Why Local Banks Might Be Different

Small, local banks may behave differently from larger and nonlocal banks for a variety of reasons, including superior access to local information, greater commitment to local prosperity, and differences in technology (cost structure) or risk management related to bank size. Under regulations limiting the geographic span of bank activity, local banks may behave differently both because they have some protection from competition and because their lending options are limited. Some of these factors are more a function of bank size, while others depend on whether the bank's charter limits its geographical range of operation. In either case, they have implications for the behavior of small, local banks.

Superior Access to Local Information. Many bank loan customers, especially small businesses, are informationally opaque—that is, their financial conditions are not easy to assess or monitor. Researchers have long characterized bank lending as information intensive, relying on essentially privately developed data and analysis (Leland and Pyle, 1977; Diamond, 1984) to assess loan requests and to monitor borrowers' financial conditions and their adherence to loan terms. The intensity of initial information gathering and subsequent monitoring implies that the location of a bank's offices relative to its borrowers may be important because the costs of these activities increase with distance. Deposit and transactions accounts can also provide low-cost financial data valuable for assessing loan requests and monitoring loan customers (Black, 1975; Berger, 1999). Since deposit relations are largely local, they strengthen the likelihood that locally active banks will have an information advantage over other lenders in serving these informationally opaque borrowers.

Greater Commitment to Local Prosperity. One premise of geographic restrictions on bank activity is that tying the fortunes of banks and bank managers to specific locations will increase their commitment to achieving local economic prosperity. Calomiris (1993) argued that established middle-class agricultural interests have historically favored entry restrictions because such restrictions create location-specific bank capital that impedes the shifting of bank lending to more lucrative locations in the short run. An essential factor in this support is the location-specific nature of agricultural wealth in land. Greater stability of local loan capital provides some measure of loan and, therefore, wealth insurance. Location-specific wealth is protected since the location-specific bank charters induce continued lending in an area even on reduced collateral values, limiting to some extent downward movements in property values. Since creditworthiness relies on wealth and wealth can depend, at times, on the continued availability of loans, location-specific banks provide a safety net in the short run, even though in the long run they may prove unable to survive occasional severe market-wide shocks.

Differences in Technology, Costs, and Risk Management. While geographic restrictions may tie banks to local prosperity, these restrictions may also affect bank behavior. Both theoretical and empirical evidence suggests that small, independent banks, branching banks, and holding company affiliates use different technologies and face different costs related to lending, funding, general operations, and risk management. Such differences are likely to be most substantial in the smaller, less diversified economies that prevail in rural areas.

With respect to lending technology, researchers have presented evidence that "relationship lending" is more prevalent at smaller banks while "transactions-based" lending dominates larger banks (Haynes *et al.*, 1999; Cole *et al.*, 1999). Relationship lending relies on privately developed information often accumulated from a variety of sources including financial relationships outside the loan contract. Transactions-based lending relies on more easily obtained information such as financial statements and collateral quality when the loan application is processed. Relationship lending depends on detailed knowledge of a business, its owner's character and reputation, and its local market. Relationship-based lenders develop this information over an extended period through several avenues. In contrast, transaction-based lending is often collateral-based, relies on nonrecurring collection of readily available and verifiable information, and relies on statistical underwriting based on large numbers of similar loans. Berger (1999) argued that both scope and scale diseconomies may discourage larger, more complex banks from engaging in relationship lending. Such diseconomies may arise from agency costs in monitoring the information generated

by local loan officers and managerial difficulties of producing outputs that require implementation of different policies and procedures. In contrast, small banks may face competitive disadvantages in transactions-based lending. Economies of scale arise from the statistical basis for such lending, and agency problems can hamper sales of loans into secondary markets by small lenders[3]—an important source of funding for such loans.[4]

The costs of establishing and operating small, independent banks may be higher than those of either same-size bank branches or affiliates of bank holding companies (BHC's). Branches and BHC affiliates share some of their fixed costs with a larger asset base. Larger branching banks and holding company affiliates can also share resources at the company level, potentially increasing the returns to specialized human capital. In theory, such cost advantages would allow branches and holding company affiliates to provide services in remote areas. Empirical evidence with respect to the dispersion of bank offices is consistent with such cost advantages (Calomiris and Shweikart, 1988; Evanoff, 1988; Gunther, 1997).

