
Liquidity and Competition in Rural Credit Markets

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Agriculture and other sectors of rural America present special challenges to financial markets. These sectors typically are capital intensive, geographically dispersed, and limited in scale and scope of business operations. They are subject to seasonal and cyclical swings in economic conditions, often resulting in liquidity problems at lending institutions serving these sectors. Nonagricultural rural areas experience considerable unevenness in economic performance and outlook and, together with agriculture, are experiencing significant structural change (Henry and Drabenstott). Borrower-lender relationships in rural markets are traditionally characterized by reputation, familiarity, and social closeness (Miller et al., Robison and Hanson). Skills in financial management and the quality of financial information also are more limited in rural versus urban markets (Gladwin et al.).

The financial markets serving rural America generally are considered less competitive than their urban counterparts, with fewer institutions and more limited offerings of financial products and services. Small community banks have played major roles in financing agricultural and rural borrowers, although the ongoing transition toward larger, interstate banking is challenging community banks. Agribusinesses and other local businesses provide significant financing as well. Federal credit programs targeted toward rural markets include the Farm Credit System (FCS), Farmer Mac, the consolidated Farm Services Agency for agriculture, the Small Business

Administration, and several rural development programs for the nonfarm sectors. Various state credit programs operate on a smaller scale.

In light of these characteristics and institutional arrangements, the availability of competitively priced, dependable credit for rural borrowers remains an important policy issue. Currently, policymakers and the finance community are considering alternative proposals for improving access by rural borrowers to agency market funds provided by the Federal Home Loan Bank System and the Farm Credit System. Another government-sponsored enterprise (GSE)—Farmer Mac—received statutory revisions in January 1996. These changes are intended to widen the financing options for community banks and rural borrowers, stabilize rural credit availability, enhance local competitiveness, foster long-term fixed-rate lending, and make interest rates on loans more uniform and perhaps lower across regions.

These potential effects would be consistent with the GSE concept of filling gaps and improving the workings of credit markets without necessarily subsidizing investors and/or borrowers (Bosworth, Carron, and Rhyne; Barry 1995). A broader scope of GSE lending does, however, raise questions about the desired degree of targeting and about the government's contingent costs if GSE financial assistance is needed in the future (Stanton).

The goals of this paper are to elucidate these policy issues, analyze their rationale and effects,

and consider the liquidity and competitive implications for rural financial markets. We will provide a brief historic perspective on funding issues for rural banks, including recent access to the Federal Home Loan Bank System, and then use bank call report data to evaluate the competitiveness and financial performance of rural versus nonrural banks. These profiles will set the stage for the policy analyses and long-term implications that follow.

FUNDING ISSUES FOR RURAL BANKS: AN HISTORIC PERSPECTIVE

The decentralized banking structure in the United States reflects an historic preference to avoid large concentrations of banking power and to initially leave the chartering and regulation of banks to individual states. These preferences were expressed initially through a prohibition of national chartering of banks that lasted until the late 1800s. In the 20th century, the McFadden Act of 1927 imposed geographic restrictions on commercial banks, and the Glass-Steagall Act separated banking and securities businesses. The result was a mixture of statewide branching and limited branching in some states and unit banking in others. The unit banking states had numerous small, community-oriented, rural and nonrural banks that were heavily dependent on their local markets for deposit generation and lending opportunities.

Dependency on local markets by community banks has been both a strength and a weakness over the business cycle, and has created the need for reliable access to nonlocal sources of funds. This need is due to several factors that change in importance over time. Included are: 1) seasonal patterns in loans and deposits; 2) pressures on loans and deposits caused by fluctuations in local economic conditions; 3) cyclical lending patterns; 4) disintermediation with reinvestment of

funds in other financial market instruments; 5) loans above the local bank's legal lending limit; 6) management of interest rate risk by matching term structures of assets and liabilities; 7) periodic needs to reduce loan risks and restructure balance sheet ratios; and 8) needs for long-term funds to finance a capital-intensive rural market.

Responses to the need for nonlocal funds have come from commercial, governmental, and quasi-governmental sources, as in the case of GSEs. A long-standing example of a commercial response is loan participations and other services provided to rural markets by urban correspondent banks (Barry 1978; Timberlake). The major policy initiatives for nonlocal funds began in the early 1900s when Federal Land Banks were formed to provide real estate loans to farmers with more appropriate financing terms than those provided by commercial banks and other lenders. The Federal Intermediate Credit Banks (FICBs) were established in 1923 to finance agricultural cooperatives and to serve as a secondary market for the purchase of short and intermediate-term agricultural notes from commercial banks and finance corporations. FICBs received little use, however, until Production Credit Associations were established beginning in 1933 to borrow directly from the FICBs and make non-real-estate loans to farmers.

Relatively stable credit conditions occurred through the 1940s and 1950s, although periodic credit crunches characterized the 1960s. Inflationary pressures and volatile agricultural conditions began emerging in the 1970s. Pressures were also mounting in the 1970s for improved access by rural banks to non local sources of funds. The American Bankers Association, the Board of Governors of the Federal Reserve System, and the Federal Reserve Bank of Kansas City were among those organizations sponsoring studies and conferences on this issue. Several new developments occurred.

Loan participations between commercial banks and the FCS institutions and reauthorization for commercial banks to borrow from the FICBs were reflected in the Farm Credit Act of 1971 and its 1980 Amendments. The Farm Credit Act Amendments of 1980 focused heavily on the authorities by which FICBs loan to commercial banks and other financing institutions (OFIs). The amended statute clearly indicated that FICB loans were to be reasonably available to OFIs that: 1) were significantly involved in agricultural or aquatic lending; 2) have limited access to regional or national markets; 3) have continuing needs for supplementary funds for agricultural and aquatic lending; and 4) do not use FICB services to expand other types of lending. The regulations of the Farm Credit Administration contain more detailed specifications of these conditions.

While these developments provided channels of access to non local funds, they still left commercial banks dependent on a GSE funding source (i.e. the FICBs and, following 1987, the FCS banks) that was owned, controlled, and primarily patronized by the lending associations of the Farm Credit System—major competitors with commercial banks in agricultural finance. In general, commercial bank access to agency market funds from the Farm Credit System has had little use.

A seasonal borrowing privilege was added to the Federal Reserve discount window in 1973, as a liquidity source for member banks. The program continues to receive modest use (for example, average weekly outstanding balances rose from \$89 million in 1973 to \$235 million in 1988)(Clark).

In the late 1970s, two money center banks (Bank of America and Manufacturer's Hanover) offered participation arrangements in loan pools to relieve liquidity pressures and

over-line loan problems at smaller agricultural banks. Neither program had much use, however, due to rapidly increasing interest rates that widened the margin at that time between national market rates and those in rural financial markets and to apparent communication difficulties within the banking system.

Another notable attempt to develop expanded agricultural funding opportunities within the commercial banking system involved Mid-American Bankers Service Company (MABSCO) and one of its subsidiaries Mid-American Services Inc. (MASI). MABSCO was a bankers' service company owned by the Bankers Associations of 13 mid-western states with the Iowa Bankers Association as the flagship. MASI was an agricultural credit corporation acting as a servicing agent by which participating banks in the several states could sell portions of their agricultural production and intermediate term loans to Rabobank (Netherlands) as the funding source.

The MASI program was established in 1981-82. It began a pilot phase in 1983 and then became fully operational. MASI itself was funded by earnings from a capital note invested by each participating bank and by a 25 basis point markup on Rabobank's cost of funding the farm loans it purchased. Expedient loan handling and credit scoring were important features of MASI's operations.

Despite the effective organization of MASI and its extensive promotion to agricultural bankers, this financial innovation had little use. It began at a time when the significant financial problems of many farmers and their lenders were beginning to emerge, and when the resulting slowdown in borrowing was creating stronger fund availability at rural banks.

Three developments in the late 1970s and early 1980s resulted in a partial release of the

funding pressures on rural banks. One development was the shift by the Federal Reserve in 1979 from targeting interest rates to targeting growth in the money supply. A shift then occurred from fluctuations in credit availability to fluctuations in interest rates. The second development was the elimination of interest rate ceilings on deposits in the early 1980s. The third development was banks' new practices in asset-liability management in response to a more volatile interest rate environment.

Funding pressures were further reduced during the financial stress times of the 1980s in response to mounting loan losses and declining loan demand by farmers. Commercial banks recovered more quickly from these problems than did the Farm Credit System and other specialized agricultural lenders. In particular, farm real estate lending (specifically, loans secured by farm real estate) by commercial banks has grown substantially in recent years—from \$8.3 billion (9.0 percent market share) in 1983 to \$22.4 billion (28.4 percent market share) in 1996, while total farm real estate debt in the United States declined from \$103.2 billion in 1983 to \$79.0 billion in 1996. The growth in farm real estate lending by commercial banks reflects several factors: 1) competitive pressures to adopt full service lending in response to consolidations of real estate and non-real-estate lending by many FCS associations; 2) financial stress of some FCS institutions; 3) loss of interest rate competitiveness on FCS farm real estate loans during the mid-1980s; 4) refinancing of non-real-estate loans using real estate as security; 5) strong bank liquidity; and 6) declines in seller financing of farmland.

This growth in farm real estate lending occurred without the banks' use of the secondary market facilities of Farmer Mac created by the Agricultural Credit Act of 1987, and without access to the FCS as a source of funds. The goal of Farmer

Mac was to provide an effective secondary market for farm real estate and rural housing loans, thus responding to earlier calls for a secondary market mechanism to aid in channeling nonlocal sources of funds to rural financial markets. The difficulties experienced by Farmer Mac, however, in achieving this goal are well known.

The Farmers Home Administration, the Small Business Administration, and some state credit programs have also served as safety valves for relieving the funding needs and credit risk concerns of rural banks. These agencies have met the financing needs of high risk, but potentially creditworthy farms and rural businesses, as well as financing various infrastructure needs of rural communities (Barry 1995). Loan guarantee programs of these agencies have allowed local bank resources to achieve similar purposes, and provided the credit enhancement needed for sale of these loans in secondary markets.

In general, history suggests that fund availability at rural banks is a long-standing, perplexing issue. Numerous initiatives have responded to this issue, but few have had much success. Innovations generally seem to come too late, with their effectiveness blunted by new emerging problems and developments. Part of the problem may involve cyclical patterns in small banks' needs for funds, rather than a sustained pattern of use over time. Another part of the problem may involve the policy preference of the past to channel agency market funds through the Farm Credit System to commercial banks, even though the FCS lending associations own the Farm Credit Banks and are direct competitors with agricultural lending by commercial banks. Attempts to combine both lending associations and commercial banks as borrowers from FCS banks have not worked well in the past, and there is little reason to expect greater success in the future.

Continued structural change in banking toward

larger, more consolidated systems may reduce the funding problem, but effective access by surviving community banks to nonlocal funds will continue to be an important issue. (See the Transition in Commercial Banking section later in the paper.)

