

**DEVELOPMENTS IN THE BANKING INDUSTRY:
Implications for the Future of Bank Lending to Small Businesses**

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I. INTRODUCTION

Small businesses are important to the economy in terms of creating jobs and generating new ideas. They account for 50 percent of the GDP (Evanson 1995). Consequently, an adequate supply of small business credit is crucial for a healthy economy.

Recent developments in the banking industry are reshaping small business lending. Traditionally, small firms have developed close lending relationships with local banks. However, consolidations and technological advancements, such as credit-scoring and loan securitization, are providing banks with new lending opportunities which alter the traditional lending relationship. The effects of these trends on small business lending are the focus of attention of many researchers and policymakers

This paper investigates the recent developments in the banking industry that are impacting small business lending. The first section describes the traditional lending relationship between banks and small businesses. An analysis of the application of credit-scoring to small businesses follows. The next section discusses potential uses of loan securitization. The final section examines the consolidation trend in the banking industry.

II. TRADITIONAL SMALL BUSINESS LENDING

Traditionally, small firms have not had many financing options. Unlike large businesses, they do not have access to capital markets. Determining their creditworthiness is difficult for investors. Detailed balance sheets and other important information about small businesses is costly and difficult to obtain. As a result, small businesses rely primarily on banks for their credit needs. According to the 1993 National Surveys of Small Business Finance, banks supply over 60 percent of small business credit (Cole et al. 1996, Table 4). Banks provide a majority of small business credit, because they possess a number of advantages in overcoming the information and cost problems associated with small firms.

Generally, small businesses have established long-term relationships with a single local banking institution. The banks serve as financial intermediaries for small businesses and investors by providing information gathering, monitoring, and risk diversification services. When a small business applies for a loan, a loan officer gathers information on its profits, assets, liabilities, etc. to assess the future prospects of that business. Loan officers can easily underwrite future loans as they become more knowledgeable about a particular firm's loan performance. As banks amass information about their small business customers and develop close lending relationships with these firms, their costs of lending decrease (Mishkin 1998).

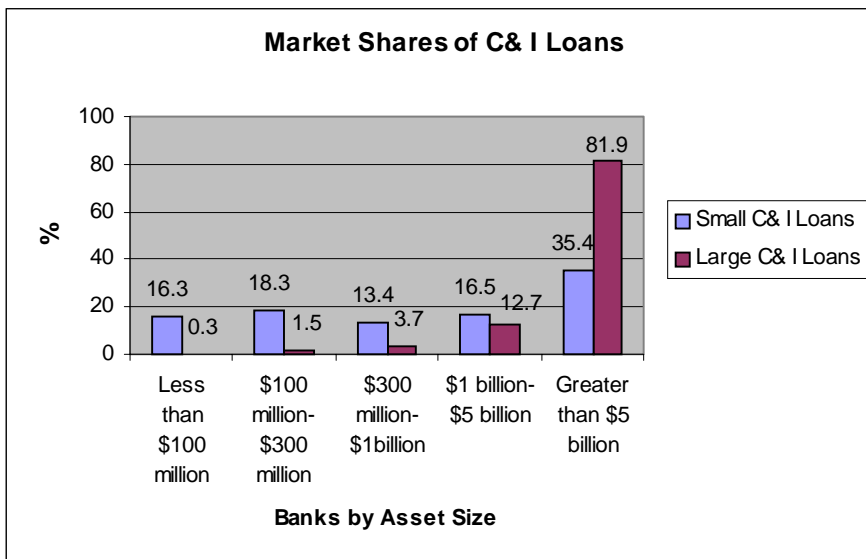
Small businesses benefit from establishing a lending relationship with a bank. First, they obtain lower interest rates and improved access to credit as a result of their bank's comparative advantage in assessing risk and monitoring loans. Also, small firms obtain personalized service. Since the banks maintain close relationships with the businesses, they are able to customize loans to the specific needs of individual borrowers. Consequently, small businesses are able to obtain funding for projects that might not have been financed otherwise (Meyer 1998).