Compared with larger banks, small banks are much more likely to rely on deposits to fund loans and much less likely to use nonlocal, nondeposit funds (USDA, 1997; Barry and Associates, 1995). This reliance on local deposits reflects, in part, agency problems faced by small banks. Correspondent banks are, at times, unwilling to accept loans originated by small banks as collateral or may be reluctant to extend liquidity to small banks during periods of tight monetary policy. Kashyap and Stein (forthcoming) argue that small banks are often more vulnerable to contractions in the money supply through the drying up of free reserves than are larger banks with direct access to commercial paper markets. Economic theory and empirical evidence also suggest that the ability of small banks to raise deposits may constrain their lending activity. This constraint may help explain the lower proportion of assets held in loans and the greater proportion held in securities by small banks (Morgan, 1998; Houston and James, 1998).

Risk management is closely linked with liquidity management. Banks that operate in relatively small and economically homogeneous geographic areas cannot easily diversify the credit risks in their loan portfolios. To compensate for this inability to diversify, small banks on average hold more equity capital and liquid assets than larger banks. The following section discusses evidence on the impact of geographic liberalization on bank behavior in more detail.

Protection from Competition. Some protection from competition was an explicit part of geographic limits on banking activity, and empirical evidence indicates such protection affects bank behavior. The historical roots of limits to bank branching in the United States lie in the mercantilist traditions of European colonialism. A cornerstone of this system was the exchange of monopoly privileges for advantages to the government. In the United States, State governments granted bank charters that included both limited liability and the right to issue money in return for revenue or other fiscal advantages. U.S. bank-chartering systems helped finance their governments through taxes, direct government ownership of banks, or forcing banks to hold government liabilities. After the constitutional ban on issuing fiat money and taxing interstate commerce, many States derived a significant share of their revenue from banking, and in some States banks were the main source of revenue (Sylla *et al.*, 1987; Calomiris, 1993). The importance of banking as a source of revenue aligned the interests of State governments with those of established State-chartered banks with respect to limiting competition among banks and prohibiting operations by banks chartered in other States. Researchers have found that banks operating in protected markets are more likely to charge higher rates on loans, pay lower rates on deposits, and be inefficient. These results are discussed in more detail in the next section.

[3]Agency problems arise when a decisionmaker acts as an agent for another and their interests diverge. In the case of a bank selling loans into the secondary market, the bank acts as an agent for investors who buy the loans. However, the interests of the bank and the investors may be at odds. For example, the bank, which has superior information about loan quality, may wish to sell low-quality loans, while investors wish to purchase high-quality loans. Thus, investors must rely on monitoring or reputation as indicators of loan quality or forgo purchasing loans from banks lacking a solid reputation.

[4]However, Freddie Mac, Farmer Mac, ABN Amro, and GNMA securitize some types of generally well collateralized or documented loans bundled across multiple lenders, including small lenders.

Geographic Liberalization, Consolidation, and Bank Behavior

A large body of literature has examined the impact of restructuring on a variety of measures of bank performance (see, for example, the survey by Berger *et al.*, 1999). With successive liberalizations of geographic restrictions and the increased consolidation of commercial banking, researchers have focused on the relationship between the geographic span of bank activity and various measures of bank performance. Areas of such research include lending quantity and quality, operating efficiency, loan and deposit pricing, bank risk management (loan portfolio diversification), and the competitiveness of various industry segments—especially nonlocal and small community banks. Here, we review the portion of this literature that directly addresses the most prevalent rural concerns: bank exercise of market power, lending to small business and agriculture, and small bank competitiveness.

Market Power Consequences of Consolidation. The potential of banks to exercise market power is of particular concern to rural areas since rural banking markets are on average significantly more concentrated than urban markets. Survey evidence indicates that households and small businesses overwhelmingly rely on financial institutions with a local physical presence. The physical barriers (e.g., distance) and economic barriers (e.g., limited overall market size) to effective competition in many rural areas are considerably greater than in urban areas. Consolidation between banks operating in the same geographic areas increases local concentration, while that involving institutions with mutually exclusive territories is unlikely to affect local concentration directly.