FEDERAL HOME LOAN BANK SYSTEM

The 1988 Financial Institutions Reform, Recovery, and Enforcement Act (FIRREA) provided another channel by which commercial banks and other eligible financial institutions could gain access to agency market funds. The Act authorized the 12 Federal Home Loan Banks (FHLB) to make advances (i.e., loans) to commercial banks similar to the FHLB system's long-standing financing of thrift institutions. The FHLBs are government-sponsored enterprises in the residential housing market. They are funded by the sales of consolidated agency securities in the financial markets, similar to the securities sold by the FCS banks. To receive advances, commercial banks must become members of the FHLB by purchasing stock in their district bank. To join the FHLB system, member banks must hold at least 10 percent of their total assets in residential mortgage loans.

Membership by commercial banks in the FHLB system has grown rapidly since 1988. On June 30, 1996 the FHLB system membership totaled 5,944 institutions, including 1,918 thrift institutions, 3,847 commercial banks, 151 credit unions, and 28 life insurance companies. About half of the 3,847 commercial banks were borrowers at midyear 1996 with outstanding advances totaling \$33.0 billion, or \$16 million per bank. In contrast, about 61 percent of member thrift institutions were borrowers, with outstanding balances totaling \$107.4 billion, or \$91.9 million per institution. Loan concentration to individual member institutions is relatively high. While 55

percent of the system's members held advances at June 30, 1996, the 21 largest borrowers (those with advance holdings greater than \$1 billion) held 38 percent of total system advances.

The advances to member institutions must be well-collateralized. The funds may then be used for any purpose, as long as the membership eligibility conditions involving residential housing loans are maintained. To date, no FHLB has experienced any loan losses.

The 1988 legislation placed a systemwide cap on advances to commercial banks equal to 30 percent of total FHLB advances. As of June 30, 1996, advances to commercial banks had increased to 23.4 percent of total advances.

Each FHLB offers an extensive range of loan products and financial services to its members that are intended to be cost competitive, liquidity generating, and helpful to asset-liability management. The usefulness in asset-liability management is shown by an array of maturity and repayment alternatives on advances that may range up to 15 years. The maturity structures of advances differ considerably among the FHLBs, depending on individual bank policies and customer needs. On December 31, 1995, the average maturity structure of advances by the 12 FHLBs was one year 54.0 percent, two years 17.8 percent, three years 10.1 percent, four years 2.9 percent, five years 4.7 percent, and six or more years 9.8 percent. The relatively high proportion of advances with a one year or less maturity indicates a liquidity utilization, while the longer maturities reflect the management of interest rate risk by member institutions in meeting the long-term financing needs of their borrowers.

An anomaly in the balance sheet structure of the FHLBs is the sizable portion of institutional assets held in various types of security investments. As of June 30, 1996, for example, system-

wide holdings of investments by the FHLBs totaled 34.2 percent of total assets (down from 46 percent two years earlier), with mortgage-backed securities comprising 35 percent of total investments, term federal funds comprising 25 percent, overnight federal funds 13 percent, U.S. Treasury and agency securities 14 percent, and other 13 percent. These investment holdings are a response to the FHLB system's obligation, created by FIRREA, to pay \$300 million annually to meet their FICO bond interest repayment responsibility to the Resolution Funding Corporation, and to make a minimum \$50 million annual contribution to the Affordable Housing Program. To assist in meeting these obligations, the FHLBs engage in substantial arbitraging of earnings through the large holding of investment securities financed by the sales of the consolidated agency bonds and discount notes.

RURAL BANKING PROFILES

Various structural and performance attributes of rural banks can be evaluated using data from bank call reports and other secondary sources. The goals are to gain insight about levels and trends in bank competition, diversity, profitability, liquidity, and vulnerability to interest rate risks. Linkages among competition, the local market economy, and various bank characteristics are also explored. Specific measures of these criteria, as reflected in Appendix Tables 1-10, include numbers of banking offices and deposit concentration per county (Table A1); composition of loan portfolios (Tables A2, A3, and A4); funding sources (Table A5); rates of return on assets and equity, cost of funds, and net interest margins (Tables A6, A7, and A8); ratios of loans to deposits and loans to total assets (Table A9); and gap ratios (Table A10). These measures are evaluated according to economic county type, market competitiveness, and bank location, structure, and type (see the appendix for delineation of these classifications).

Banking competition

Several indicators of banking competition are shown in Table A1 using a county as a proxy for local market size and county type as the classification scheme. Clearly, as counties become more rural, the average numbers of head offices and branches decline. However, fewer branches is consistent with smaller populations. As shown in Table A1, the number of branch offices per capita is greater in rural versus nonrural counties, although the average sizes of the rural head-office banks are smaller than those of metropolitan counties.

The Herfindahl-Hirschman Index (HHI) is a frequently used concentration measure. It is used by the Department of Justice, for example, to establish guidelines for evaluating the acceptability or unacceptability of acquisitions based on the potential increase in concentration in the market where an acquisition occurs. The HHI index is computed by taking the percentage market shares of branch-level deposits for each firm in a market, squaring them, and then summing these squared shares.¹ The Department of Justice defines a concentrated market as having a post merger HHI greater than 1,800, a modestly concentrated market as having an HHI of 1,000 to 1,800, and an unconcentrated market as having an HHI of less than 1,000.²

As shown in Table A1, all of the average HHIs for market shares of deposits exceed 1,800, indicating concentrated markets, although the HHI values for rural counties are much higher than those for metro counties. The average HHI values for completely rural counties are especially high, exceeding 5,000 in all four cases. Higher concentration implies lower competition, less efficiency, and less favorable offerings of products and services to customers. In general, rural counties are characterized by lower banking competition relative to urban counties and relative to the Department of Justice guidelines.

Loan composition

The composition of loan portfolios for the various bank classifications is shown in dollar terms in Table A2 and as percentages of total loans and total banks in Tables A3 and A4, respectively. Agricultural loans are the total of small and large production and real estate loans. Similarly, business loans are the total of small and large C&I loans and commercial real estate loans.

As shown in Table A3 for June 30, 1996, banks in farming-dependent counties held 46 percent (27 percent +19 percent) of their total loans in agricultural loans, 21 percent (14 percent + 7 percent) in business loans, 13 percent in consumer loans, 18 percent in other real estate loans, and 9 percent in all other loans. Similarly, 2,628 agricultural banks held 43 percent of their loans in agricultural loans, 22 percent in business loans, 12 percent in consumer loans, and 20 percent in other real estate loans. In all other categories, the percentages of business loans exceed those of agricultural loans, especially in the case of nonagricultural rural banks. The 3,156 other rural banks hold 30 percent of their loans in business loans and 41 percent in other real estate loans. The 30 percent business loan figure for other rural banks is relatively close to the 35 percent total business loan figure for "other" (metro) banks. Moreover, "other real estate" lending (41 percent) by "other rural" banks is well above the proportional value for "other real estate" lending by "other" banks.

In terms of total credit allocations across banks, the higher proportions of agricultural loans are found in farming-dependent and other rural counties, in counties with mid-low competitiveness, in Regions 2 and 3, and in small, nonaffiliate agricultural banks for smaller loans and in larger, affiliated, nonrural banks for larger loans. The higher proportions of rural business loans are in nonfarm dependent counties and counties with mid-

low competitiveness. Otherwise, business loans are concentrated in larger, metropolitan banks.

In general, agricultural and other rural banks are significantly involved in agricultural and business lending, with some tendency to specialize according to the degrees of involvement in their respective markets. For example, head banks in farming counties have 41 percent of their loan portfolios in small agricultural loans and small rural business loans.

Funding sources

The composition of deposits and the relative importance of nondeposits for the various bank classifications are shown in Table A5. Deposit composition is largely the same across most bank classes and types of deposits, although bank holdings of large deposits in more competitive rural areas are less than in more concentrated rural areas and in all competition classes for MSA banks. Banks in Region 4 (Southwest) and 5 (West) also indicate higher proportions of large deposits. Reliance on nondeposit liabilities tends to increase in larger, affiliated MSA banks.

The high portion of deposits from individuals, partnerships, and corporations (IPC) indicates a high dependence on local sources of funds. In addition, banks in farming counties hold a higher portion of public funds, and the reliance on public funds increases as competitiveness in rural markets decreases.

Profitability

Bank profitability can be evaluated in terms of rates of return on assets and equity, and profit components including costs of funds and net interest margins. As shown in Table A6, since 1991, bank return on assets (ROA) tends to be modestly higher in less competitive rural markets, Region 4 (Southwest), larger banks, and

nonagricultural rural banks. Return on equity (ROE) and net interest margins (Table A7) roughly parallel the ROA relationships. In particular, net interest margins tend to be higher in more concentrated rural banking counties, similar to the ROA effects. This relationship is consistent with the view that, as competition declines, financial institutions may exercise noncompetitive pricing and earn surplus rates of return.

The measures of costs of deposits and borrowed funds (Table A8) show few clear patterns across the bank characteristics. Exceptions are noticeably lower costs of deposits in Region 4, consistent with that region's higher measures of ROA and ROE, and higher costs of deposits for agricultural banks in farming-dependent counties.

Liquidity measures

Median ratios of loans to deposits and loans to total assets are shown in Table A9. The data are consistent with the traditional relationship in which both ratios are typically lower for smaller, rural banks than for their urban counterparts. Moreover, both ratios tend to be higher as competition in rural banking markets increases.

Over 1991-95, the loan to deposit ratios for all of the bank classes increased, although the largest increases occurred in the rural counties and for agricultural banks. As examples, the median loan to deposit ratio increased from 54.01 percent to 63.02 percent for agricultural banks, from 54.36 percent to 63.61 percent for banks in farming-dependent counties, and from 56.76 percent to 65.38 percent for banks in other rural counties. Comparable increases in median ratios of loans to total assets for these groups indicate that virtually all of the increase is due to growth in the loan portfolio over this time period, rather than a decline in deposits. Thus, the liquidity of rural banks has declined, although bankers' responses to recent surveys by the

Chicago, Kansas City, and Richmond Federal Reserve Banks indicate that loan to deposit ratios are still lower than desired for many agricultural banks (Board of Governors, Federal Reserve System).