Lending Patterns

Strahan and Weston (1996) utilized the *Report of Condition and Income* (the Call Report) to examine small business lending patterns by banks. The Call Report includes data on commercial and industrial (C&I) loans. For their analysis, loans less than \$1 million were classified as small business loans. In addition, banks were classified according to their asset size. Small banks had assets less than \$300 million. Medium-sized banks had assets between \$300 million and \$5 billion. Finally, large banks had assets over \$5 billion (1996). These classifications are used throughout the remainder of this paper.

By examining 1995 Call Report data, Strahan and Weston (1996) show that small banks generally hold more small business loans than large banks (Figure 1). Large banks account for a 35 percent share of the small business loan market, but they account for an 82 percent share of large business loans. On the other hand, a majority of small bank lending is to small businesses. Small banks account for 35 percent of the small business loan market (1996).

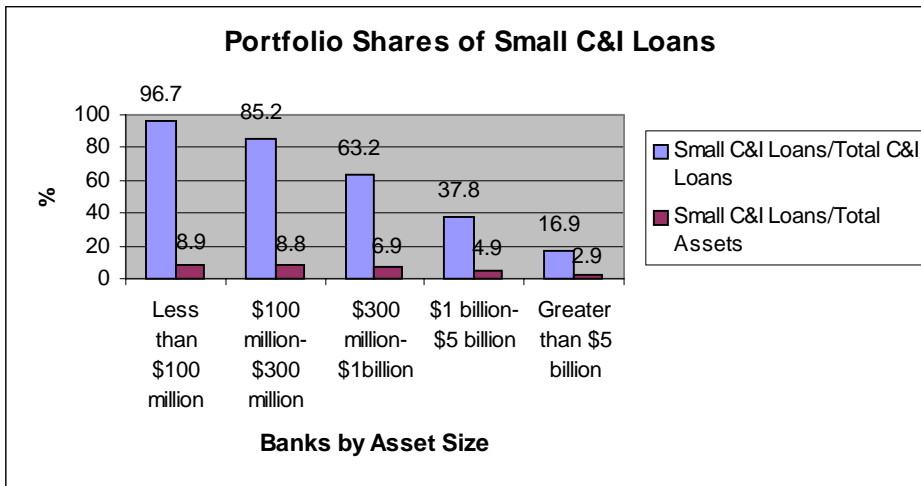
Figure 1



Source: June 1995 *Report of Condition and Income*

Evidence provided by Strahan and Weston also shows that the share of small business loans to assets is greater for small banks than large banks. Figure 2 illustrates the focus of small banks on small business loans. Approximately 97 percent of their total C&I loans were small-sized loans. Only 17 percent of large banks total C&I loans were small business loans. Their investigation also found that the share of small C&I loans to total assets declines as bank size increases (1996).

Figure 2



Source: June 1995 *Report of Condition and Income*

Why do Small Banks Focus on Small Business Lending?

Small banks tend to concentrate on small business lending for a number of reasons. First, regulations prevent banks from lending more than fifteen percent of their total capital to any single borrower (Strahan and Weston 1998). If banks were allowed to make large loans relative to their total capital, they would not be adequately diversified. Thus, they would increase their vulnerability to default risk.

Small banks also make small business loans, because they have difficulty competing for large loans. Large banks can offer more products and services to large enterprises such as

foreign exchange transactions. Many businesses prefer to obtain all of their financial services from one bank. Therefore, small banks are at a disadvantage, because they lack the large offering of services required by many large businesses. However, they do have the resources necessary to meet the needs of small businesses (Levonian and Soller 1996).

III. CREDIT SCORING

Developments in information technology are changing the way banks evaluate and monitor small business loans. Traditionally, small banks had a clear advantage over large banks in the market for small business loans. They amassed information more cheaply than large banks as a result of their close relationship with their borrowers. However, large banks are beginning to apply credit-scoring technologies to small business loans, and as a result, they have become more effective in competing with the small banks.

Small Business Loan Analysis

Credit-scoring, also known as actuarial-based lending, treats small business loans as consumer loans rather than traditional business loans. Credit-scoring models assign scores to potential borrowers by estimating the default probability of their loans based on borrower and loan characteristic data. The models assume that past performance is the best predictor of future behavior, and on average, borrowers with similar characteristics and background will have similar loan performance (Board of Governors 1997).

