Rural Banks and the Federal Home Loan Bank System

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Increased competition within the financial services industry has raised concerns about the ability of rural banks to adequately fund local development. In an attempt to address these concerns, the Gramm-Leach-Bliley Act of 1999 broadened rural bank access to Federal Home Loan Bank (FHLB) financing. Rural banks that are experiencing higher interest rate risk, tighter net interest margins, and liquidity constraints seek FHLB membership and actively use advances to increase lending. Greater reliance on nondeposit funding may increase the risk profiles of banks.

Since the 1980's, increased competition within the financial services industry due to changes in Federal legislation and regulation, as well as market and technological developments, has increased concerns about funding for small banks (assets under $500 million). Since rural banks tend to be small, the potential constraints on loanable funds in rural financial markets could hurt economic development. Rural economies consist of small communities and small borrowers, who rely on these local banks for credit.

The Gramm-Leach-Bliley Act (GLB) of 1999 increased small bank access to Federal Home Loan Bank (FHLB) funds to finance agricultural, rural, small business, and low-income community development. Under their government-sponsored enterprise (GSE) status, the FHLB's extend low-cost advances to member institutions. In addition to a steady source of long-term funds, FHLB membership offers other benefits for rural banks. FHLB advances can provide rural credit markets with an alternate source of liquidity, and they may also increase rural bank profitability since they are less costly than core deposits (Collender). Finally, membership and the use of advances can reduce risks, such as interest rate risk, by matching maturities on assets and liabilities held in portfolios.

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Rural Bank Membership May Increase With Changes to the FHLB's

Congress created GSE's as privately owned and operated entities in order to make credit more available and affordable to specific sectors of the economy, including rural areas, agriculture, education, and housing. Established in 1932, the 12 FHLB's acted as lender of first resort for its member thrifts, extending advances for home mortgages. Under the Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) of 1989, FHLB eligibility was extended to all qualifying depository institutions, such as credit unions and commercial banks, but advances were still mostly used to support home mortgage markets. The GSE status of the FHLB's allows them to borrow funds in capital markets at rates only slightly higher than those paid by the U.S. Treasury. Member institutions can use illiquid mortgages and government securities as collateral for the low-cost advances.

The GLB increased competition within the industry by changing the basis for FHLB membership, augmenting the purposes of advances, and expanding the types of collateral that can be pledged against advances. Before GLB, eligibility criteria included meeting capital and loan quality standards, taking domestic deposits, and holding at least 10 percent of total assets in mortgage-related assets. The GLB repealed the mortgage/assets ratio for small commercial banks (less than $500 million in assets), increasing their access to nonlocal funding. The GLB authorized FHLB financing to any small bank for agricultural, rural development, small business, or low-income community development lending. And it extended the types of collateral against advances to include secured small business, small farm, and small agribusiness loans (or securities representing a whole interest in these loans).

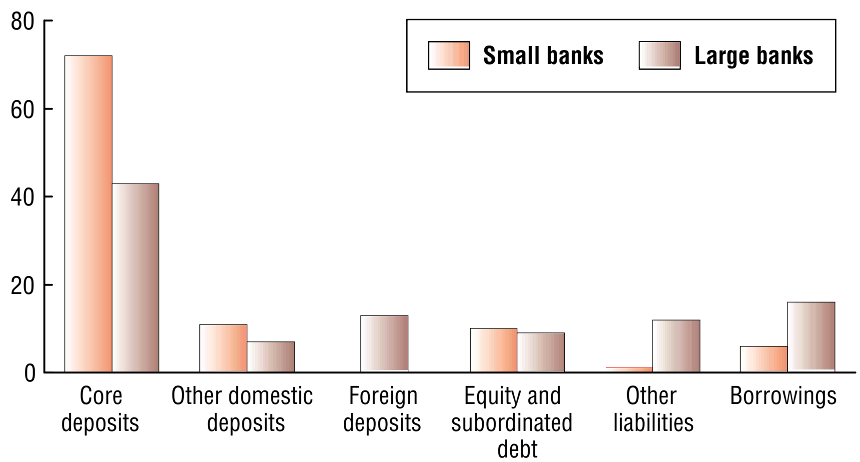
Rural Banks Are Interested in Membership

Since 1994, over 90 percent of all commercial banks have been classified as small and over half of all small banks are rural. An increase in FHLB membership and use of advances by small banks is of concern for many reasons. By nature, agriculture is location-specific and concentrated in rural areas. Increased funding to small financial institutions will facilitate their continued service to underserved markets. Rural communities tend to have relatively few local sources of loanable funds, and so development is highly dependent on the ability of small banks to make new loans to local businesses, governments, and households.