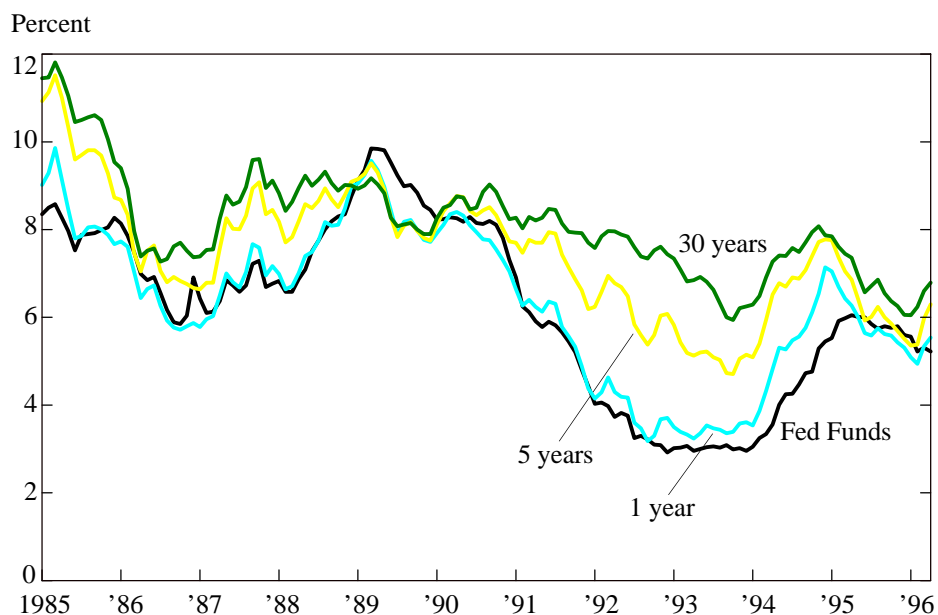
Interest rate risk

The vulnerability of a commercial bank's net interest margin to volatility in interest rates depends on the relative consistency of the repricing horizons for assets and liabilities. Theoretically, if the distributions of repricing horizons are identical (yielding gap ratios of 1.0), a bank would be fully insulated against interest rate risk. The greater the mismatch between these distributions, the greater the vulnerability to interest rate risk. Like other approaches to asset-liability management, the gap approach has several shortcomings, but it remains a widely used approach in asset-liability management. (Data are not available from call reports to determine durations of assets and liabilities—alternative indicators of vulnerability to interest rate risk.)

Table A10 reports the estimated short-term and long-term gap ratios for the various bank classes over the 1991-95 time period. The short-term gap ratio reflects repricing horizons less than one year in length, while the long-term gap ratio is for repricing horizons longer than one year.

In 1995, commercial banks, on average, had a relatively close match between short-term, rate-sensitive assets and short-term, rate-sensitive liabilities, and a significant mismatch between long-term, rate-sensitive assets and long-term, rate-sensitive liabilities. Moreover, these numerical relationships consistently hold across all of the bank categories shown in Table A10. Except for Region 5, all short-term gap ratios are less than 1.0, while the long-term gap ratios are greater than 2.0 in most cases.

Chart 1
INTEREST RATES, 1985-96



The period from 1991 to 1995 contains some significant changes in the levels and maturity structures of interest rates. As shown in Charts 1 and 2, a downswing in all rates, but especially short-term rates early in the time period, created a sharp increase in the steepness of the yield curve. The rates eventually increased with a general narrowing of the difference between short-term and long-term rates, and a more moderate upward slope to the yield curve by 1996.

Banks with short-term gap ratios less than 1.0 (the typical case in the 1990s) have net interest margins that are vulnerable to upswings in interest rates. The cost of their liabilities will increase faster than the returns on assets and reduce their net interest margins. Increasing the short-term gap ratio would be logical to expect under these conditions—as occurred for all of the bank classes

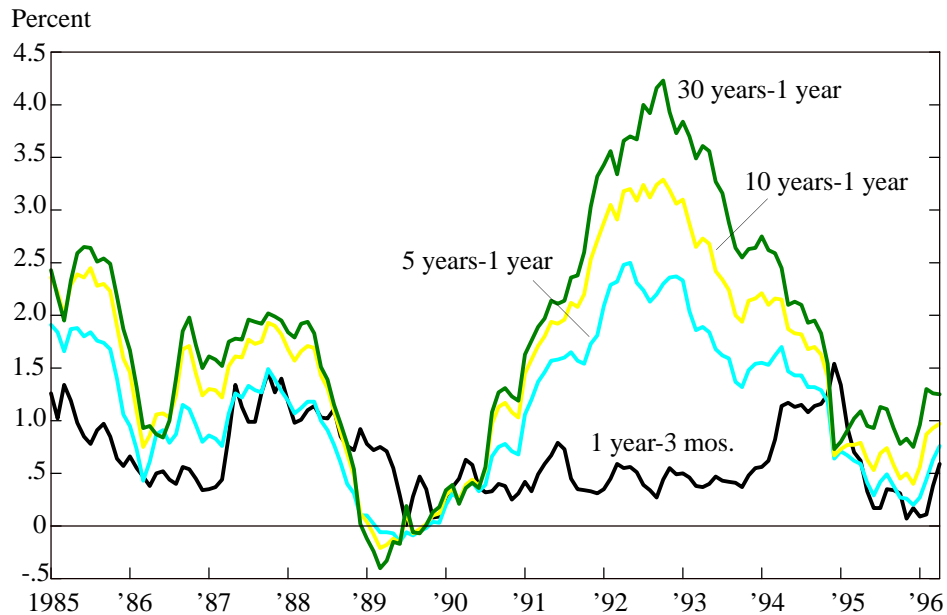
in Table A10. While not shown in Table A10, the increases in gap ratios mostly reflect a lengthening of the maturity of interest bearing liabilities, rather than adjustments in interest bearing assets. In the process, the banks' average long-term gap ratios declined over the time period as well.

These relationships are consistent with the traditional problem in commercial banking of finding long-term funding sources for investments in longer term loans and other securities. The current degrees of mismatch in the long-term gap ratios indicate a significant vulnerability to interest rate risk in long-term lending.

Responses to interest rate risk

Vulnerability to interest rate risk requires effective asset-liability management to main-

Chart 2
YIELD CURVE DIFFERENCES, 1985-96



tain stability in a bank's net interest margins and the market value of its equity capital. The basic options in asset-liability management include:

1. *Using variable interest rates on loans.* Variable interest rates are widely used in banking, but usually with caps included in the contract or purchased in the marketplace, and other protections against transferring excessive risks to borrowers and creating dissatisfied customers. Variable rates alone cannot resolve interest rate risks.

2. *Matching maturities on assets and liabilities* will tend to stabilize net interest margins. However, the mismatch as shown above in holdings of long-term assets and liabilities suggests a lack of flexibility in effectively countering interest rate risk on longer term loans.

3. *Matching durations on assets and liabilities* focuses on the stability of a bank's equity capital by structuring a portfolio so that the values of assets and liabilities respond equally, or nearly so, to changes in market interest rates. This sophisticated, complex approach is used by larger banks (and by the FCS banks) that have the necessary skills and resources for effective implementation. Duration analysis is less applicable for smaller banks.

4. *Hedging with financial futures, interest rate swaps, purchases of interest rate caps, and other derivatives* are sophisticated, management-intensive approaches to managing interest rate risk that receive little direct use by small banks. Call report data indicate that less than 1 percent of all agricultural banks report involvement in interest rate hedging or interest rate swaps (Barry et al; Ellinger and Barry).

5. *Selling long-term loans in secondary markets* is a common practice with housing loans, government-guaranteed loans, and other selected cases. Farmer Mac offers an opportunity for the sale of farm mortgage loans, but has received limited use.

Many rural banks have seemingly legitimate desires for more effective and flexible options to use in asset-liability management. Moreover, the potential is growing for small banks to purchase or contract for asset-liability services from larger banks or specialized service providers, as restructuring and transition in commercial banking continue. Having access to sources of funds with flexible maturities is a key element for responding to interest rate risk, although effective institutional capacity to implement asset-liability management is essential as well.

Summary

In general, these data indicate the unique features of rural banking markets—lower competition than in urban markets, smaller institutions, heavy involvement in agricultural and rural business lending, relatively strong profitability, recent declines in liquidity due to loan growth, and vulnerability to interest rate risk in financing longer term loans.

CURRENT POLICY ISSUES

As a perspective on agency market access by rural markets, Figure 1 portrays the current wholesale funding by three GSEs (the Farm Credit System, Farmer Mac, and the Federal Home Loan Banks) and their relationships to retail lending by commercial banks (and by the FCS lending associations). These GSEs have clearly defined and separate missions, although some inter-GSE competition occurs. In the mid-1990s each of the GSEs along with commercial banks has sought, or has received, legislative

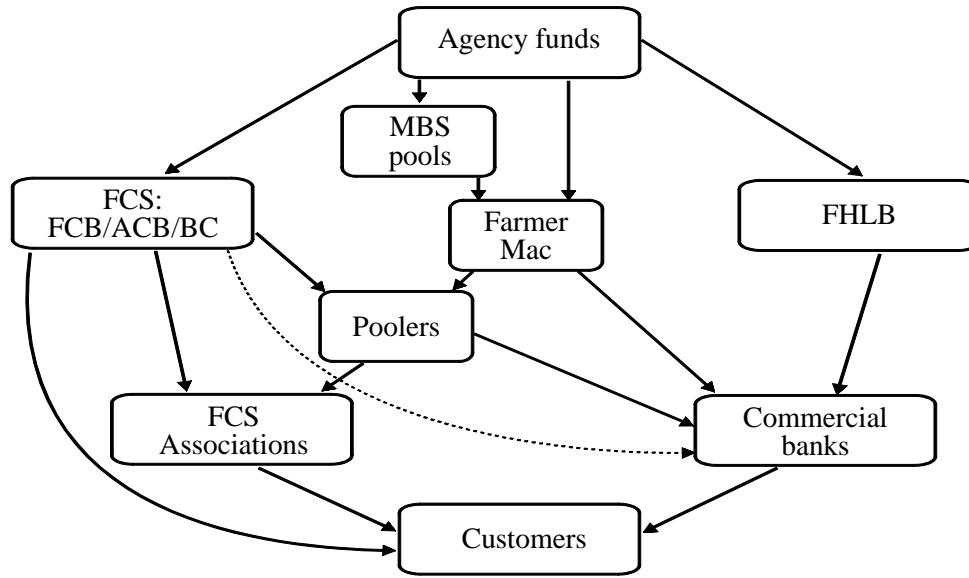
changes that would significantly influence agency market access by rural borrowers and that could strongly influence institutional competitiveness and market performance.

Farmer Mac

Farmer Mac was granted statutory revisions in January 1996 that permit it to act as a pooler of qualified loans, including the power to buy loans directly from originators and to issue guaranteed agricultural mortgage-backed securities or other securities backed by such loans. The mandatory 10 percent minimum cash reserve, or subordinated participation interest, previously required with each pool has also been eliminated. These changes and several others have made Farmer Mac's operating structure essentially the same as that of other GSEs providing secondary markets for residential mortgage loans. The competitively priced securitization of farm mortgage loans can occur through sales of newly originated loans or swaps of seasoned loan portfolios and the issuance of agricultural mortgage-backed securities. This process allows the efficient reallocation of credit risks (with Farmer Mac guarantees) and interest rate risk to financial market investors through the risk-reducing benefits of well-diversified loan pools. Only prepayment risks would remain with pricing through the use of prepayment premiums in loan rates. The specialized, information-intensive functions of loan origination, monitoring, and servicing can remain with the local lenders.

The changes are intended to heighten Farmer Mac's ability to develop and operate an effective secondary market for agricultural and rural housing loans. If successful, these changes would provide a viable GSE vehicle through which commercial banks, or other lenders, could fund the farm real estate and rural housing components of their loan portfolios, and manage the related interest rate risks.

Figure 1
AGENCY MARKETS AND AGRICULTURAL FINANCE



Farm Credit System proposals

In 1994, the Farm Credit System proposed, among several items, an expansion of its authorities that would allow FCS institutions to purchase whole loans from other lenders, as long as the loans are eligible under FCS lending authorities. This authority would create another GSE vehicle for secondary loan sales by commercial banks in funding their agricultural loan portfolios. It could enhance liquidity and provide further flexibility in responding to interest rate risks.