Research indicates some cause for continuing concern. Some previous empirical research has found adverse and statistically significant associations between local market concentration and rates paid on deposits or charged on small business loans (Berger and Hannan, 1989, 1997; Hannan, 1991). However, other studies have found mixed or contrasting results (Petersen and Rajan, 1995), while a theoretical analysis of adverse selection demonstrates how loan rates may decline with market concentration (Shaffer, 1999).

In addition, the dynamic behavior of bank deposit rates in more concentrated markets has been consistent with the exercise of market power. In concentrated markets, bank deposit rates have generally been slower to respond to changes in open market interest rates than in less concentrated markets. Under neoclassical assumptions, such stickiness should not persist in a competitive market. Also consistent with the exercise of market power, this observed stickiness in deposit rates was greater as rates rose than as they fell (Hannan and Berger, 1991; Neumark and Sharpe, 1992; Hannan, 1994; Jackson, 1997).

Finally, Prager and Hannan (1999) directly investigated the impact of merger activity on pricing. They found that banks involved in mergers that violate Department of Justice safe harbor guidelines (a Herfindahl-Hirschman Index (HHI) over 1800 or increase over 200) reduced rates they paid on deposits after the merger.[5]

Despite this association between local measures of concentration and prices, some evidence points to a decrease in market power over time. *A priori*, one would expect that markets for banking services are increasingly contestable, in part, because the removal of geographic restrictions lowers barriers to entry in local markets. New delivery alternatives and changes in consumer behavior (ATM's, telephone banking, internet banking, and increased use of credit and debit cards) also increase the geographic span of bank activities. Although the association between local concentration and rates on small business loans remains robust (Cyrnak and Hannan, 1998), that between local concentration and deposit rates has apparently weakened (Hannan, 1997; Radecki, 1998). Bank fees on retail deposits and payment services show little relationship to local market concentration in the 1990's, consistent with low market power (Hannan, 1998).

Consolidation and the Availability of Services To Small Business and Agriculture. The fact that rural businesses tend to be small and to rely on local banks might suggest that bank consolidation could reduce the credit available to small businesses. For example, many researchers have noted that large banks lend proportionally less assets to small businesses than to large (Berger *et al.*, 1995, Keeton, 1995; Levonian and Soller, 1995; Berger and Udell, 1996; Peek and Rosengren, 1996; Strahan and Weston, 1996; Cole *et al.*, 1999). For various reasons, small banks cannot make large business loans or provide other services attractive to larger businesses. They lack sufficient

[5]The HHI is the sum of squared market shares of all market participants times 10,000.

scale to do so efficiently, they cannot diversify risks effectively, and they are subject to strict legal lending limits relative to their modest equity capital. Similarly, larger institutions may have a comparative disadvantage in serving some types of small customers since diseconomies may exist in mixing retail and wholesale services (Berger and Udell, 1996; Cole *et al.*, 1999). They may be inefficient at providing relationship-based services as opposed to high-tech, transactions-based services. More complex banking organizations (e.g., multibank, multistate holding companies) may find serving small customers inefficient when multiple layers of management are involved. As banks achieve sufficient size, they may shift focus away from small customers as they choose to deliver more lucrative services to larger customers.

However, even if these observations are valid, countervailing forces imply that consolidation is not always bad for small borrowers, and empirical evidence indicates little cause for concern except for transitional disruptions. While consolidations of large organizations often reduce small business lending, several researchers (Walraven, 1997; Peek and Rosengren, 1999; Strahan and Weston, 1996) point out that the majority of consolidations involving small banks increase rather than decrease small business lending. Among smaller banking organizations, managers tend to allocate more of their total assets to loans and tend to make more small business loans. In rural areas, mergers among small and medium-sized banking organizations have been more prevalent than in metropolitan areas, mitigating the adverse impact of consolidation on rural farms and small businesses.