Figure 1

Bank asset funding, year-end 1998

Small banks rely more heavily on core deposit funding than do large banks



Notes: Small banks are banks with less than $500 million in total assets; core deposits are total domestic deposits less time deposits in excess of $100,000 and brokered deposits less than $100,000; borrowings include Federal funds purchased, repurchase agreements, FHLB advances, demand notes, and mortgages.

Source: Puwalski and Kenner.

FHLB advances allow access to a steady source of nonlocal funds, an alternative to local deposits for financing investment opportunities. Recent studies reveal that deposit growth nationwide has been slow over the past decade. During the 1980's, increasing deposits accounted for over 30 percent of the increases in banks' financial assets, but less than 15 percent in the 1990's. This drop is especially worrisome for small banks since they tend to rely more heavily on deposits than larger banks. By year-end 1998, 72 percent of aggregate small bank assets were funded with core deposits, compared with only 43 percent for large banks (fig. 1).

Sluggish deposit growth may be partially attributed to the emergence of higher yielding investment alternatives, such as money market funds and mutual stock/bond funds. Nonbank institutions also offer financial services such as check writing, ATM's, and check cards with some money market accounts. In addition, advancing technology has lowered the relative costs of

Photo courtesy Economic Research Service, USDA.

Data and Methods

Financial decisions involve a tradeoff between risk and return, where risk is characterized by deviations in expected returns. In general, financial institutions seek to increase returns while controlling risk. FHLB membership and advances gives banks additional tools with which to increase expected return for a given level of risk. Following portfolio theory, an empirical model was derived to test for characteristics of banks seeking membership in the FHLB's. This analysis also tests whether factors related to returns or risk influence the decision to become a member. The same analysis was used to determine which members used advances as an alternative funding source.

Characteristics of commercial banks that choose to join an FHLB and choose to use advances are estimated for the years 1994 to 1996. Balance sheet and income statement data were compiled using Call Reports from the FDIC and the Summary of Deposits data from the Federal Reserve. A year-by-year bivariate logit analysis was used in an attempt to eliminate time effects.

these nondeposit investments, so the share of household assets held as bank deposits has diminished (fig. 2).

This slow deposit growth may be fueling the record-high levels of loan-to-deposit ratios. Reduced liquidity, where loan growth exceeds deposit growth, was evident in 64 percent of all small banks during the 1990's (Puwalski and Kenner). In imperfect capital markets, slower growth in deposits is associated with slower growth in lending, especially in smaller banks (Jayartne and Morgan). Longer term funding options are relatively limited for small banks. Capital market instruments have high fixed costs, which make them relatively more expensive for small institutions that spread these costs over a smaller volume of business activity. Since smaller banks are not as well known, they are not easily evaluated by creditors and are forced to pay higher rates for borrowings than large banks.

FHLB advances are a viable nondeposit source of funding for small banks, and can be used as direct substitutes for deposits in loan funding when short-term deposits are insufficient in satisfying local loan demand. In addition, advances have other attractive features: no withdrawal risk is associated with their use as a liability, no reserve requirements must be held against them, and no insurance premiums must be paid.

The current increase in small banks' use of nondeposit sources of funds reflects the rising use of FHLB advances. In 1993, only 42 percent of all small banks held over 10 percent of total liabilities in noncore deposits; by second-quarter 1998, 75 percent did. And by year-end 1998, advances made up over 80 percent of all nonovernight borrowings (all borrowings other than Federal funds purchased and repurchase agreements) for small banks (Puwalski and Kenner).