The loan purchase authority would have effectively extended to whole loans the current authority of FCS institutions to participate in up to 90 percent of a loan with other types of lenders. FCS loan volume under participations has

been very low. More recently, participation activity has mostly involved large commercial banks and the banks for cooperatives (now CoBank and the St. Paul Bank for Cooperatives), in meeting the financing needs of large agricultural and cooperative borrowers. Whether the FCS institutions would aggressively use an authority to purchase whole loans remains unclear, given their competitive position with other direct lenders in financing agriculture.

The FCS institutions also proposed a broader scope for its lending authorities in order to expand their financing of agribusinesses and engage in rural development lending. The goals of these proposals were to provide a competitive source of credit from the national financial markets for rural borrowers, communities, and cooperatives

whose financing needs are otherwise unmet or inequitably served, and to enhance the risk carrying capacity of the FCS institutions. The potential for risk reduction is difficult to project because the financial health of agribusinesses and many rural communities is often strongly correlated with that of agricultural producers. Moreover, credit risks might increase in the near term because FCS institutions lack familiarity with new types of borrowers. Opponents to these proposals have argued that existing credit sources are available to adequately meet these financing needs, especially from commercial banks, and that expanding FCS lending authority would detract from the financing of its traditional agricultural clientele. While no legislation is currently pending on these proposals, they likely remain on the FCS agenda.

Commercial bank proposals for FCS access

In May of 1995, the American Bankers Association and the Independent Bankers Association of America jointly proposed a plan to restructure the Farm Credit System to serve as a direct funding source for commercial banks in support of their lending to agriculture and rural communities for rural development purposes. Commercial banks seeking to borrow from the Farm Credit Banks would have essentially the same status as the current lending associations of the FCS, and would become partial owners and participate in the governance of the Farm Credit Banks. To be eligible, a prospective bank would need to have at least 10 percent of its total assets in agricultural loans.

Motivation for this proposal came in part from commercial banks' recent experiences with the Federal Home Loan Bank System. As indicated earlier, the FHLB advances are believed to have provided commercial banks with a cost-competitive source of funds, facilitated asset-liability

management especially in response to interest rate risk, and provided greater flexibility in liquidity management. The bankers believe that access to funds from the Farm Credit Banks could have similar effects. No specific legislation has resulted from this proposal, and the focus has shifted in part to a restructuring of the FHLB system.

Enterprise Resource Bank Act of 1996: Re-engineering the FHLB system

In the Spring of 1996 Congressman Richard Baker, Chair of the House Banking Subcommittee on Capital Markets, Government-sponsored Enterprises, and Securities introduced the Enterprise Resource Bank Act of 1996. The legislation would significantly increase access by depository institutions and credit unions to agency market funds from a restructured FHLB system. Renamed "Enterprise Resource Banks," these institutions would provide GSE funds to depository institutions to facilitate community and economic development lending, including rural economic development as well as other types of lending.

The proposed changes in the FHLB system having the greatest competitive implications for rural financial markets include:

1. Renaming the FHLBs as Enterprise Resource Banks.
2. Converting the membership of federally chartered savings and loans associations from voluntary to mandatory, thus eliminating the 30 percent systemwide cap on advances to commercial banks.
3. Allowing any depository institution or credit union to join the ERB system, although beginning July 1, 1998 any institution with more than \$500 million in total assets must hold at least the following percentages of total assets in whole

residential mortgage loans: July 1, 1998, 7 percent; July 1, 1999, 8 percent; July 1, 2000, 9 percent; July 1, 2001 and thereafter, 10 percent.

4. Requiring that the minimum of each stockholder's investment in the voting shares of an ERB must not be less than 3 percent nor more than 6 percent of advances to the members.

5. Broadening the statutory limitations on the type of assets ERBs may accept as collateral to include:

5.1* Whole first mortgages on residential property.

5.2* U.S. government or agency securities.

5.3* Cash or deposit in an ERB.

5.4* Other real estate related collateral, not to exceed 50 percent of a members capital.

5.5 Small business loans, each less than \$750,000.

5.6 Loans to municipalities, each less than \$2.5 million.

5.7 Municipal securities, investment grade.

5.8 Additional collateral, post-loan origination, if ERBs experience financial distress.

*Currently eligible FHLB collateral.

6. Making the Federal Housing Finance Board an arms length regulator, similar to the Farm Credit Administration.

7. Allowing ERBs to establish separately capitalized facilities.

As stated in the act, the proposed legislation is intended to improve fund availability for com-

munity banks in support of local lending and to revitalize the FHLB system. Supporters of the legislation believe that the economy in rural America could benefit from increased competition if rural community banks had enhanced access to capital markets. The FHLB revitalization motivation, expressed by the findings in the act, is based on the view that the establishment of Fannie Mae, Freddie Mac, and Ginnie Mae and the subsequent development of an extensive private secondary market for residential housing loans has "challenged" the FHLB system as a source of intermediate and long-term credit to support primary residential mortgage lenders. Other major factors involving revitalization include the annual FICO payments and contributions to the Affordable Housing Program, both of which have distorted the FHLB balance sheets, as discussed earlier. In short, the FHLB system is viewed as needing a restored purpose.

POTENTIAL IMPACTS OF THE ENTERPRISE RESOURCE BANK ACT

The potential impacts of the ERB Act on rural banks can be evaluated in part with bank call report data for 1995 (Barry et al.). Under the eligibility conditions cited above, 9,624 banks nationwide (97 percent of all banks at year-end 1995) would qualify for ERB membership, accounting for 57 percent of total bank assets, 92 percent of agricultural real estate loans, 87 percent of agricultural production loans, and 89 percent of total agricultural loans held by commercial banks. All banks in the United States with less than \$500 million in total assets would be ERB eligible, as would 99.8 percent of non-metropolitan banks, 99.8 percent of all agricultural banks, and 98.6 percent of banks not affiliated with a multibank holding company. Nationwide, an estimated 49.8 percent of total bank assets would be eligible as collateral for ERB advances to commercial banks.

Collateral and liquidity effects

Additional impacts on banks can be illustrated for the case of agricultural banks. Suppose, for example, that agricultural banks, on average, utilized 10 percent of their eligible collateral in borrowing from ERBs (actual collateral utilization rates for FHLB member banks fall in the 5 percent to 10 percent range). Borrowing capacities for agricultural banks would average \$2.08 million per bank. This level of ERB borrowing would allow the average ratio of loans to total assets to increase from 0.552 to 0.568, and the average loan to deposit ratio to increase from 0.630 to 0.677, utilizing data from Table A9. Each increase would represent a new benchmark for the respective measures and a leveraging of liquidity from the use of ERB funds. Higher collateral utilization rates for borrowing would lead to greater lending capacities and further increases in these key liquidity ratios.

Cost of funds effects

Effects of ERB borrowing on a bank's costs of funds are also important to consider. As calculated from yearend 1995 call reports, the nationwide median funding costs for all banks in 1995 were 2.918 percent for other savings, 3.202 percent for money market accounts, 5.430 percent for small time deposits, 5.523 percent for large time deposits, and 5.785 percent for federal funds purchases. Table A11 reports monthly and annual averages for 1995 of selected interest rates, based on Federal Reserve Bank reports. The rates for Federal Reserve seasonal borrowing, certificates of deposits, and federal funds all fall within the 5.84 percent to 5.98 percent range, slightly above the costs of funds for large time deposits and federal funds estimated from the call report data. The rates on longer term treasuries are in the 6 percent to 7 percent range, reflecting relatively low premiums for longer term maturities.

Table A12 reports weighted average interest rates on advances by year of maturity for five of the Federal Home Loan Banks based on year end data in their 1995 annual report. The overall weighted average rates at yearend 1995 range from 5.83 percent at the Seattle FHLB to 6.1 percent at the Boston FHLB. These rate levels are comparable to the market rates on Federal Reserve credit, one year or less CDs, and federal funds purchases reported in Table A11. The FHLB rates are also 20-70 basis points above the median rates on time deposits and federal funds calculated for commercial banks, as summarized above.

These comparisons suggest that future lines of credit from ERBs would not reduce banks marginal costs of funds in managing liquidity and in meeting modest growth of loans with relatively short maturities. Rather, ERB rates would be comparable to rates on other funding sources. ERBs may be rate competitive, however, as a marginal funding source for meeting growth of loans with relatively long maturities, similar to banks current use of longer term funds from FHLBs.

Management of interest rate risk

Utilization of borrowing capacity from ERBs could have a significant impact on the management of interest rate risk, especially for longer term lending. Augmenting the banks' liabilities with longer term ERB funds would allow a reduction in the long-term gap ratio for commercial banks, thus reducing their vulnerability to interest rate risk. To illustrate, suppose that an agricultural bank with \$100 million of total assets could fund \$10 million in long-term loan growth with \$10 million of borrowing from an ERB. Suppose further than the bank's initial holdings of long-term, rate-sensitive assets and liabilities are \$48 million and \$24 million, yielding a long-term gap ratio of 2.0. Adding \$10 million to both assets and liabilities would give

new asset and liability holdings of \$58 million and \$34 million, respectively, and a revised long-term gap ratio of 1.71. The mismatch problem, thus, can be reduced but not eliminated. Banks would still need to utilize other risk management practices to deal with the residual interest rate risk.

Other considerations

In general, the creation of ERBs would likely lead to greater GSE borrowing by at least some higher performing banks who would view ERBs as a strategically advantageous source of funds. Relatively high concentration among a few borrowers likely would continue. ERB utilization would also be cyclical, reflecting different interest rate environments and liquidity conditions. Utilization would primarily reflect access to funds with flexible maturities to aid in managing interest rate risk. Additional substitution for seasonal borrowing from Federal Reserve Banks may occur. The effects on rural lending would be positive to some degree, although it is doubtful that the survival of rural banks or their borrowers would be jeopardized by failure of the banks to gain expanded access to GSE funding.

Prospects for passage of the Enterprise Resource Bank Act in 1997 are unclear. The act is controversial with opposition from the Treasury Department and various other sources, based on the greater contingent costs to taxpayers and the broadening of the GSE concept of targeted lending to provide a wholesale banking system for most federally sponsored banking institutions. Virtually all of the traditional pro and con arguments about public credit programs and GSEs arise in evaluating this proposal.

COMPARING FHLB/ERB AND FCS ACCESS

In many respects, expanded access for com-

mercial banks to either FHLBs (or new ERBs) or the FCS banks would yield similar financial effects. Costs of funds would be similar, especially for longer term rates. Both the FCS banks and the FHLB/ERBs utilize sales of consolidated securities in the agency market as major sources of loanable funds. Differences in rates between the two institutions should be minor and would largely reflect differences in managerial effectiveness, efficiencies, scales of operations, risk positions, and capital investment requirements.

Asset-liability management especially involving the management of interest rate risk would respond similarly as well. Both the FHLB/ERB and the FCS banks offer a member borrower the flexibility to be anywhere on the yield curve, thus enhancing the ability to fund longer term loans with longer term sources of funds.

