U.S. Small Business Administration
Office of Advocacy

September 2000

The Changing Banking Structure and Its Impact on Small Business: A Conference Report

Proceedings of a conference held June 15, 2000

The Office of Advocacy of the U.S. Small Business Administration was established in 1976 by Congress under Public Law 94-305 to, among other things, examine the current role of small business in the economy, present current and historical data on the small-business sector, and identify economic trends which will or may affect the small-business sector and the state of competition. In fulfillment of this mandate, the Office of Advocacy funds research and publishes reports, such as *The State of Small Business*, *Small Business Profiles*, the *Small Business Answer Card*, and *Small Business Economic Indicators*.

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Foreword

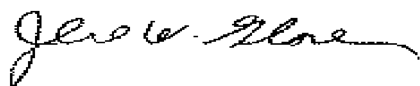
Major changes in the environment for small business lending are occurring as a result of technological developments such as credit scoring, market changes such as ever-larger bank mergers, and the new Gramm-Leach-Bliley Act that overhauls financial services regulation. Many of these changes have occurred since the Office of Advocacy's first conference on the impact of mergers and acquisitions in the banking industry in 1997. We wanted to revisit the subject to see whether small business access to capital was being affected.

The House Banking Committee hearing room was the scene for Advocacy's June 15 conference on "The Changing Banking Structure and Its Impact On Small Business." House Banking Committee Chairman Jim Leach (R-Iowa), the keynote speaker, and Ranking Member John LaFalce (D-New York), who opened the forum, underscored the value to Congress of ensuring adequate loan funds to small business and of having Advocacy examine the subject.

Two senior Advocacy economists, Robert Berney and Charles Ou, joined leading researchers from the Federal Reserve Board and other bank regulatory agencies, plus several academics and banking representatives, in exploring the issues and the data. The scholars provided a variety of conclusions about the availability of funds to small business in general and to women, minority and rural small businesses. They also put forth a number of proposals for further research, which are summarized in this report.

As always, there is a need for more and better data. The annual call reports and Community Reinvestment Act data are a start, and more frequent National Surveys of Small Business Finances would be helpful. Having the bank regulatory agencies interested in these issues is crucial: thanks to those who participated and to the academic community for making the conference successful in advancing our understanding of the changing banking structure's effects on small firms.

For comments or questions about the report, e-mail Dr. Robert Berney at robert.berney@sba.gov or Dr. Charles Ou at charles.ou@sba.gov. The report and related materials are on the Web site at http://www.sba.gov/advo/b_cf00ap.pdf. Other Office of Advocacy banking studies may be found at http://www/sba/gov/advo/stats/#finance. As always, we welcome your comments and suggestions for future exploratory research.



Jere W. Glover
Chief Counsel for Advocacy
U.S. Small Business Administration

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Introduction

On October 6, 1997, the Office of Advocacy of the U.S. Small Business Administration held a conference on "The Impact of Bank Mergers and Acquisitions on Small Business." Having noted that the ratio of small business loans to bank assets declines with increases in bank size, Advocacy wanted to know whether lending to small firms was falling because of bank mergers. The answers at that 1997 conference, based on research by leading scholars on small business lending, were inconclusive.[1]

Bank merger activity continued to increase significantly post-1997. Moreover, with the increased use of credit scoring techniques at larger banks, the nature of small business lending was changing dramatically as more large banks and finance companies competed in the market. In 2000, the Office of Advocacy convened a second conference to determine how the market for small business loans was changing, given the increase in merger activity and changing technology. Among the conclusions reached by various conference speakers were the following:

