

CONCLUSIONS

The past decade saw significant increases in commercial bank membership in the Federal Home Loan Bank (FHLB) System and extensive growth in FHLB assets. As a non-deposit funding alternative, System advances provide banks with a stable source of lower-cost funds, and can be used to manage liquidity and interest rate risk. Research results suggest banks interested in FHLB participation suffer higher liquidity risks prior to FHLB membership. Liquidity is enhanced by and managed with the use of System advances, while investments in loans and mortgage-related assets increase with FHLB participation, particularly for small members.

Commercial banks with better performing loan portfolios seek and attain membership in the System, potentially a result of effective screening by the FHLBs, although members with lower profitability are more likely to use System funds. Credit quality and bank financial conditions improve after participating in the FHLB program, which may reflect the well-secured position of the FHLBs due to effective pressure from regulators, or the relatively healthy state of banks during the estimation period. Additionally, cost savings from borrowing low-cost FHLB advances, and efficiency gains from the extensive consolidation of the decade, may have contributed to higher deposit rates for savers.

Banks with relatively higher levels of interest rate risk are more likely to become FHLB members and use System advances. Additionally, interest rate risk exposure further increases after membership attainment, as member banks increase advances borrowed, and the longer members remain in the FHLB program. Results suggest longer-term advances have not been used to lengthen liability duration to offset growth in long-term asset investments.

The evaluation of bank performance under the FHLB program during the 1990s suggests no serious problems. However, the economy of this period was characterized by favorable conditions, such as low unemployment, low inflation, and low interest rates, which raised expectations for continued growth in income and employment, and increased optimism about loan repayment prospects. The result was extensive lending by banks, which was facilitated by

government-sponsored activity, and escalated levels of leveraged credit in the nation. However, the economy has begun to weaken, and continues to change, most notably toward an environment of uncertainty. Some old regulatory issues are rekindled, while new concerns about the future of banking are generated.

Local economies, particularly agriculture and small businesses, continue to depend primarily on community financial institutions for credit. Extensive consolidation in the banking industry and between Farm Credit Associations has made the banking industry more concentrated, and can potentially cause investment interests to become less localized. As members, small private-sector community banks are able to fund local economic investments with System advances and better contend with competitors, such as the government-sponsored Farm Credit System lending associations. However, research findings suggest concerns related to adverse loan pricing by FHLB participants can not be rejected, while concentration was found to be affiliated with less attractive pricing of loans for consumers.

FHLB participation may also contribute to increasing concentration in the financial services industry. System advances may alleviate the need for deposits and additional bank branches, and can be used as substitutes for deposits in member liability structures, possibly to the detriment of small savers. The changing delivery of banking services via the use of automated teller machines, credit cards, and phone- and online-banking also directs banking toward nonlocation-specific operations that does not require the creation of additional local branches, particularly with the high brick-and-mortar costs associated with traditional methods of retail deposit collection. Uncertain economic conditions may cause members with market power to charge high rates for local loans, or may export local deposits to fund non-local investments because of perceived higher returns or lower risk.

Market and financial risks are fueled by the indebtedness of the economy and the increased mismatches in long-term asset-liability maturities held in bank portfolios, making the banking industry more susceptible to rising rates. Banks are tightening lending to make up for past credit excesses, and the economy is beset with uncertainty. The economy continues to grow, but is spurred by government spending and tax cuts. Historically low interest rates, decreasing loan

supplies, and continued federal budget deficits run the risk of increasing rates, mounting concerns about the resulting quality of member bank loan portfolios, bank profitability levels, and current interest rate risk management practices. Future economic uncertainty questions the repayment of loans made during the 1990s that are still held in bank portfolios. Bank could feel profit pressure, since rising rates cause costs of funds to increase by more than returns generated from existing loans. Therefore, the current economic environment is further expected to positively influence FHLB participation, since longer-lived liabilities, such as longer-term FHLB advances, can regulate interest rate risk and stabilize bank returns.

The expansion of System advances borrowed is expected to continue, particularly since the Gramm-Leach-Bliley (GLB) Act of 1999 eliminates the often-binding membership eligibility requirement, for banks with fewer than \$500 million in total assets, and targets FHLB activity toward farm and small business lending and makes these loans eligible collateral to support FHLB advances. Hence, more small banks are able to join the FHLBs and membership becomes more attractive for small banks, particularly for riskier banks. Access should induce banks to make more loans for the specified purposes—supporting farms, small business, and rural development. Consequently, System advances may be used to fund rapid and/or unsafe growth, and deposit insurance funds remain at risk if troubled FHLB members are using System advances, because of the subordinated position of insured deposits to FHLB liens on the assets of failed institutions.

Results from the current analysis are likely to change after 1999. The continued evaluation of the FHLB System, the performance of its members, and markets containing high levels of influential FHLB participation remain important areas of research. Potential safety and soundness problems associated with expected increases in FHLB funding, and possible mispricing and misallocation of credit that can be detrimental to local community investment and development, are ongoing issues that must continue to be monitored closely by bank regulators and supervisors. Therefore, possible avenues for further research with respect to FHLB sources of finance for commercial banks are vast, and some suggestions for the current research are briefly introduced here.

On average, rural markets have been growing, but are also aging, due to out-migration of young, educated, and skilled adults (to seek greater opportunities available in metro cities), aging-in-place, and the in-migration of retirees, which may lead to a depletion of rural deposit bases. Despite shifting rural age demographics, local banks may not participate in the System if additional funds are not needed, because of limited opportunities or government subsidies providing adequate funds, or costs to deliver such services to these areas are too high (due to low population density or economic activity centering on a single industry).

Therefore, it is of interest to evaluate all banking markets, not just those located in rural areas, to fully assess the effects of the FHLB System on the entire banking industry, and to incorporate additional variables to better explain bank participation in the FHLBs. Rural markets can be further distinguished as industry-dependent areas, such as farming or mining, and as areas with high percentages of farm payments, which may be used to measure need for System advances as a source of funding. The evaluation of market concentration on commercial bank participation decisions could also prove insightful. If higher concentration is found to elicit participation in the System by local banks that are trying to remain competitive in their markets, then one can potentially ascertain whether participation leads to a more competitive market, or a de-concentration of market deposits. The size structure of local markets (i.e. the mix between large and small banks) can also capture differences in pricing and availability of banking products and services between areas. The differing ownership structures of small and large banks may drive different motives of operation. The family-owned structure of many smaller banks may not result in the maximization of shareholder values, since managers possess the broader mission of local improvement, lack the management sophistication to participate in various programs, or are more conservative by nature. Hence, distinguishing the family-owned small community bank could be insightful. Finally, various bank regulators present and adhere to different policies. The Office of the Comptroller regulates national banks, and encourages the attainment of many different sources of funds. However, the Federal Deposit Insurance Corporation regulates non-Federal Reserve member state banks, and discourages the use of additional funding sources. Capturing these differing policies and requirements may prove to be intuitive.