One key difference between the two institutions involves the intended uses of the borrowed funds and the related eligibility conditions for institutional membership—for housing and economic development lending for ERB borrowing and agricultural lending for FCS borrowing. However, the fungibility of money tends to diminish this difference. Involvement in institutional governance could be another significant, nonfinancial source of difference. The FHLBs/ERBs and the FCS banks both allow eligible borrowing institutions to become owners, investors, and directors of these banks. Access by banks to the FCS is especially problematic in terms of governance, in light of their competitive relationships in the retail lending markets.

OTHER POLICY RELATED ISSUES

Improving access of agricultural and rural borrowers to agency market funds is one issue within a complex, dynamic policy environment. Included are developments affecting other GSEs, the evo-

lution of the commercial banking industry, and the changing nature of the agricultural and rural economic sectors.

Government-sponsored enterprises

All GSEs have been under periodic privatization pressures since 1980 because of the contingent government liability, a perception of significant subsidies in their lending programs, and the perceptions of diminished needs for their targeted missions (see Lins and Barry for an early analysis of FCS privatization). Resistance to change, however, is strong. As observed by Tom Stanton, the subsidies conveyed by GSE status lead to market power, which in turn leads to political power, and thus to inflexibility to change. Crises or other major events and conditions are needed to precipitate change.

The current setting does, however, reflect very different directions taken by the GSEs. The ERB act proposes to fix the FHLB system by its evolution into a wholesale GSE lending system for nearly all depository institutions. Sallie Mae requested and recently received congressional authority for eventual privatization in order to continue support of student lending and “to add value to our customers by using our technological, financial and transaction processing expertise in new and important ways” (L.A. Hough, Congressional testimony, May 3, 1995). Fannie Mae is receiving pressure to privatize from recent General Accounting Office and the Congressional Budget Office reports that identify large subsidies only part of which goes to homeowners. With its new authorities, Farmer Mac is seeking to grow by building loan volume and meeting the legal requirement to restore its capital base by 1998. And, as discussed earlier, the Farm Credit System is addressing the banker access issue, and has sought possible expansions in its lending authorities.

These multiple directions weaken the common bond among GSEs, increase their political vulnerability, and may hasten change. A key question is whether the market gaps and imperfections that justified each GSE’s initial creation still exist today? Can the GSE function satisfactorily occur under private charter or by other financial market institutions? The various changes cited above reflect a “follow the wind” strategy as determined by the confluence of market forces, financial technology, and changing economic conditions for each targeted sector.

These questions remain especially important for GSE involvement in financing agriculture and rural America.

Transition in commercial banking

The on-going transition of commercial banking toward larger, more consolidated, more diverse branching and holding company systems is important to consider because it could diminish and destabilize the availability of credit to agricultural and rural borrowers, especially family farmers and other small-scale borrowers (Neff and Ellinger). The effects of both geographic liberalization and continued easing of “Glass-Steagall” requirements are involved. From 1987 to 1996, the number of commercial banks and agricultural banks have declined by 26.7 percent and 22.1 percent, respectively, although the number of banking offices has remained about the same (Economic Research Service, USDA). Community banks will continue to decline in number, although it seems well-recognized that agricultural and rural lending will remain important niche markets for well-capitalized, highly competitive, and strongly managed small banks that have strong customer relationships and the ability to effectively use various services from larger bank and nonbank institutions.

The trend toward larger banking systems without rural headquarters and without their related commitment to, and dependency on, rural borrowers will create longer distance financing and more “fair weather friends” in agricultural and rural finance. This tendency will destabilize credit availability, weaken relationship lending, and require significant improvements in financial management by agricultural and other rural borrowers (Belongia and Gilbert; Keeton; Wilson and Barkley; Laderman, Schmidt, and Zimmerman). As recognized by Peterson and Rajan, greater competition can erode lending relationships and hamper the ability of banks to finance new and financially stressed firms. The effects will be greater in the Midwest and Plains states where smaller banks have predominated in agricultural lending. The role of GSEs and other public credit programs then would become more important in providing financial services to agricultural and rural borrowers, and to the surviving rural community banks.

Structural change in rural America

Interestingly, the structural changes in banking are paralleling structural change in agriculture and rural businesses. A tri-modal structure is emerging in agriculture characterized by the coexistence of large industrialized units (e.g. contract and integrated hog and broiler production; custom cattle feeding), commercial-scale family operations, and small, part-time, or limited resource farms. Agriculture is also entering a new era of reduced government involvement in crop production and marketing, stronger reliance on exports and greater emphasis on risk management by farmers and their lenders. Currently, the agricultural sector has a favorable near term (i.e., 3-5 years) financial outlook, but considerable uncertainty for the longer term. Its debt market is considered mature, with modest growth potential. Similar structural change is occurring among rural counties, especially

when tourism, proximity to regional trade centers, and rural industries contribute significantly to local economic growth in some counties and are absent in others (Henry and Drabenstott).

These structural groups have different financing needs. Large commercial banks and the Farm Credit System are meeting most of the needs of the industrialized agricultural units. These units neither need nor use subsidized credit programs, except perhaps for some young, inexperienced contract growers in poultry, hogs, and related types of production. Commercial-scale family operations and small farms are financed by a variety of sources including smaller commercial banks, the Farm Credit System, and other public credit programs. If the public policy preference is toward preserving at least part of the traditional pluralistic, small-scale organizational and ownership structure of agriculture and rural markets, then reliance on the pro-competitive effects of public credit programs, including access to agency market funds, plays an important role.

CONCLUDING COMMENTS

Two key policy questions are 1) do rural financial markets need expanded access to nonlocal, GSE sources of funds? and (if so); 2) how such access should occur? History suggests that fund availability at rural banks is a long-standing, yet perplexing issue. Numerous initiatives in the past have responded to this issue, but few have had much success. It has proved difficult to find permanent solutions for cyclical problems. Nonetheless, rural markets still are less competitive than urban markets and many of them are dominated by smaller banks, heavily dependent on agricultural and/or rural business finance. Expanded access could provide greater flexibility in asset-liability management, allow more extensive product offerings, prove cost-effective, and enhance rural banks' responses to ongoing structural change in rural America.

In general, the evidence reported in this paper points toward a “yes” answer to the first question. Answering the second question is more complicated. One vantage point on the form-of-access issue is to compare the roles of GSEs in the financing of residential housing and agriculture. In residential housing, commercial banks and other mortgage lenders originate housing loans and either hold the loans in their portfolios or sell them to Fannie Mae, Freddie Mac, or a private company. The originating institution may also borrow funds from a FHLB for liquidity and A-L management.

In agriculture, a viable Farmer Mac and access by rural banks to the FCS banks would seem to be a comparable structure. Major differences, however, are the direct real estate and non-real-estate lending functions of the FCS lending associations and the cooperative structure in which agricultural borrowers become owners of the lending associations which, in turn, become owners of the Farm Credit Banks. Inherent conflicts of interest arise when a lender (a FCS bank) attempts to finance two competing borrowers (a FCS lending association and a commercial bank), one of which owns the bank. Channeling agency market funds through the FCS to commercial banks has not worked well in the past, and there is little reason to expect success in the future.

On the other hand, allowing commercial banks access to the FCS, granting FCS institutions the authority to purchase whole loans, and expanding access by commercial banks to advances

from the Federal Home Loan Banks would diminish the potential use of Farmer Mac and threaten its viability. In housing, loan sales and securitization have dominated direct borrowing by banks from FHLBs, and they could have the same effect in farm real estate lending.

Perhaps the most effective near-term solution to the form-of-access question is to maintain the agricultural focus of the Farm Credit System and Farmer Mac, and to target the FHLB system toward a broader range of community and rural development lending. Such an approach would be consistent with the existing institutional structures. It would give Farmer Mac a greater chance to provide commercial banks with effective access to agency market funds for farm real estate lending. And, it would allow some refocusing of the FHLB system.

Such a near-term solution would require reconsideration over the longer term for two reasons. One reason involves potential changes in the prospects for privatization of all GSEs, perhaps with other forms of public assistance to rural markets. The second reason involves the potential increase in credit gaps in rural markets as a result of the continued consolidation of banking in the United States. It will be important to monitor competitiveness, institutional performance, structural change in rural sectors, and the timely provision of credit to rural borrowers in order to adapt future credit policies to a changing financial environment.

APPENDIX

Table A1

COUNTY TYPES: BANK COMPETITION AS OF JUNE 1995

	<u>Number of counties</u>	<u>Average number of head offices</u>	<u>Average number of branches</u>	<u>Average Herfindahl- Hirschman Index</u>	<u>Average head office bank size assets (\$million)</u>	<u>Average county population 1995</u>	<u>Number of branches per 10,000 population</u>
<i>Completely rural counties</i>							
Farming	291	1.6	3.5	6,065	37.1	4,618	7.58
Mining	33	.9	3.6	6,692	62.2	9,741	3.70
Manufacturing	49	1.4	4.7	5,264	58.8	11,016	4.27
Other	158	1.5	4.4	5,673	58.7	10,249	4.29
<i>Other rural counties</i>							
Farming	265	2.7	6.5	4,034	51.7	12,90	5.04
Mining	114	2.0	7.5	4,542	95.9	22,870	3.28
Manufacturing	467	2.5	12.6	3,482	122.8	33,961	3.71
Other	927	2.8	11.2	3,523	93.9	29,917	3.74
<i>Small metro counties</i>	205	4.4	31.2	2,717	120.4	103,557	3.01
<i>Other metro counties</i>	632	6.0	76.8	2,480	594.1	297,925	2.58