Credit-scoring systems fit into the loan review process by producing a "score card" listing the characteristics and credit-score for a loan. Scores are derived from data on current indebtedness or previous loan performance from the consumer credit bureau. In some cases, the consumer credit bureau information is supplemented by loan application information such as

loan size relative to the price of the object being purchased. In general, a good credit-score indicates that the loan meets the bank's profitability requirements, while a bad credit-score signals that the loan falls short of the bank's performance standards (Feldman 1997).

The credit-scoring models do not approve or reject applications. Banks decide how to incorporate credit-scores into their loan analysis. For instance, some lenders approve all the loans above a set score and reject all the loans below another score. Then underwriters examine the remaining loans that fall in between the cutoffs (Feldman 1997).

Although credit-scoring has been used for years with other types of loans, small business loan reviews have always involved loan officers and personal contact with the firms. Many lenders want to extend their use of credit-scoring technologies to small business loans. Credit-scoring system developers, Fair, Isaac & Co. Inc. (FICO), asserted that the variables determining the small business owner's probability of paying off loans can be applied to determining the small business' credit score. Their analysis of a large small-business-loan database indicated that the "willingness and ability of the business owner to repay personal borrowings could reasonably be assumed to correlate with the ability and willingness of the firm controlled and managed by the owner to repay its loans" (Feldman 1997). Therefore, a reliable credit-score for a small business loan can be obtained from data on the owner of the firm, basic loan application information, and basic business credit bureau information. FICO argues that the data previously reviewed by underwriters, such as financial statement ratios, does not have a significant effect on predicting a small business' loan performance. Consequently, FICO's most popular credit-scoring model does not require any financial statements from small businesses (Feldman 1997).

Benefits of Credit-scoring

Credit-scoring is replacing traditional methods of credit analysis for small business loans. The benefits of credit-scoring to borrowers and lenders are substantial relative to the costs of the models. As a result, the volume of small business lending is increasing.

One benefit of credit-scoring for lenders is that personal contact is unnecessary for banks to approve credit. Loan evaluation is simplified by credit-scoring, because loan performance is predicted utilizing third party data on the small business. Data on a small business' credit history is readily available and can be obtained at a relatively low cost. Lenders do not need to have offices in the same area as the small business as in traditional lending relationships. Pre-approved applications can be sent to the firm by mail, while renewals, adjustments, and the administration of loans or lines of credit are activities that may be conducted by phone. These cost reductions make small business lending more profitable for banking institutions (Board of Governors 1997).

Credit-scoring is also attractive because it can be used to target new customers. By mining their customer database, banks can find potential small business borrowers. Banks set up new relationships with the targeted businesses based on their credit-scores. Once the relationships are established, fewer resources are necessary to monitor the new customers' loans (Evanson 1995).

When credit-scoring models are based on firm characteristics instead of the characteristics of a proposed project, banks can treat the loans as consumer loans which reduces the need for documentation by the small businesses. Banks avoid the costs of obtaining balance sheets and income statements. In fact, the typical credit-scoring application for a small business loan is only one page.

Credit-scoring is also beneficial for lenders due to its speed. Loan reviews are processed faster, and loans can be underwritten and closed within minutes or hours as opposed to days with the traditional method. The bank also saves time by not having to evaluate collateral (Feldman 1997).

In addition, credit-scoring reduces the costs of providing credit to small businesses. It decreases the costs to banks by replacing underwriters with software and low cost data entry employees. Reducing the amount of documentation and information stored on computers are additional sources of cost savings. Personnel need to spend less time reviewing loans. Also, the cost per loan decreases for banks with large loan portfolios. They spread the fixed costs of computers and support systems for small businesses across numerous loans (Feldman 1997).

As an alternative to human loan officers reviewing small business loans, credit-scoring offers a number of advantages. Credit-scoring eliminates variations in risk assessment among loan officers, and by a single officer over time (Board of Governors 1997). Also, if credit-scoring provides more accurate risk analyses than those provided by underwriters, lenders will reduce their loss on loans. Underwriters can then focus on loans requiring more personal attention. Finally, credit-scoring is more consistent than loan officers in regards to applying loan standards and adjusting credit requirements (Feldman 1997).