Bank consolidation can also improve services to small customers during economic downturns, since large, complex banks are likely to be better diversified (Calomiris, 1993; Gilbert and Belongia, 1988; Laderman *et al.*, 1991, Hancock and Wilcox, 1998). Large banks or multibank holding companies may also operate efficient internal capital markets that allocate funds to the most profitable loan markets relatively unconstrained by local deposits (Houston *et al.*, 1997; Houston and James, 1998). Kashyap and Stein (forthcoming) argue that small banks are particularly hampered by adverse selection problems associated with raising external funds and that changes in monetary policy matter most for lending by small banks with the least liquid balance sheets. They argue that significant benefits may accrue from consolidating small banks into an organization that internally coordinates capital flows.

Several researchers have focused specifically on the effects of consolidation or geographic liberalizations on lending to agriculture. Laderman *et al.* (1991) found that, after introduction of statewide branching, rural banks decreased (but urban banks increased) their share of agricultural loans. Bank asset diversification benefits agriculture by reducing credit disruption from bank failure. Their evidence is also consistent with increased efficiency of bank equity capital. When banks efficiently diversify assets, their equity capital can safely support higher loan-to-asset ratios and higher asset-to-capital ratios. Laderman *et al.* make no statement on the net effect on agricultural lending, but their results are generally consistent with those of Gilbert and Belongia (1988), who found that an increase in acquisitions by large banking organizations (assets greater than $1 billion) reduces the supply of agricultural credit through commercial banks. They attribute the difference in behavior between large and small banks to diversification constraints faced by small banks, consistent with the results of Calomiris, Hubbard, and Stock (1986). None of these studies considered the reactions of other lenders to any adjustments by consolidating commercial banks.

The effects of consolidation on the behavior of other small business lenders can also be important. Overall, the direct effect of bank consolidation appears to reduce small business lending because large banks dominate the volume of merged assets but not the numbers of mergers. However, secondary effects appear to offset much, if not all, of the adverse direct effect (Berger *et al.*, 1998). De novo (newly chartered) banks are spawned in larger numbers in the wake of consolidations and tend to lend a greater percentage of their assets to small businesses than do other comparable small banks. This effect persists for years (Goldberg and White 1998; DeYoung, 1998; DeYoung *et al.*, 1999). Berger *et al.* (1999) suggest that the evidence is consistent with the possibility that the number of small banks in a market may be determined by local demand for small business services.

If indeed small businesses depend on financial institutions with a local physical presence, then the impact of consolidation on branch office availability could also be important. Research on this subject is somewhat mixed with respect to rural access. Avery *et al.* (1999) found that mergers within the same ZIP codes reduce the number of branches per capita, but other mergers have little effect. Evanoff (1988) found that limited branching enhanced access to bank services in rural counties but that statewide branching did not

beyond that associated with unit banking. Both limited and statewide branching boost service in metropolitan areas. However, Gunther (1997) found that many types of geographic liberalization were associated with relatively strong growth in the number of bank offices serving rural areas during the 1980's. Effective liberalizations included moves from unit to limited branching, from limited branching to statewide branching, and from banning bank holding companies to allowing limited bank holding company activity.

Small Bank Competitiveness. If small banks are not fully competitive with large banks, then the larger banks could enjoy greater ability to exercise market power in smaller rural banking markets and consumer welfare could suffer. A loss of local control could also result in an outflow of local savings to large metropolitan centers except as limited by the Community Reinvestment Act (CRA), with small businesses facing reduced access to financial services. While the empirical literature finds little evidence of reduced competition, some evidence suggests potentially significant competitive advantages for larger banks.

No compelling evidence yet exists that geographic liberalization leads to reduced local competition. Savage (1993) found no significant increase in local concentration due to relaxation of branch restrictions. Thomas (1991) found that interstate branching increased the rate at which new local banks were chartered in Florida. Calem and Nakamura (1995) found that branch banking in metropolitan areas enhanced competition in outlying areas without reducing it in urban centers. Berger *et al.* (1999) presented evidence that average market concentration has fallen in both metropolitan and nonmetropolitan markets since 1988.

Whalen (1995) focused on the competitiveness of local and nonlocal banks in financing small businesses. He found that the proportion of small business lending at banks affiliated with out-of-State holding companies compares favorably to that at both independent banks and in-State holding company affiliates. While out-of-State affiliates generally charged less for small business loans in his sample, their marginal costs were higher. Thus, independent local banks are not at a competitive disadvantage in the market for small business lending, enjoying both lower marginal costs and higher margins than either in-State or out-of-State bank holding company affiliates. However, DeYoung *et al.* (1997) found that, after an initial adjustment period, out-of-State entry ultimately improved cost efficiency at small, local banks in metropolitan areas, enhanced competition, and led to substantial gains in market efficiency.