- There is no indication, given the general expansion of bank credit, that small businesses are being denied the credit they need.
- There is, however, some indication that the terms and conditions offered by large merged banks are more onerous, and that the transaction costs of small firms are higher as they search for new banking relationships.
- With credit scoring techniques, the nature of small business lending at large banks is changing. Relationship-based loans, still available from small community and new (*de novo*) banks, are being replaced by model-based loan decisions (transaction-based loans) at the larger banks.
- Credit scoring techniques and the use of business credit cards have made it easier for large banks to issue small loans to businesses at a lower cost. These developments have encouraged more non-bank competition in the lending to small firms. Because of these factors, the need for community banks appears to have been reduced except for relationship-based loans. The long-run impacts of these changes on small business finance are unknown.
- The use of credit cards to finance small businesses cannot be separated from the use of household credit cards. Thus, the Survey of Consumer Finance is a useful data base to help understand the use of credit cards by the self-employed in their businesses.
- Internet banking is so new that how it will affect the supply of and demand for small business loans is unknown. To date, bank customers do not appear to have been convinced that Internet banking products and services provide sufficient value to warrant a substantial change in their banking habits.
- There is concern that if credit conditions tighten or if the economy goes into a recession and banks' capital accounts are reduced by business bankruptcies, small businesses will be hurt by a lack of credit availability.
- Available data are currently inadequate to test many of the research questions raised by the conference. The release, expected in late 2000, of the Federal Reserve's 1997 National Survey of Small Business Finances should help answer many questions about small business lending.

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[1]See U.S. Small Business Administration, Office of Advocacy, *The Impact of Bank Mergers and Acquisitions on Small Business Lending: A Conference Report,* January 1998. Office of Advocacy reports are on the Internet at http://www.sba.gov/advo/stats.

Session 1: Opening Remarks

Jere W. Glover, Chief Counsel for Advocacy, U.S. Small Business Administration

In his opening remarks, Chief Counsel for Advocacy Jere Glover welcomed the researchers and attendees to the conference. In the 1997 Advocacy conference on The Impact of Bank Mergers & Acquisitions on Small Business, attendees learned that when out-of-state banks merge with in-state banks, small business lending tends to fall, but new banks or other financial institutions may fill the gap. Moreover, when small-business-friendly banks take over less friendly banks, small business loans increase at the larger merged institutions. So some mergers help small businesses and some do not. Since that time, a number of trends have continued or accelerated:

- Small community banks continue to disappear;
- National and regional banking systems continue to develop rapidly, and large banks are even larger, on average;
- Larger banks have increased the use of credit scoring models for business credit cards, small loans, and lines of credit.

It's important try to understand whether the supply of these smaller loans is meeting the demand of entrepreneurs starting up and expanding their businesses. Current data point to both positive and disturbing trends:

- The dollar value of micro-loans (loans of less than $100,000) increased by only 2.5 percent from 1998 to 1999, while the number of micro-loans increased by 10.1 percent. Micro-loans are becoming smaller. Is that the impact of credit scoring? Has this trend, which has been going on for several years, helped or hurt small firms in meeting their credit needs?
- The dollar value of large business loans (loans under $1 million) increased by 14.6 percent. As the large business share of loans continues to increase, again the concern is that small business credit needs may not be met.

Recently, the Office of Advocacy extended the lending analysis to farm lending and found more disturbing results:

- The dollar value of farm micro-loans declined by 5.5 percent;
- The dollar value of large farm loans increased by 6.6 percent.

On the surface, it seems hard to believe that small farms are obtaining the credit they need to grow and expand. The Advocacy conference is important in helping policy makers understand what is and is not known about how the changing banking structure is affecting the availability of credit to small business.

Representative John LaFalce, Ranking Minority Member, Committee on Banking and Financial Services, U.S. House of Representatives

Small business is the engine of economic and employment growth. Government policy should serve only to fine-tune what develops naturally in the marketplace. Among Rep. LaFalce's observations about the current banking trends, public policy, and how they affect small businesses are the following:

- Mergers, technological change, and the development of global markets are creating opportunities for the small business community.
- Large businesses become efficient by downsizing and outsourcing, opening up additional opportunities for new small firms.
- The goal of policy should be to make small business more efficient. Provide the entrepreneur with "M&Ms"—that is, the money and management skills to get started. Government policy and budgets should help people realize their dreams to become economically independent by owning their own businesses.
- We often focus on budgets and GDP numbers, but not on people. Similarly, in banking we need to focus on people, not just on the efficiency of, for example, credit scoring models.
- The Congress is in a position to bring order to the market, and that is a focus of the Banking Committee. An example is repeal of the Glass-Steagall Act.
- Banking changes have affected and will continue to affect small businesses, so we want to work with interested parties such as the participants in this conference to ensure that banking policies improve lending for small business.