Borrowers benefit from credit-scoring, because the models treat small business loans as consumer loans. Consumer loans are processed faster and less expensively than business loans. As a result, borrowers obtain more favorable loan terms from credit-scoring compared to when their loans are treated as traditional business loans (Peek and Rosengren 1998).

Another benefit of credit-scoring for borrowers is the objectivity of the models. Race, age, and gender are not considered during loan evaluations by credit-scoring systems. Thus, the probability of borrowers being treated unfairly is reduced (Board of Governors 1997).

Credit-scoring is also beneficial to borrowers, because quantitative risk assessments allow for price differentiation that more accurately reflects risk. Historically, banks have not charged higher rates to riskier small businesses for two main reasons. First, the risk of the borrower is difficult to assess. Second, higher rates increase the probability that some firms will be unable to make their payments. As a result, banks dealt with riskier credit through collateral requirements (Board of Governors 1997). Risk-based pricing reduces rates for low risk borrowers who previously faced flat rates. Although some credit-scored loans may have high rates, those small businesses may have been unable to obtain loans under traditional underwriting standards. Risk-based pricing could become an alternative to credit rationing (Feldman 1997).

Impacts on Small Business Lending and Implications for the Future

It is difficult to estimate the impact credit-scoring has had on small business lending thus far. First, credit-scoring models have only been used for small-business lending in the 1990s. Its development has been hindered by the lack of historical data required to establish the relationships between borrower characteristics and loan performance (Board of Governors 1997). In addition, uncertainty exists concerning its effectiveness if there is a downturn in the economy. Another possible concern with its use is the representation of businesses in under-served communities. Regulators will need to monitor patterns in the use of credit-scoring and ensure that the models are used appropriately (Board of Governors 1997).

Although the effects of credit-scoring on the availability of small business credit are difficult to assess, banks planning to use credit-scoring feel that it is expanding small business

access to credit. According to the "Report to the Congress on the Availability of Credit to Small Businesses," issued by the Federal Reserve Board of Governors, "credit-scoring has and is likely to continue expanding access to credit for small businesses" (1997: 33). Evidence from surveys conducted in the last decade suggests that the use of credit-scoring in small business lending is increasing. A 1995 *American Banker* survey indicated that 23 percent of the large banks that responded to the survey were using credit scoring. In 1997, the Senior Loan Officer Opinion Survey on Bank Lending Practices found that approximately 65 percent of large banks were using credit-scoring in small business lending (1997).

The increased use of credit-scoring results in more products being offered, such as loans with different size offerings and pre-approved small loans. Competition is also increasing as large banks enter new markets. Their entry is the result of the ability to offer more standardized products along with lower interest rates (Board of Governors 1997).

Large banks are looking to apply their credit-scoring systems to nontraditional lending activities that could benefit from such models. Small business lending provides this opportunity. According to a 1997 Fed survey of large banks, approximately 70 percent of the surveyed banks used credit-scoring for small business lending. Those banks with over \$15 billion in assets were most likely to use credit-scoring. Since large credit-scoring banks can offer small business loans at a lower cost, they are able to increase competition in markets where small banks have controlled a dominant share of small business lending (Feldman 1997).

Wells Fargo and Chase Manhattan Bank are two lenders who are currently utilizing credit-scoring technologies to increase their volume of small business loans. Wells Fargo developed a "Business Direct Program" which markets lines of credit to small firms. Through the use of database management and credit-scoring, they target and pre-qualify small businesses

for lines of credit up to \$50,000 (Cocheo 1997). As of June 1996, they made over 200,000 pre-approved small business loans with a combined volume of \$4 billion. In the future, they hope to make over \$25 billion worth of small business loans under this program (Feldman 1997).

Chase Manhattan Bank is also taking advantage of credit-scoring technologies. They instituted a pilot program using pre-selection. Potential small business customers are mined from their customer database, but unlike the Wells Fargo customers, they are not given automatic approval (Cocheo 1997).