Recent research on the efficiency consequences of consolidation generally indicates that large banking organizations may derive competitive advantages from two sources: scale and diversification. These results contrast with earlier research that indicated few competitive advantages for banks based on asset size (Clark, 1996; Berger and Humphrey, 1991), scope of activities (Berger *et al.* 1987; Ferrier *et al.*, 1993), or diversification (Rose and Wolken, 1990; Goldberg and Hanweck, 1988).

Berger and Mester (1997) estimated significant economies of scale (up to about 20 percent of costs) for banks with up to $25 billion in assets. They suggested that the presence of such large potential cost savings in contrast to earlier negative findings could arise from lower open market interest rates, technological progress, or regulatory changes such as geographic liberalization. McAllister and McManus (1993) found scale efficiencies from diversification for banks up to $1 billion in assets. Hughes *et al.* (1999) found that when size increased in a way that brings geographic diversification—for example, through interstate banking—efficiency tended to be higher and insolvency risk tended to be lower.

The Finance Sector and Economic Growth

We argue in this paper that a better indicator of the economic impact on local markets of liberalization and consolidation is their overall impact on economic growth. Such indicators as changes in the quantity of lending, pricing, or bank competitiveness are limited measures of efficiency because of the strong likelihood that the starting points themselves were inefficient. For example, an increase in small business lending following geographic liberalization may be consistent with either an efficiency gain or an efficiency loss. A gain might arise if preexisting geographic restrictions induced conservative lending policies to compensate for inefficient diversification or allowed a local bank to exercise market power. Conversely, a loss might occur if funding expands for projects with high risk or negative expected net present value (Broecker, 1990; Shaffer, 1998). Therefore, while direct measures of loan volume and pricing can provide valuable indicators of winners and losers from liberalization, it is not clear that they

provide information about whether the result is economically efficient or socially desirable.

The literature on the nexus between finance and growth is the primary intellectual inspiration for the current report. We provide empirical evidence concerning the relationship of longrun economic growth to *ex ante* measures of local banking structure and ownership in both metropolitan areas and rural counties within the United States.

In recent years, researchers have found increasing support for the hypothesis that financial development precedes and facilitates economic growth. Using data for 80 countries from 1960-89, King and Levine (1993a) presented cross-country evidence consistent with Schumpeter's view that financial systems can promote longrun growth. They found the predetermined component of financial development to be robustly correlated with future rates of economic growth for three alternative measures of economic growth: real per capita GDP, the rate of physical capital accumulation, and improvements in efficiency of physical capital use. King and Levine (1993b) explored the mechanisms through which financial systems affect economic growth. They suggested that financial sector distortions reduce growth by reducing the rate of innovation and presented evidence consistent with the hypothesis that financial systems are important in spurring productivity growth and economic development. Levine (1998) examined the relationship between the legal system, banking, and economic development. Countries with legal systems that emphasize creditor rights and rigorously enforce contracts have better developed banks than countries where laws do not give priority to creditors and where enforcement is lax. Again, he found the exogenous component of banking development to be correlated positively and robustly with measures of economic growth. Levine and Zervos (1998) found that stock market liquidity and banking development both predict growth, capital accumulation, and productivity improvements. Their results are robust after controlling for economic and political factors. Their evidence is consistent with the view that financial markets provide important services for growth and that stock markets and banks provide different services. Rajan and Zingales (1998) showed that firms that are more dependent on external finance grow faster in countries with better-developed financial sectors. They suggested that by reducing the cost of external finance for such firms, financial development plays an important, beneficial role in the rise of new firms.

These papers all explored the relationship between financial development and economic development in the context of national economies. In contrast, Jayaratne and Strahan (1996) explored the relationship between the banking sector and economic growth in the context of the liberalization of branching restrictions by U.S. States. They provided evidence that real per capita growth rates, of both personal income and gross State product, increase significantly following intrastate branching reforms. They also checked the robustness of their results to affirm that changes in growth rates resulted from changes in the banking system.