Table A2

LOAN PORTFOLIOS OF COMMERCIAL BANKS

June 1996, mean levels

	Number of banks	Ag. Loans (prod. & RE)		Business (C&I & RE)		Consumer	Other real estate	All other
		<\$100,000	>\$100,000	<\$100,000	>\$100,000			
All banks	10,222	2,739	3,689	10,533	75,077	50,253	84,119	21,611
<i>Economic county type</i>								
Farming	1,189	6,304	4,337	3,333	1,641	2,965	4,251	431
Mining	257	2,175	1,670	7,608	10,019	13,072	23,806	998
Manufacturing	1,223	3,074	2,342	8,260	9,806	11,879	26,935	1,300
Other	2,848	3,800	2,867	6,939	8,072	9,079	18,079	868
Small MSA	907	2,422	5,205	12,242	39,297	47,152	58,070	4,182
Other MSA	3,798	832	4,311	16,003	182,276	111,545	187,360	55,894
<i>Market competitiveness</i>								
High: rural	46	3,863	2,098	5,035	2,942	3,073	9,102	387
Mid-high: rural	937	4,350	2,832	5,121	4,611	5,660	13,408	532
Mid-low: rural	3,789	3,955	3,137	6,923	8,317	9,284	18,549	992
Low: rural	745	4,563	2,656	6,073	4,753	8,922	16,559	743
High: MSA	395	378	1,111	8,266	131,533	33,367	74,909	28,683
Mid-high: MSA	1,889	743	2,377	11,796	119,023	92,328	123,176	43,494
Mid-low: MSA	2,369	1,562	6,776	19,315	190,080	117,268	210,210	51,721
Low: MSA	52	2,002	2,193	11,142	16,059	19,603	77,086	1,151
<i>Bank location</i>								
Region 1	2,683	1,028	2,257	14,816	131,506	94,097	163,785	44,035
Region 2	3,320	3,464	3,125	9,919	62,241	35,691	60,320	13,913
Region 3	2,581	4,355	3,960	6,363	17,235	17,591	18,645	3,662
Region 4	1,001	2,008	2,868	8,165	41,722	21,320	37,549	6,267
Region 5	637	759	12,853	16,313	191,078	119,280	211,085	64,121
<i>Bank size (total assets)</i>								
Less than \$50M	4,099	2,706	1,066	2,849	1,434	2,524	5,136	237
\$51 to \$100M	2,557	3,030	2,435	6,625	7,260	6,135	16,367	634
\$101M to								
\$500M	2,818	2,566	3,567	11,572	31,120	18,753	51,961	2,289
Greater than								
\$500M	748	2,574	22,814	62,086	876,067	581,290	869,703	283,242
<i>Bank structure</i>								
No affiliation & single BHC	7,594	2,606	2,347	7,698	34,322	23,175	47,923	5,108
MBHC affiliate small	1,497	3,404	2,899	7,327	12,748	8,460	19,258	1,306
MBHC affiliate large	1,131	2,751	13,745	33,811	431,216	287,381	413,007	159,295
<i>Bank type</i>								
Agricultural	2,628	6,431	4,698	3,851	1,854	3,136	5,028	432
Other rural	3,156	2,291	1,71	8,516	11,269	12,706	26,16	1,213
Other	4,438	871	4,385	15,924	163,812	104,854	171,775	48,658

Table A3

LOAN PORTFOLIOS OF COMMERCIAL BANKS

June 1996, percent of total loans*

	Number of banks	Ag. Loans (prod. & RE)		Business (C&I & RE)		Consumer	Other real estate	All other
		<\$100,000	>\$100,000	<\$100,000	>\$100,000			
All banks	10,222	1	1	4	30	20	34	9
<i>Economic county type</i>								
Farming	1,189	27	19	14	7	13	18	2
Mining	257	4	3	13	17	22	40	2
Manufacturing	1,223	5	4	13	15	19	42	2
Other	2,848	8	6	14	16	18	36	2
Small MSA	907	1	3	7	23	28	34	2
Other MSA	3,798	0	1	3	33	20	34	10
<i>Market competitiveness</i>								
High: rural	46	15	8	19	11	12	34	1
Mid-high: rural	937	12	8	14	13	16	37	1
Mid-low: rural	3,789	8	6	14	16	18	36	2
Low: rural	745	10	6	14	11	20	37	2
High: MSA	395	0	0	3	47	12	27	10
Mid-high: MSA	1,889	0	1	3	30	23	31	11
Mid-low: MSA	2,369	0	1	3	32	20	35	9
Low: MSA	52	2	2	9	12	15	60	1
<i>Bank location</i>								
Region 1	2,683	0	0	3	29	21	36	10
Region 2	3,320	2	2	5	33	19	32	7
Region 3	2,581	6	6	9	24	24	26	5
Region 4	1,001	2	2	7	35	18	31	5
Region 5	637	0	2	3	31	19	34	10
<i>Bank size (total assets)</i>								
Less than \$50M	4,099	17	7	18	9	16	32	1
\$51 to \$100M	2,557	7	6	16	17	14	39	1
\$101M to \$500M	2,818	2	3	9	26	15	43	2
Greater than \$500M	748	0	1	2	32	22	32	10
<i>Bank structure</i>								
No affiliation & single BHC	7,594	2	2	6	28	19	39	4
MBHC affiliate small	1,497	6	5	13	23	15	35	2
MBHC affiliate large	1,131	0	1	3	32	21	31	12
<i>Bank type</i>								
Agricultural	2,628	25	18	15	7	12	20	2
Other rural	3,156	4	3	13	17	20	41	2
Other	4,438	0	1	3	32	21	34	10

* Means are weighted average mean values. Weights are based on the loan volume.

Table A4

LOAN PORTFOLIOS OF COMMERCIAL BANKS

June 1996, percent of all banks

	Number of banks	Ag. Loans (prod. & RE)		Business (C&I & RE)		Consumer	Other real estate	All other
		<\$100,000	>\$100,000	<\$100,000	>\$100,000			
All banks	10,222	100	100	100	100	100	100	100
<i>Economic county type</i>								
Farming	1,189	27	14	4	0	1	1	0
Mining	257	2	1	2	0	1	1	0
Manufacturing	1,223	13	8	9	2	3	4	1
Other	2,848	39	22	18	3	5	6	1
Small MSA	907	8	13	10	5	8	6	2
Other MSA	3,798	11	43	56	90	82	83	96
<i>Market competitiveness</i>								
High: rural	46	1	0	0	0	0	0	0
Mid-high: rural	937	15	7	4	1	1	1	0
Mid-low: rural	3,789	54	32	24	4	7	8	2
Low: rural	745	12	5	4	0	1	1	0
High: MSA	395	1	1	3	7	3	3	5
Mid-high: MSA	1,889	5	12	21	29	34	27	37
Mid-low: MSA	2,369	13	43	42	59	54	58	55
Low: MSA	52	0	0	1	0	0	0	0
<i>Bank location</i>								
Region 1	2,683	10	16	37	46	49	51	53
Region 2	3,320	41	28	31	27	23	23	21
Region 3	2,581	40	27	15	6	9	6	4
Region 4	1,001	7	8	8	5	4	4	3
Region 5	637	2	22	10	16	15	16	18
<i>Bank Size (total assets)</i>								
Less than \$50M	4,099	40	12	11	1	2	2	0
\$51 to \$100M	2,557	28	17	16	2	3	5	1
\$101M to \$500M	2,818	26	27	30	11	10	17	3
Greater than \$500M	748	7	45	43	85	85	76	96
<i>Bank structure</i>								
No affiliation & single BHC	7,594	71	47	54	34	34	42	18
MBHC affiliate small	1,497	18	12	10	2	2	3	1
MBHC affiliate large	1,131	11	41	36	64	63	54	82
<i>Bank type</i>								
Agricultural	2,628	60	33	9	1	2	2	1
Other rural	3,156	26	16	25	5	8	10	2
Other	4,438	14	52	66	95	91	89	98

Table A5

FUNDING SOURCES

June 1996, percent of all banks

	Number of banks	Core deposits/ demand deposits	Percent of deposit liabilities (not mutually exclusive)				Percent of total liabilities		
			IPC's	Public	Large deposits	Brokered deposits	Purchased funds	Other borrowed < 1 year	Other borrowed > 1 year
All banks	10,222	88.9	91.1	7.0	11.0	.7	1.1	.9	.7
<i>Economic county type</i>									
Farming	1,189	89.2	88.8	10.2	10.8	.6	.6	.5	.3
Mining	257	86.6	89.8	9.3	13.4	.2	.7	.4	.6
Manufacturing	1,223	89.1	91.0	8.0	10.9	.3	.7	.6	.7
Other	2,848	89.6	90.3	8.7	10.4	.3	.8	.5	.6
Small MSA	907	89.2	92.4	6.0	10.8	.7	1.6	1.1	.8
Other MSA	3,798	88.3	92.2	4.5	11.5	1.0	1.6	1.4	1.0
<i>Market competitiveness</i>									
High: rural	46	93.6	91.5	7.7	6.4	.4	.4	.5	.3
Mid-high: rural	937	91.2	91.1	7.9	8.8	.4	.7	.4	.4
Mid-low: rural	3,789	89.1	90.1	8.8	10.9	.4	.8	.5	.5
Low: rural	745	87.4	88.5	10.5	12.6	.4	.6	.6	.7
High: MSA	395	87.8	91.6	5.9	12.1	.8	1.4	.9	.6
Mid-high: MSA	1,889	87.8	91.7	4.2	11.8	1.2	1.5	1.3	1.0
Mid-low: MSA	2,369	89.1	92.7	5.0	10.9	.9	1.8	1.5	1.0
Low: MSA	52	88.3	90.3	8.7	11.7	.0	1.7	.5	.6
<i>Bank location</i>									
Region 1	2,683	88.0	92.4	4.8	11.8	.8	1.4	1.4	1.0
Region 2	3,320	89.8	91.2	7.4	10.2	.6	1.3	.7	.9
Region 3	2,581	90.6	89.1	9.4	9.4	.6	1.0	.6	.4
Region 4	1,001	85.8	90.7	8.1	14.2	.1	.6	.3	.4
Region 5	637	86.0	93.3	2.5	13.9	1.7	.9	2.2	.9
<i>Bank size (total assets)</i>									
Less than \$50M	4,099	89.5	90.0	8.5	10.5	.5	.6	.4	.3
\$51 to \$100M	2,557	88.6	91.4	7.0	11.4	.3	.7	.6	.6
\$101M to									
\$500M	2,818	88.7	92.5	5.6	11.2	.6	1.3	1.1	1.0
Greater than									
\$500M	748	87.2	90.4	4.2	12.1	3.0	5.3	4.1	2.6
<i>Bank structure</i>									
No affiliation &									
single BHC	7,594	88.8	91.2	7.0	11.2	.6	.7	.8	.7
MBHC affiliate									
small	1,497	89.0	90.5	8.2	11.0	.4	.9	.5	.6
MBHC affiliate									
large	1,131	9.5	91.3	5.4	10.3	1.3	4.6	2.4	1.1
<i>Bank type</i>									
Agricultural	2,628	89.8	89.3	9.9	10.2	.5	.6	.4	.3
Other rural	3,156	88.9	90.8	8.0	11.1	.3	.8	.6	.7
Other	4,438	88.4	92.3	4.6	11.5	1.0	1.7	1.4	1.0

Table A6

PROFITABILITY, 1991-95

(Median values)