Credit-scoring makes small business lending more attractive to large banks, but it is unlikely to eliminate small banks. It decreases the costs of distinguishing between small firms with established histories that are a good or bad credit risk, but small businesses without an established history still pose problems for banks. They are difficult to qualify for a loan based on a credit-score. Therefore, some small businesses will have to continue to seek financing from banks that conduct traditional loan evaluations (Feldman 1997).

IV. SECURITIZATION

Securitization is another trend in bank lending to small businesses. It involves banks bundling standardized loans and selling them to investors. Recent developments in information technology are resulting in an increase in small business loan securitization.

Securitization began with bundles of standardized mortgage loans. Banks sold Ginnie Mae guaranteed mortgages as a security to pass interest and principal payments on to a third party. Eventually, securitization expanded to automobile loans, credit card receivables, and commercial and computer leases (Mishkin 1998).

Benefits of Securitization

Lenders, borrowers, and investors benefit from securitization. Lenders utilize the secondary markets to profit from scale economies and their expertise in originating and servicing loans. They charge a fee for their services which include collecting interest and principal payments and distributing the payments. Securitization is also beneficial to lenders, because it reduces their exposure to risk and provides liquidity. Securitizing loans decreases lenders' susceptibility to interest rate fluctuations which affect loan values. Also, substituting loan securitization for direct lending activities diversifies banks' balance sheets. In addition, lenders increase their diversity by selling their loans and buying other loan securities. Finally, securitization decreases a bank's capital requirements, because the requirements do not apply to loans that are sold (Feldman 1995).

Securitization also benefits borrowers. In her testimony to congress on the role of banks in small business financing, Janet Yellen of the Federal Reserve Board stated that securitizing loans "would increase the liquidity of small business lending and provide banks and other lenders with additional sources of funding. We anticipate that the cost savings generated through these new processes will be passed on, at least in part, to small business customers" (1996). In other words, banks will securitize loans by selling them to investors for cash. This improves the lenders' liquidity positions and allows them to increase their volume of loans. As a result, the availability of credit increases (Feldman 1995).

Securitization benefits investors, because investments in small business loan securities easily meet investors' maturity or risk requirements. Loan securities are also beneficial, because the risk of a bundle of loans is lower than direct investment in individual loans. Finally, investors receive attractive returns on their investments (Mishkin 1998).

Investors prefer that sellers bear the risk of small business loan pools. By obtaining compensation from the seller or a third party lender, investors eliminate their need to evaluate the risk of securities. Guaranteeing loss protection gives lenders an incentive to originate and sell high quality loans. As a result, they closely evaluate a borrower's creditworthiness. However, when banks provide loss protection the benefits of securitizing small business loans decrease. Regulatory rules prevent banks from lowering their capital costs, because loans guaranteed by the lender are treated as loans that have not been sold. Retaining the risk of the sold loans will not reduce a lender's overall loss exposure (Feldman 1995).

Current Securitization Activity

Despite the numerous benefits of securitization, the transaction costs have hindered the growth of the securitization of small business loans. In order for small business loan securitization to become widespread, uniform underwriting standards and loan documentation need to be established. Also, better information for estimating the risk of loss is needed.

The Riegle Community Development and Regulatory Improvement Act of 1994 aimed to reform regulatory policy and encourage the growth of securitization. The Riegle Act gives favorable treatment to securitized small business loans. For example, investment restrictions on securitized loans were waived. In addition, the Riegle Act reduces capital requirements for banks selling small business loans (Board of Governors 1997).

The Riegle Act dealt with the high transaction costs associated with small business loan securitization by reducing regulatory costs but did not address information costs. Advancements in credit-scoring are likely to address information problems.

So far, most securitized small business loans have been the unguaranteed portion of U.S. Small Business Administration (SBA) backed loans. For example, by 1995, the Money Store

Inc. had securitized approximately \$380 billion of such loans (Feldman 1995). By 1997, roughly \$2 billion of small business loans were securitized. Sierra West Bancorp of Truckee, California was the first bank to securitize the portion of the 7(a) loans that is not guaranteed by SBA (Federal Reserve Bank of Minneapolis 1997). However, these loans do not represent typical small business loans.