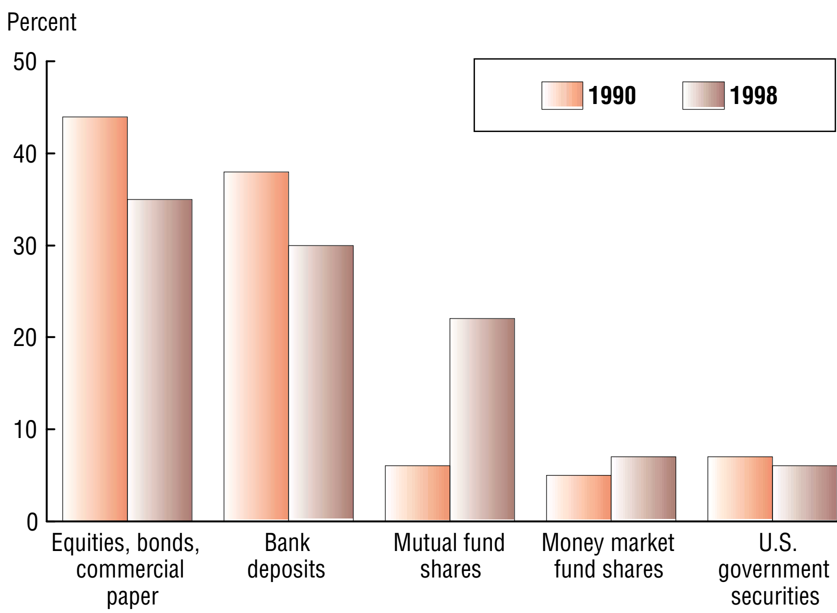
Which Rural Banks Join and Use FHLB Advances?

In general, the residential mortgage loan constraint is binding for all commercial banks. Its alleviation through GLB will allow many more rural banks to join the FHLB's. Member rural banks are more likely to take out advances than urban

Figure 2

Shares of liquid assets held in household portfolios, 1990 and 1998

The share of household assets held as bank deposits diminished during the 1990's



Source: Puwalski and Kenner.

Table 1

Factors associated with FHLB membership and use of FHLB advances

The FHLB system is a potential risk management tool for rural banks

	Relationship with:	
Factor	FHLB membership	Use of FHLB advances
Interest rate risk	positive	positive
Liquidity risk	positive	positive
Credit risk	negative	positive
Profit pressure	positive	positive
Rural bank classification	negative	positive

members due to rural banks being predominantly small and small bank funding options being relatively limited.

Financial institutions seek FHLB membership to manage risk and profit. Rural banks that are experiencing higher interest rate risk, tighter net interest margins, and liquidity constraints seek membership in the FHLB system and actively use advances as a source of funding to increase lending. Member rural banks are more likely to take out advances when experiencing higher levels of credit risk, such as during periods of increased loan defaults and delinquencies.

Interest rate risk is measured by asset-liability maturity gaps (see "Definitions" for an explanation of the technical terms used here). Banks with relatively large, positive maturity gaps (i.e., high interest rate risk) are significantly more likely to seek membership and have outstanding FHLB advances since movements in market interest rates may cause wide variations in net interest income (table 1). On average, deposits exist for 12 months, whereas the average life of a fixed-rate real estate loan is 15 years. Obtaining FHLB membership allows banks to finance long-term loans with longer term liabilities.

Credit risk occurs when loans carry high default risk and are illiquid. Loans constitute a major portion of banks' earning assets and generate the bulk of interest income. A bank with a relatively high level of credit risk will need a source of funds for liquidity purposes. Banks with higher credit risk, measured by higher net loan charge-offs or a higher percentage of nonperforming loans to total loans, are less likely to join an FHLB, often due to the failure of these banks to meet the minimum asset quality requirement when gross loan losses are exceptionally high. However, member banks experiencing higher credit risk actively use advances as a funding source. Interest rate risk can also be transformed into credit risk. That is, if rates on variable-rate or indexed loans rise by enough to make the new payments too high for the borrower, then the potential for default increases.

Liquidity risk arises when banks must honor deposit withdrawals or when they want to take advantage of profitable opportunities that the existing liability base cannot support. Liquidity is measured by the loan-to-core-deposit ratio, since core deposits are an important source of liquidity due to their stability and relatively low interest rate sensitivity. A loan-to-deposit ratio that is high or increasing indicates low or falling liquidity for small banks. During the 1990's, small bank loan-to-deposit ratios increased 14 percentage points to exceed 69 percent, on average, by 1997 (Keeton).