	Number of banks	ROA					ROE				
		1995	1994	1993	1992	1991	1995	1994	1993	1992	1991
All banks	10,222	1.16	1.13	1.15	1.11	.93	12.00	11.94	12.37	12.34	10.42
<i>Economic county type</i>											
Farming	1,189	1.14	1.13	1.17	1.17	1.02	10.95	11.20	11.76	12.23	10.62
Mining	257	1.25	1.21	1.25	1.19	.98	11.91	12.01	12.35	12.12	10.27
Manufacturing	1,223	1.22	1.19	1.21	1.20	1.03	12.11	12.25	12.68	11.18	12.90
Other	2,848	1.19	1.15	1.18	1.17	.98	11.98	12.02	12.66	12.72	10.95
Small MSA	907	1.18	1.14	1.20	1.15	.95	12.55	12.39	13.56	13.05	10.95
Other MSA	3,798	1.11	1.05	1.05	.96	.76	12.17	11.90	11.98	11.43	9.07
<i>Market competitiveness</i>											
High: rural	46	1.26	1.17	1.18	1.18	1.05	10.82	11.39	11.40	11.93	10.30
Mid-high: rural	937	1.11	1.09	1.13	1.14	.98	10.78	10.89	11.54	11.79	10.49
Mid-low: rural	3,789	1.19	1.17	1.19	1.18	1.00	11.94	12.04	12.67	12.87	11.05
Low: rural	745	1.30	1.24	1.23	1.23	1.01	12.53	12.48	12.51	12.75	10.51
High: MSA	395	1.08	1.06	1.07	1.05	.96	12.57	12.75	13.01	13.21	11.73
Mid-high: MSA	1,889	1.12	1.08	1.05	.97	.76	12.43	12.16	12.07	11.46	9.03
Mid-low: MSA	2,369	1.12	1.07	1.10	1.02	.81	12.04	11.83	12.17	11.79	9.45
Low: MSA	52	1.18	1.23	1.28	1.13	.94	12.26	12.45	14.05	14.04	10.28
Region 1	2,683	1.14	1.11	1.09	.98	.73	11.85	11.93	11.87	11.02	8.10
Region 2	3,320	1.14	1.12	1.16	1.15	1.02	11.54	11.64	12.44	12.57	11.26
Region 3	2,581	1.18	1.15	1.17	1.16	.98	12.20	12.07	12.56	12.79	10.98
Region 4	1,001	1.27	1.20	1.25	1.18	.82	13.58	13.54	14.47	14.26	10.24
Region 5	637	1.12	1.03	.92	.83	.78	12.09	11.04	10.19	9.45	9.25
<i>Bank size (total assets)</i>											
Less than \$50M	4,099	1.08	1.05	1.07	1.06	.89	10.46	10.65	11.01	11.12	9.46
\$51 to \$100M	2,557	1.20	1.16	1.19	1.14	.94	12.29	12.19	12.60	12.56	10.57
\$101M to \$500M	2,818	1.21	1.18	1.20	1.16	.97	13.07	13.06	13.52	13.41	11.47
Greater than \$500M	748	1.23	1.20	1.20	1.08	.93	14.76	14.73	15.09	14.55	12.60
<i>Bank structure</i>											
No affiliation & single BHC	7,594	1.13	1.09	1.11	1.07	.89	11.29	11.32	11.75	11.67	9.83
MBHC affiliate small	1,497	1.25	1.21	1.23	1.21	1.00	13.49	13.37	13.70	13.82	11.76
MBHC affiliate large	1,131	1.29	1.27	1.27	1.20	1.04	15.29	15.10	15.62	15.16	13.37
<i>Bank type</i>											
Agricultural	2,628	1.15	1.12	1.15	1.16	1.02	10.74	11.01	11.51	11.93	10.57
Other rural	3,156	1.22	1.18	1.22	1.19	.98	12.57	12.58	13.13	13.19	11.17
Other	4,438	1.12	1.07	1.07	.99	.79	12.30	12.10	12.27	11.81	9.42

Table A7

PRICING AND EFFICIENCY, 1991-95*(Median values)*

	Number of banks	Net interest margin					Net noninterest margin				
		1995	1994	1993	1992	1991	1995	1994	1993	1992	1991
All banks	10,222	4.38	4.39	4.37	4.39	4.16	-2.38	-2.46	-2.45	-2.47	-2.45
<i>Economic county type</i>											
Farming	1,189	4.24	4.27	4.25	4.29	4.05	-2.30	-2.35	-2.35	-2.34	-2.31
Mining	257	4.49	4.43	4.42	4.39	4.17	-2.34	-2.44	-2.45	-2.45	-2.44
Manufacturing	1,223	4.40	4.44	4.43	4.47	4.22	-2.30	-2.41	-2.38	-2.39	-2.37
Other	2,848	4.34	4.35	4.35	4.38	4.13	-2.32	-2.39	-2.40	-2.39	-2.38
Small MSA	907	4.36	4.37	4.40	4.45	4.22	-2.39	-2.47	-2.41	-2.46	-2.47
Other MSA	3,798	4.46	4.46	4.39	4.42	4.19	-2.52	-2.62	-2.59	-2.66	-2.67
<i>Market competitiveness</i>											
High: rural	46	4.42	4.35	4.42	4.43	4.13	-2.32	-2.44	-2.39	-2.37	-2.38
Mid-high: rural	937	4.19	4.24	4.20	4.25	4.06	-2.28	-2.36	-2.34	-2.33	-2.29
Mid-low: rural	3,789	4.34	4.36	4.37	4.38	4.13	-2.31	-2.38	-2.39	-2.38	-2.37
Low: rural	745	4.53	4.48	4.42	4.47	4.24	-2.35	-2.40	-2.41	-2.45	-2.40
High: MSA	395	4.29	4.38	4.34	4.42	4.25	-2.39	-2.50	-2.46	-2.55	-2.54
Mid-high: MSA	1,889	4.54	4.53	4.45	4.47	4.22	-2.60	-2.67	-2.63	-2.73	-2.75
Mid-low: MSA	2,369	4.40	4.40	4.35	4.40	4.16	-2.44	-2.54	-2.51	-2.55	-2.54
Low: MSA	52	4.66	4.47	4.53	4.51	4.37	-2.37	-2.45	-2.43	-2.55	-2.57
<i>Bank location</i>											
Region 1	2,683	4.45	4.48	4.41	4.41	4.14	-2.44	-2.53	-2.51	-2.55	-2.54
Region 2	3,320	4.16	4.22	4.23	4.29	4.09	-2.22	-2.32	-2.28	-2.31	-2.29
Region 3	2,581	4.43	4.43	4.41	4.43	4.19	-2.43	-2.48	-2.47	-2.48	-2.45
Region 4	1,001	4.52	4.41	4.38	4.42	4.04	-2.44	-2.52	-2.57	-2.61	-2.60
Region 5	637	5.38	5.31	4.99	5.03	5.05	-3.33	-3.46	-3.37	-3.36	-3.46
<i>Bank size (total assets)</i>											
Less than \$50M	4,099	4.39	4.37	4.36	4.39	4.15	-2.55	-2.60	-2.60	-2.62	-2.59
\$51 to \$100M	2,557	4.41	4.43	4.40	4.42	4.17	-2.37	-2.44	-2.42	-2.44	-2.43
\$101M to \$500M	2,818	4.37	4.40	4.37	4.41	4.19	-2.27	-2.38	-2.34	-2.37	-2.37
Greater than \$500M	748	4.16	4.23	4.25	4.29	4.05	-2.01	-2.10	-2.15	-2.19	-2.15
<i>Bank structure</i>											
No affiliation & single BHC	7,594	4.39	4.39	4.36	4.39	4.15	-2.46	-2.53	-2.51	-2.54	-2.51
MBHC affiliate small	1,497	4.38	4.38	4.39	4.42	4.17	-2.28	-2.36	-2.37	-2.39	-2.37
MBHC affiliate large	1,131	4.32	4.37	4.39	4.42	4.21	-2.09	-2.22	-2.19	-2.24	-2.22
<i>Bank type</i>											
Agricultural	2,628	4.23	4.26	4.23	4.27	4.05	-2.30	-2.34	-2.34	-2.29	2.33
Other rural	3,156	4.43	4.45	4.44	4.47	4.22	-2.34	-2.43	-2.43	-2.44	-2.42
Other	4,438	4.44	4.45	4.40	4.44	4.20	-2.48	-2.59	-2.56	-2.62	-2.63

Table A8

COST OF FUNDS, 1991-95*(Median values)*

	Number of banks	Cost of deposit funds					Cost of borrowings				
		1995	1994	1993	1992	1991	1995	1994	1993	1992	1991
All banks	10,222	4.37	3.48	3.54	4.49	6.18	5.36	3.81	2.93	3.33	5.07
<i>Economic county type</i>											
Farming	1,189	4.55	3.63	3.70	4.65	6.16	5.18	4.49	3.33	3.42	5.23
Mining	257	4.24	3.43	3.49	4.43	6.08	5.38	3.58	2.80	3.28	4.74
Manufacturing	1,223	4.45	3.59	3.67	4.65	6.29	5.28	3.71	2.88	3.23	4.86
Other	2,848	4.37	3.50	3.59	4.56	6.20	5.30	3.72	2.87	3.17	4.99
Small MSA	907	4.37	3.46	3.53	4.47	6.12	5.51	3.91	2.99	3.41	5.04
Other MSA	3,798	4.26	3.36	3.39	4.34	6.14	5.42	3.74	2.93	3.41	5.16
<i>Market competitiveness</i>											
High: rural	46	4.43	3.75	3.81	4.76	6.11	5.56	2.72	2.81	3.31	4.64
Mid-high: rural	937	4.47	3.61	3.74	4.71	6.24	5.28	3.51	2.70	3.17	4.87
Mid-low: rural	3,789	4.41	3.54	3.61	4.57	6.20	5.27	3.87	2.94	3.22	5.00
Low: rural	745	4.42	3.50	3.56	4.51	6.17	5.26	4.17	3.04	3.30	5.06
High: MSA	395	4.27	3.37	3.39	4.28	5.97	5.35	3.67	2.95	3.38	5.41
Mid-high: MSA	1,889	4.25	3.32	3.32	4.28	6.11	5.43	3.71	2.94	3.41	5.07
Mid-low: MSA	2,369	4.31	3.43	3.48	4.44	6.17	5.50	3.88	2.94	3.41	5.11
Low: MSA	52	4.28	3.45	3.68	4.55	6.26	4.62	3.07	2.78	3.95	5.23
<i>Bank location</i>											
Region 1	2,683	4.36	3.49	3.58	4.57	6.38	5.37	3.74	2.98	3.52	5.11
Region 2	3,320	4.45	3.57	3.66	4.62	6.21	5.37	3.89	2.99	3.30	5.06
Region 3	2,581	4.42	3.52	3.58	4.53	6.10	5.22	3.87	2.81	3.23	4.99
Region 4	1,001	4.05	3.13	3.11	3.99	5.97	5.43	3.29	2.43	2.79	4.90
Region 5	637	4.16	3.21	3.21	4.14	5.96	5.69	3.87	2.98	3.75	5.53
<i>Bank size (total assets)</i>											
Less than \$50M	4,099	4.35	3.49	3.57	4.54	6.17	5.04	3.57	2.70	2.96	4.73
\$51 to \$100M	2,557	4.40	3.49	3.57	4.51	6.20	5.37	3.63	2.86	3.21	4.93
\$101M to \$500M	2,818	4.35	3.46	3.52	4.45	6.19	5.37	3.78	2.98	3.43	5.11
Greater than \$500M	748	4.38	3.39	3.39	4.34	6.11	5.71	4.19	3.13	3.67	5.36
<i>Bank structure</i>											
No affiliation & single BHC	7,594	4.37	3.49	3.56	4.51	6.19	5.35	3.69	2.93	3.29	5.02
MBHC affiliate small	1,497	4.40	3.49	3.59	4.54	6.18	5.37	3.94	3.00	3.35	5.15
MBHC affiliate large	1,131	4.29	3.37	3.43	4.36	6.09	5.37	4.01	2.91	3.41	5.17
<i>Bank type</i>											
Agricultural	2,628	4.48	3.58	3.67	4.64	6.18	5.23	4.15	3.01	3.22	5.07
Other rural	3,156	4.37	3.51	3.60	4.55	6.23	5.29	3.59	2.84	3.22	4.95
Other	4,438	4.27	3.37	3.41	4.35	6.13	5.45	3.79	2.95	3.41	5.13