The loans securitized thus far possess characteristics facilitating securitization. First, these lenders use clear and consistent underwriting standards. Secondly, due to the nature of SBA loans, they are generally standard loans. All of the securitized loans are backed by comparable forms of documentation and collateral. In addition, the lenders possess considerable information on the loss rates for these loans. Finally, since they are all high volume lenders, securitization is cost effective (Board of Governors 1997).

Expectations for the Future

Small business loan securitization is expected to become more common in the future. The benefits of securitization create incentives for lenders to decrease information and risk assessment costs. The benefits of holding a security of a diverse loan pool versus an individual loan creates incentives for investors to look for cost reductions. However, it is uncertain if the securitization of small business loans will be as prominent as with other loan sectors (Feldman 1995).

According to Ronald Feldman, Financial Specialist in the Banking Supervision Department at the Federal Reserve Bank of Minneapolis, small business loan securitization is likely to become feasible for small banks as well as large banks. Small lenders will sell loans to large banks with enough volume for securitization to be cost effective. Also, the software development of "Loan Origination Management and Exchange" (Lori Mac) is intended to

standardize loan pools. Finally, the Small Business Funding Corporation plans on using credit-scoring to standardize loans to small firms and estimate risk (Federal Reserve Bank of Minneapolis 1997).

Recent technological developments are expected to decrease the costs of securitizing loans. For instance, credit-scoring addresses risk assessment and loss protection concerns. Improvements in acquiring information facilitate the process of selling securities. Also, advances in computer technology decrease the transaction costs of bundling loan portfolios, collecting payments, and distributing payments to third parties (Mishkin 1998).

V. CONSOLIDATION

The wave of bank mergers that is reshaping the structure of the banking industry is another trend that will have an impact on small business lending. Over the past decade, the number of banks has declined dramatically. In 1984, there were 14,500 banks in the United States. Today there are approximately 9000 banking institutions (Moore and Siems 1998).

What is driving the surge in consolidations? The removal of barriers to mergers and branching is primarily responsible for the substantial increase in consolidation. The Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (IBBEA) allowed interstate branching. Banks are now able to merge with other institutions in order to expand their activities or geographical presence (Strahan and Weston 1998).

The numerous bank consolidations raises concerns about the availability of small business loans. As shown in Figures 1 and 2, large banks hold fewer small business loans and focus less on lending to small firms than small-sized banks. How will consolidation affect the

supply of small business credit? Should small businesses be concerned about the consolidation trend?

Critics of Consolidation

Critics contend that mergers between banks will reduce the availability of credit to small businesses. They fear that small banks and relationship lending will disappear if the consolidation trend continues. They cite a number of reasons for a reduction in the supply of small business loans. First, they argue that merged banks will adjust their proportion of assets to the levels of the large banks before the consolidations. Since small banks generally hold a greater proportion of small business loans than large banks, the volume of loans to small firms will fall (Walraven 1997).

The supply of credit to small firms might also be reduced since the complexity of the lender-borrower relationship will make it impractical for large merged banks to make loans to small businesses (Strahan and Weston 1996). The increase in the size of banks causes them to place less emphasis on small business lending. They substitute more attractive products and services for small business lending. Activities that take advantage of economies of size and scope become more profitable in comparison with loans to small firms. For instance, size increases allow the consolidated banks to focus more attention on national and international markets (Peek and Rosengren 1998).

Bank consolidation critics look at portfolio shares to support their argument that mergers will decrease the availability of small business loans. If the portfolio shares of merged banks remain fixed, the total volume of small business loans will decrease (Strahan and Weston 1996).

To illustrate the position of the critics, Strahan and Weston (1996) consider a consolidation between a large bank (assets worth \$10 billion) and a small bank (assets worth

\$100 million). According to the data presented in Figure 2, the loss of the small bank would reduce small business lending by \$8.9 million (8.9 percent * \$100 million). The new merged bank would increase small business lending by \$2.9 million (2.9 percent * \$100 million). Thus, the net effect of the consolidation would be a loss of small business loans worth \$6 million (1996).

However, this example ignores market adjustments to changes in the availability of loans after mergers. Some additional possibilities must be considered. Small businesses will continue to seek loans after the merger. Therefore, the merged bank has a profit incentive to increase its lending to small businesses. In addition, other banks may pick up loans not supplied by the merged bank (Strahan and Weston 1996).

