLB member from selling such interests outside of the FHLB System in a private placement.
40. See the March 26, 2003, press release at <www.fhlbc.com>.
41. An interesting question concerning the shared funding program pertains to how it adds value relative to a private-label deal. One answer to this, provided in Inside Mortgage Finance (2003c), is that the participating FHLBs were willing to pay a premium for the senior securities because they qualify as "acquired member assets" for purposes of the Finance Board's Financial Management Policy. As such, Shared Funding Certificates are not subject to the 300 percent of equity capital cap on FHLB investments in mortgage-backed securities.
42. Ginnie Mae, or Government National Mortgage Association, is a government-owned corporation that guarantees securities backed by loans guaranteed by the Departments of Housing and Urban Development and Veterans Affairs. As of year-end 2002, Fannie Mae, Freddie Mac, and Ginnie Mae had about $3 trillion in mortgage-backed securities outstanding.
43. Estimates of the savings to mortgage borrowers and an understanding of how any savings accrue (through lower interest rates or lower fees) would be an interesting topic for future research.
44. See Black, Garabade, and Silber (1981) for empirical evidence related to the effect of the Ginnie Mae pass-through program on FHA mortgage costs.
45. Furthermore, after the FHLBs have some experience with a securitization program, they could seek to alter the regulatory terms of the program, including the scope of permissible investors.

Effect on GSE risk. All three housing GSEs accrue federal subsidies through the market's perception of a federal guarantee of their debt obligations. It is well understood that such guarantees create an incentive to increase risk taking. This tendency is known as moral hazard. However, to the extent that subsidies serve to erect barriers to entry and reduce competition in a particular product market, they provide firms with franchise value, or positive expected economic profits. Firms with franchise value face risk-averting incentives in order to maintain the status quo.[46]

The risk profiles of Fannie Mae and Freddie Mac could change as a result of increased competition from the FHLBs. That is, if competition reduces Fannie Mae's and Freddie Mac's expected profits (returns), these GSEs will be faced with either accepting the lower expected returns or taking on more risk. Such increased risk-taking might manifest itself through the selection of riskier investments, less effective hedging, holding less capital, or entering new markets. As safety and soundness regulator, the Office of Federal Housing Enterprise Oversight (OFHEO) actively monitors the risk positions of Fannie Mae and Freddie Mac, and the U. S. Department of Housing and Urban Development (HUD) is responsible for the approval of any new programs offered by Fannie Mae or Freddie Mac.[47] These regulators should be aware of the effect of increased competition on the risk-taking incentives of Fannie Mae and Freddie Mac.

For the FHLBs, the mortgage programs expose them to market risks that they have been managing for some time although the assumption of residual mortgage credit risk is new.[48] Nevertheless, the probability of losses accruing to the FHLBs is small and comparable with that arising from counterparties in many other financial transactions. Thus, it would seem that the Mortgage Partnership Finance and Mortgage Purchase Programs should have no material impact on the risk profile or risk-taking incentives of the FHLB System. That said, anytime a GSE expands, the size of the implied government guarantee increases and therefore taxpayer exposure increases. If the growth in the FHLB mortgage programs comes exclusively at the expense of Fannie Mae and Freddie Mac, then any change in taxpayers' contingent liability depends on the relative risk profile of the three housing GSEs. By contrast, if this growth arises from business otherwise headed for the private market, taxpayers' liability will expand proportionally.

Conclusions

Mortgage purchases are becoming an increasingly large part of the FHLB System's asset base. Under the Mortgage Partnership Finance and Mortgage Purchase Programs, seller-members guarantee most of the credit risk associated with the mortgages while shedding the interest rate risk. As a result, FHLB members have a more complete set of options for funding conforming mortgage loans via the three housing GSEs.

The FHLB mortgage programs increase competition in the secondary conforming mortgage market. In terms of credit risk, the issuance of mortgage credit guarantees makes all FHLB members potential competitors to Fannie Mae and Freddie Mac. The current average prices for these credit guarantees suggest that the FHLB programs are an attractive alternative. However, direct comparisons are clouded by differences in the guarantee structures. In terms of market risk, as the mortgage programs continue to grow, the FHLBs may begin working with members to structure securities bearing the market risk of conforming mortgages. The Chicago FHLB completed the first such deal in March 2003.

There are at least two potential effects of increased competition in the secondary conforming mortgage market. First, consumers could ultimately benefit from lower mortgage costs because of a lower cost of guaranteeing mortgage credit. However, the savings would likely be small on a per dollar basis. Second, increased competition may reduce the franchise value of Fannie Mae and Freddie Mac, in turn possibly increasing risk-taking incentives for these firms. Overall, how this competitive landscape evolves bears close attention as it could have important implications for mortgage markets.

46. See, for example, Demsetz, Saidenberg, and Strahan (1996) for a more complete discussion of the disciplinary role of franchise value in financial services.
47. The OFHEO is an independent agency within HUD.
48. For example, the market risks posed by the mortgage programs are the same as those for mortgage-backed securities holdings. As of year-end 2002, the FHLB System maintained $96.4 billion in mortgage-backed securities on their consolidated balance sheet.

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