Table A9

LIQUIDITY OF BANKS, 1991-95*(Median values)*

	Number of banks	Loan to deposit ratio (percent)					Loan to asset ratio (percent)				
		1995	1994	1993	1992	1991	1995	1994	1993	1992	1991
All banks	10,222	67.4	67.0	63.2	60.8	61.1	58.7	58.5	55.5	53.8	54.0
<i>Economic county type</i>											
Farming	1,189	63.6	63.3	58.2	55.6	54.4	55.7	55.3	51.5	49.1	48.0
Mining	257	62.5	58.5	53.1	51.1	52.3	54.4	50.2	46.7	44.7	47.0
Manufacturing	1,223	68.3	67.1	63.9	61.9	61.7	59.6	58.7	56.3	54.8	55.0
Other	2,848	65.4	63.8	59.6	56.9	56.8	57.3	52.6	50.5	51.0	56.0
Small MSA	907	70.9	71.3	66.2	62.8	63.2	61.8	62.2	57.9	55.8	56.0
Other MSA	3,798	69.2	70.0	67.2	65.9	67.0	60.0	60.7	58.8	58.1	59.0
<i>Market competitiveness</i>											
High: rural	46	69.4	69.7	65.3	60.2	60.0	59.5	60.2	54.6	52.1	52.5
Mid-high: rural	937	66.7	65.7	60.8	58.3	58.1	58.1	56.9	53.2	51.4	52.0
Mid-low: rural	3,789	65.5	64.3	60.3	57.5	56.9	57.3	56.5	53.3	51.1	51.0
Low: rural	745	64.1	62.5	58.3	56.3	56.6	55.5	54.5	51.4	49.4	50.0
High: MSA	395	62.5	63.5	61.0	59.7	61.8	55.4	55.4	53.1	52.7	54.0
Mid-high: MSA	1,889	67.7	68.2	65.7	64.3	65.1	59.0	59.6	57.7	56.8	58.0
Mid-low: MSA	2,369	72.1	72.5	69.3	67.2	67.7	62.4	62.8	60.2	58.8	59.0
Low: MSA	52	69.7	67.5	62.8	59.1	56.0	61.1	60.8	57.9	52.8	52.0
<i>Bank location</i>											
Region 1	2,683	70.6	71.0	68.2	67.4	68.4	61.2	61.6	59.8	59.5	60.0
Region 2	3,320	68.8	67.6	63.3	60.7	60.5	59.6	58.7	55.4	53.4	54.0
Region 3	2,581	66.1	65.5	60.4	57.2	56.5	57.8	57.2	53.2	50.7	50.0
Region 4	1,001	52.6	49.7	46.8	44.6	45.5	46.4	44.2	42.4	40.5	41.0
Region 5	637	71.3	73.5	72.1	73.7	75.4	62.9	64.7	64.0	65.5	67.0
<i>Bank size (total assets)</i>											
Less than \$50M	4,099	63.6	62.8	58.6	56.2	56.2	55.7	55.3	51.7	49.8	50.0
\$51 to \$100M	2,557	67.2	66.7	63.0	60.7	60.6	58.9	58.5	55.7	54.0	54.0
\$101M to \$500M	2,818	70.4	70.5	67.3	65.4	65.8	61.3	61.4	59.1	57.9	58.0
Greater than \$500M	748	79.9	80.5	75.5	72.7	73.5	64.1	63.2	61.6	60.6	62.0
<i>Bank structure</i>											
No affiliation & single BHC	7,594	65.9	65.5	61.9	59.8	60.2	57.6	57.4	54.4	53.0	53.0
MBHC affiliate small	1,497	69.3	68.2	64.1	61.0	60.8	60.5	59.8	56.6	54.3	54.0
MBHC affiliate large	1,131	76.8	77.3	71.7	68.1	68.6	64.2	63.9	61.0	58.9	59.0
<i>Bank type</i>											
Agricultural	2,628	63.0	62.3	57.6	54.8	54.0	55.2	54.4	50.7	48.5	48.0
Other rural	3,156	67.6	66.4	62.3	60.2	60.0	59.1	58.1	54.8	53.4	54.0
Other	4,438	69.8	70.5	67.6	66.0	66.9	60.5	61.2	59.1	58.1	59.0

Table A10

GAP RATIOS, 1991-95*(Median values)*

	Number of banks	1-year gap ratio					Long-term gap ratio				
		1995	1994	1993	1992	1991	1995	1994	1993	1992	1991
All banks	10,222	.89	.84	.87	.82	.80	2.13	2.21	2.20	2.45	2.68
<i>Economic county type</i>											
Farming	1,189	.88	.83	.85	.80	.81	2.23	2.47	2.40	2.73	2.80
Mining	257	.85	.76	.82	.76	.75	2.25	2.37	2.33	2.63	3.03
Manufacturing	1,223	.87	.82	.83	.80	.79	2.00	2.08	2.15	2.35	2.55
Other	2,848	.86	.80	.82	.78	.76	2.17	2.33	2.30	2.56	2.75
Small MSA	907	.87	.83	.85	.80	.77	2.15	2.17	2.18	2.41	2.66
Other MSA	3,798	.94	.92	.94	.89	.83	2.11	2.09	2.06	2.26	2.63
<i>Market competitiveness</i>											
High: rural	46	.88	.73	.84	.75	.81	1.92	2.17	1.83	2.28	2.03
Mid-high: rural	937	.85	.79	.83	.79	.78	2.03	2.17	2.11	2.30	2.43
Mid-low: rural	3,789	.86	.81	.82	.78	.77	2.19	2.33	2.33	2.61	2.78
Low: rural	745	.92	.85	.87	.82	.81	2.10	2.29	2.38	2.73	2.98
High: MSA	395	.90	.87	.90	.85	.82	2.15	2.10	2.08	2.52	2.26
Mid-high: MSA	1,889	.95	.93	.93	.89	.83	2.23	2.23	2.18	2.40	2.79
Mid-low: MSA	2,369	.91	.89	.92	.86	.81	2.02	2.01	2.22	1.01	2.53
Low: MSA	2	.90	.81	.86	.83	.77	2.28	2.05	2.16	2.11	2.58
<i>Bank location</i>											
Region 1	2,683	.90	.89	.91	.86	.79	2.06	2.04	2.05	2.27	2.74
Region 2	3,320	.86	.81	.84	.80	.79	1.97	2.04	2.06	2.26	2.42
Region 3	2,581	.88	.83	.84	.79	.80	2.21	2.39	2.35	2.60	2.73
Region 4	1,001	.89	.82	.84	.79	.74	3.03	3.39	3.28	3.71	4.45
Region 5	37	1.09	1.09	1.12	1.06	.99	2.03	1.83	1.82	1.96	2.44
<i>Bank size (total assets)</i>											
Less than \$50M	4,099	.90	.83	.85	.81	.80	2.12	2.30	2.27	2.52	2.67
\$51 to \$100M	2,557	.89	.85	.88	.81	.78	2.11	2.18	2.18	2.42	2.74
\$101M to \$500M	2,818	.87	.85	.87	.83	.79	2.15	2.10	2.10	2.34	2.65
Greater than \$500M	748	.87	.87	.91	.89	.83	2.27	2.18	2.31	2.50	2.72
<i>Bank structure</i>											
No affiliation & single BHC	7,594	.90	.85	.87	.82	.80	2.13	2.20	2.45	2.69	2.22
MBHC affiliate small	1,497	.88	.83	.85	.80	.79	2.06	2.18	2.43	2.68	2.22
MBHC affiliate large	1,131	.86	.84	.87	.83	.81	2.27	2.20	2.41	2.66	2.13
<i>Bank type</i>											
Agricultural	2,628	.88	.82	.84	.80	.80	2.21	2.40	2.38	2.63	2.72
Other rural	3,156	.85	.80	.82	.78	.75	2.09	2.21	2.20	2.46	2.70
Other	4,438	.92	.91	.93	.88	.82	2.13	2.09	2.08	2.28	2.64

Table A11

SELECTED INTEREST RATES FOR 1995

	8th District	1-month CDS	3-month CDS	6-month CDS	Federal funds	5-year Treasury	7-year Treasury	10-year Treasury	30-year Treasury	F.H.A.
	seasonal credit									30-yr. mort.
Jan	5.90	5.84	6.24	6.71	5.52	7.76	7.79	7.78	7.85	9.54
Feb	5.90	6.01	6.16	6.44	5.92	7.37	7.44	7.47	7.61	9.10
Mar	6.05	6.02	6.15	6.34	5.98	7.05	7.14	7.20	7.45	9.05
April	6.00	6.01	6.11	6.27	6.05	6.86	6.95	7.06	7.36	8.60
May	6.05	5.98	6.02	6.07	6.01	6.41	6.50	6.63	6.95	8.56
June	5.95	5.97	5.90	5.80	6.00	5.93	6.05	6.17	6.57	8.03
July	6.00	5.80	5.77	5.73	5.85	6.01	6.20	6.28	6.72	8.00
Aug	5.75	5.77	5.77	5.79	5.74	6.24	6.41	6.49	6.86	8.09
Sept	5.75	5.74	5.73	5.73	5.80	6.00	6.13	6.20	6.55	8.03
Oct	5.75	5.75	5.79	5.76	5.76	5.86	5.97	6.04	6.37	8.03
Nov	5.75	5.75	5.74	5.64	5.80	5.69	5.83	5.93	6.26	7.61
Dec	5.75	5.75	5.62	5.49	5.60	5.51	5.63	5.71	6.06	7.51
Average	5.88	5.87	5.92	5.98	5.84	6.39	6.50	6.58	6.88	8.35

Source: Federal Reserve Economic Data (FRED), Federal Reserve Bank of St. Louis.

Table A12

**WEIGHTED AVERAGE INTEREST RATES ON FHLB ADVANCES,
FIVE BANKS**

Year of maturity	Bank				
	Boston	Seattle	Topeka	Atlanta	San Francisco
	(percent)				
1996	6.07	5.86	5.83	5.92	5.96
1997	6.16	5.58	6.01	6.03	6.12
1998	5.85	5.84	5.70	6.08	6.19
1999	6.44	6.11	7.19	6.96	5.84
2000	6.15	5.96	6.91	5.99	6.42
Thereafter	6.78	6.94	6.66	6.37	5.85
Overall	6.14	5.83	5.94	6.01	6.06

Source: Annual Reports, 1995, Selected Federal Home Loan Banks.

ENDNOTES

¹ In a market where a single firm has a 100 percent market share, the HHI would be $HHI = (100)^2 = 10,000$.

² A market with five firms each holding 20 percent of the market would have an index of $HHI = 5(20)^2 = 2,000$.

The Justice Department uses wider definitions of bank markets than counties, thus hampering comparisons to the measures reported in Table A1.

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