Consolidation Advocates

Advocates of consolidations argue that bank mergers will not adversely affect the supply of small business loans. Since most mergers involve extensions of banking institutions' markets, the market power of local banks will decrease. Thus, competition for loans to small firms will increase. Also, they feel that mergers are beneficial, because they will increase the diversification and efficiency of the consolidating banks. In fact, mergers may increase the availability of loans to small businesses.

Large banks have more potential opportunities than small banks. As mergers increase the size of institutions, merged banks will be looking for more profitable banking activities. According to Michael ter Maat, senior economist with the American Bankers Association, "institutions with lots of assets and efficient systems of distributing and monitoring loans will be looking for more customers to loan to. For small businesses, consolidation is a real opportunity" (Evanson 1995: 31) Some banks will target lenders with attractive small business loan portfolios

for acquisitions in order for the merged bank to expand its lending activities. Merged banks are also looking for opportunities to expand their credit scoring and loan securitization activities. As a result, many large banks are focusing on business loans small enough to be similar to consumer credit (Levonian and Soller 1998).

Current Evidence

Are consolidations decreasing the availability of credit to small businesses? Overall, current evidence indicates that banks mergers do not have a negative impact on the volume of small business lending.

Walraven (1997) examined the characteristics of banks involved in mergers from 1993 to 1996. His research showed that most consolidations involve small banks acquiring other small banks. Also, the acquiring institutions "tend to be much more active small business lenders than either the banks that they purchased or comparably-sized banks that were not involved in a merger " (1997: 26).

Research by Peek and Rosengren supports Walraven's findings which indicated that most consolidations involved small banks acquiring other small banks. In addition, they found that small acquiring banks tend to increase their small business lending while large acquiring banks tend to decrease their small business lending (1998).

Strahan and Weston (1998) found that consolidations have a positive impact on banks' portfolio shares of small business loans. Overall, their evidence shows that "small business lending per dollar of assets actually *increased* after mergers and acquisitions between small banking companies" (1998: 823) In addition, they found that mergers between medium and large-sized banks had no significant effect on small business lending (1998).

Finally, according to the "Report to Congress on the Availability of Credit to Small Businesses" (1997), other banks are compensating for merged banks that decrease their small business lending. Researchers reported that in markets where merged banks decreased their small business lending, the other banks increased their share of the small business loans (Board of Governors 1997).

Implications for the Future

The bank consolidation trend is expected to continue. Current evidence suggests that the decrease in the number of independently owned small banks will not decrease the availability of credit to small businesses. In fact, mergers increase economic efficiency, because "any improvements in competition and efficiency may increase the supply of credit to borrowers with positive net present value projects that inefficient lenders previously did not fund" (Meyer 1998: 1115).

Large banks account for a substantial portion of small business loans despite the fact that small banks hold more small business loans as a percentage of total assets. This indicates that small business lending is profitable for large banks.

Although mergers decrease the number of small banks, their share of small business loans to assets is increasing. Relationship lending is likely to survive because it will continue to be profitable despite the proliferation of mergers. If there are financial incentives for lenders to make relationship loans, they will do so. Small banks will continue to have cost advantages for lending to small firms requiring personal attention (Strahan and Weston 1996).

So far, the empirical evidence does not indicate that mergers are resulting in a decline in small business lending. However, since the collection of data on small business loans began

only recently, more analysis will be necessary to determine the long-run effects of mergers on the availability of credit to small businesses.

VI. CONCLUSION

Overall, advances in credit-scoring and loan securitization along with bank consolidations are likely to increase the efficiency of small business lending. Therefore, the costs of making small business loans decreases while the availability of loans increases.

Credit-scoring and loan securitization are changing the way loans are made to small businesses. These technologies potentially increase the opportunities for small businesses by decreasing the costs of lending and increasing financing opportunities. The use of credit-scoring leads to more standardized small business loans which are suitable for securitization. So far, these systems have not been utilized extensively with small business loans. As a result, more evidence needs to be collected before definite conclusions are made about the impacts of these developments.