Banks facing increasing loan-to-deposit ratios are more likely to join an FHLB and to use advances as a substitute for deposits as a liquid asset. Increased liquidity allows banks to remain active in difficult lending environments, such as rural areas. Seasonal mismatches in loan demand and deposits create funding problems for rural banks. The homogeneity and isolation of rural economies makes diversification of loan portfolios difficult, so rural banks hold fewer loans as a percentage of deposits compared with the banking industry as a whole.

FHLB membership can also help banks increase profits. Reductions in net interest margins are used to measure increased profit/earnings pressure and to characterize those institutions with high marginal costs of funds and/or low returns on asset portfolios. Banks facing increased profit pressure are more likely to join an FHLB and to use advances since the marginal cost of funds may be lowered by doing so. In addition, an institution suffering from earnings pressure may be cash-flow constrained, leading to the need for an alternative source of funding. Profit pressure may entice institutions to raise loan-to-asset ratios by extending credit to marginal borrowers in search of higher returns. On average, this could lead to higher loan losses since more credit risk has been undertaken.

Definitions

Asset-liability maturity gaps. The difference between an institution's asset and liability maturity structures. A positive maturity gap implies that assets (loans and investments) held in portfolio have longer maturity than liabilities (deposits and other sources of funds), where these mismatched maturities lead to higher interest rate risk.

Core deposits. Stable deposits that are not highly interest-rate sensitive. These include demand deposits, negotiable order of withdrawal (NOW) accounts, money market demand accounts (MMDA's), and small time deposits.

Credit risk. The risk that the borrower will default on his loan. High credit risk is displayed through significant loan losses.

Interest rate risk. The possibility of a change in cost of funds (market interest rate) without a matching change in rates charged on outstanding loans held in portfolio (fixed-rate loans).

Liquidity risk. Variation in net income due to difficulty in obtaining cash at reasonable cost.

Net charge-offs. Gross charge-offs (dollar value of loans written off as uncollectable) less recoveries (loans initially charged off that are repaid).

Net interest margin. Ratio of net interest income to earning assets; measures net interest returns on income-producing assets.

Nonperforming loans. Loans where the contracted interest and principal payments have not been made within 90 days after the due date or loans currently not accruing interest for the bank.

Small banks. Insured commercial banks with average total assets under $500 million.

Increased FHLB Membership Could Erode Deposit Insurance Funds

With more rural banks joining the FHLB system under GLB, safety and soundness become major concerns. For instance, the use of advances may prolong the life of a failing institution. Moreover, if those institutions that seek membership are suffering profit pressures, then earnings pressure may entice these banks to engage in risky behavior. FHLB's low-cost, nonlocal funds may lead to rapid, unsafe growth in bank portfolios if these funds are used to extend credit to risky marginal borrowers.

These potential problems are a major concern for the Federal Deposit Insurance Corporation (FDIC) since bank and thrift failures impose huge costs on the Bank Insurance Fund and the Savings Association Insurance Fund. They include the direct costs of arranging mergers, assisting troubled firms, liquidating assets, and final payouts to depositors. FDIC officials worry that FHLB lending policies may at times enable rather than deter such risk-taking. Previous studies have indicated a negative correlation between FHLB advances to thrifts and thrift capital levels, a widely used indicator of riskiness (Ashley and others). FHLB lending to poorly capitalized thrifts increased Federal Savings and Loan Insurance Corporation losses during the 1980's. Advances allowed institutions to increase financial leverage and induced insured thrifts to undertake greater risks since profits would accrue to the owners while losses in the event of failure would fall on the insurer. Liens associated with the FHLB advances have priority over other security interests, such as insured deposits, in the assets of failed insured institutions, so deposit insurance funds are at risk if the FHLB's provide advances to troubled, federally insured banks or thrifts.

Conclusions

The FHLB's are intended to promote competition within the financial services industry and to strengthen small institutions by ensuring adequate liquidity to meet local credit demand. As a nondeposit funding alternative, advances provide a stable source of funds, better matching of asset cash flows, greater flexibility in asset-liability management, access to liquidity and interest rate risk management tools, and a means of alleviating some profit pressure by potentially lowering the marginal cost of loanable funds. Member banks in rural financial markets can use FHLB advances to fund businesses, agriculture, rural development, and community development.

The GLB will increase small bank membership in the FHLB system. Moral hazard problems associated with this increase can be effectively managed with attentive regulation. Supervisors can evaluate whether or not banks are adequately capitalized and scrutinize an institution's risk management.

For Further Reading . . .

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