Concerns about the effects of mergers on the availability of small business credit have also been raised. Since consolidations result in fewer small banks and more large banks, some feel that the volume of lending to small businesses will decrease. However, recent studies indicate that consolidations do not have a negative impact on small business lending. In fact, some studies suggest that mergers involving small-sized banks actually increases the volume of lending.

It is important to note the interaction between these trends. As competition intensifies in the financial industry, banks seek new lending opportunities. Credit-scoring and loan securitization compliment one another and create new small business lending activities. Merged

banks take advantage of these developments in order to compete effectively for small business loans.

Although more data need to be collected on small business loans to assess the long-term impacts of credit-scoring, securitization, and consolidations, the available evidence indicates that these developments are having a positive impact on bank lending to small businesses. In addition, these trends are not likely to eliminate small banks or relationship lending due to the unique financing needs of many small businesses.

REFERENCES

- Board of Governors of the Federal Reserve System. "Report to the Congress on the Availability of Credit to Small Businesses," Submitted to the Congress pursuant to section 2227 of the Economic Growth and Regulatory Paperwork Reduction Act of 1996, (Oct. 1997), pp. 1-75.
- Cocheo, Steve. "More Banks Direct-Market Small-Biz Credit." *ABA Banking Journal*, vol. 89 (June 1997), pp.1-3.
- Cole, Rebel A., John D. Wolken, and R. Louise Woodburn. "Bank and Nonbank Competition for Small Business Credit: Evidence from the 1987 and 1993 National Surveys of Small Business Finances," *Federal Reserve Bulletin*, vol. 82 (November 1996), pp. 983-95.
- Evanson, David R. "Benefiting from Banking Changes," *Nations Business*, vol. 83 (Sept. 1995), pp.29-31.
- Federal Reserve Bank of Minneapolis. Sept. 1997 "An Update on the Securitization of Small Business Loans," *The Region*, http://woodrow.mpls.frb.fed.us/pubs/region/97-09/credit_side.html 17 March 1999.
- Feldman, Ron. Sept. 1997 "Small Business Loans, Small Banks and a Big Change in Technology Called Credit Scoring," Federal Reserve Bank of Minneapolis, *The Region*, http://woodrow.mpls.frb.fed.us/pubs/region/97-09/credit_score.html 16 Feb. 1999.
- Feldman, Ron. Sept. 1995 "Will the Securitization Revolution Spread?" Federal Reserve Bank of Minneapolis, *The Region*, <http://woodrow.mpls.frb.fed.us/pubs/region/reg959b.html> 17 March 1999.
- Levonian, Mark and Jennifer Soller. 12 Jan. 1996. "Small Banks, Small Loans, Small Business." Federal Reserve Board of San Francisco, *Weekly Letter* <http://www.frbsf.org/econsrch/wklyltr/w19602.html>. 16 Feb. 1998.
- Meyer, Laurence H. "The Present and Future Roles of Banks in Small Business Finance," *Journal of Banking and Finance*, vol. 22 (1998), pp. 1109-1116.
- Mishkin, Frederic S. The Economics of Money, Banking, and Financial Markets Addison Wesley, New York: 1998.
- Moore, Robert R. and Thomas Siems. "Bank Mergers: Creating Value or Destroying Competition?" Federal Reserve Bank of Dallas Financial Industry Third Quarter (1998), pp. 1-6.
- Peek, Joe and Eric S. Rosengren. "The Evolution of Bank Lending to Small Businesses." *New England Economic Review*, (March/April, 1998), pp. 27-36.

Strahan, Philip E. and James P. Weston. "Small Business Lending and the Changing Structure of the Banking Industry." *Journal of Banking and Finance*, vol. 22 (1998), pp. 821-845.

_____. "Small Business Lending and Bank Consolidation: Is There Cause for Concern?" Federal Reserve Bank of New York, *Current Issues in Economics and Finance*, vol. 2 (March 1996), pp. 1-6.

Walraven, Nicholas A. "Small Business Lending by Banks Involved in Mergers," Finance and Economics Discussion Series 1997-25. Board of Governors of the Federal Reserve System, 1997.

Yellen, Janet L. "Statement to the congress." *Federal Reserve Bulletin*, July 1996, pp.652-55.