Session 2: Will the Impacts of Bank Mergers Lead to a Reduction in Loans to Small Business?

The Changing Banking Structure and Its Impacts on Small Business: An Overview

Allen Berger, Federal Reserve Board

The theme of this conference is timely, as it covers the effects of mergers on all small businesses, as well as certain types of small firms such as those owned by women and minorities. It also addresses how the addition of new technologies and new entrants change previously understood impacts, including the effects of monetary policy

Because it is impossible to give an overview of all these topics, Berger focused on the research concerning relationship-based finance and the effect of bank consolidation on small business lending.

Relationship-based borrowers have a special relationship with their banks that allows the bank to gather, over time, more information on the small, informationally opaque firm. Without this close relationship, the business is unlikely to obtain a loan. (Angel and venture capital investments are also often based on relationship finance.)

At the opposite extreme is transaction-based finance, in which loans are provided based on "transparent" information (data readily available through financial statements, available collateral, or other public information). Some key points:

- Relationship-based finance is less important in collateral-based lending, such as mortgages and auto loans.
- Eighty-seven percent of firms identify the commercial bank as their primary financial institution, even though only 41 percent of small businesses have loans.
- Small firms have long relationships with their banks (7.8 years, on average).
- The benefit of relationship banking is potentially more credit on better terms.
- Less competition in banking and more market power appear to help less transparent firms get credit, but relationships also seem important for the more transparent firms.

Bank consolidation is largely the result of deregulation, but is worrisome, since large banks devote a smaller percentage of their assets to small business loans. Observations are often based on static analysis (viewing what happened at a past point in time), while consolidations are dynamic events that are changing what is happening. Such changes may lead to more or less small business lending. Static analysis also ignores external events in which other banks may become more competitive and new banks may open. Some key points:

- Large banks appear to avoid more risky relationship-based lending.
- Small lines of credit tend to come from small banks and large lines from large banks.
- Large banks tend to lend to larger, older, and more financially secure firms.
- Bank size and market share do not seem to affect lending decisions with respect to small firms.
- The technology for dealing with informationally opaque relationship borrowers is different from that used for large informationally transparent borrowers and it is likely to be costly to provide both products in the same organization.
- Studies tend to show that mergers and acquisitions involving large bank organizations reduce small business lending, while mergers among small banks increase small business lending.

- The negative impacts of large bank organization mergers tend to be offset by external effects of new entries or more competition.

  More research is needed on all these issues.

Bank Consolidation, Small Business, and Capital Markets

William Dunkelberg and Jonathan Scott, Temple University

The research by Scott and Dunkelberg (S&D) differs from the work of other scholars in this area in that S&D are surveying business borrowers about their response to mergers rather than empirically measuring the activity of merging and non-merging commercial banks. According to S&D, other researchers have found:

- Compared with smaller banks, larger banks hold a proportionally smaller share of their portfolios in small loans.
- Mergers between smaller banks increase their share of assets held in small loans, but researchers find no predictable outcome when large banks merge.
- Competitive responses by other banks in local markets offset the impacts of portfolio reductions of larger banks.

S&D plan to test some of these results with their data base. S&D's data come from a 1995 survey of members of the National Federation of Independent Business (NFIB). Members were asked: "During the last 3 years, was your principal financial institution bought out or absorbed by another?" More than 25 percent of the respondents answered "yes" to that question. Additional responses allowed them to assess how consolidations (both mergers and acquisitions) have affected the quantity of credit available, the cost of that credit and the quality of service delivered.

The conclusions that they drew from their data set are mixed with respect to the impacts on small business:

- Consolidation had no impact on the ability of firms to obtain the credit they needed, but it did increase the search cost of obtaining credit.
- Consolidation had no significant impact on interest rates, but other terms were more onerous.
- Consolidation had adverse impacts on services rendered in the banking relationship.
- Younger firms, their proxy for informationally opaque firms, did face higher costs after merger activity compared with larger, less informationally opaque firms.

Bank Consolidation and the Provision of Banking Services: The Case of Small Commercial Loans

Robert Avery, Federal Reserve Board, and Katherine Samolyk, Federal Deposit Insurance Corporation

This study examines how bank consolidation is related to small business credit availability at the local market level. There is a concern that as banks become larger and more complex, they will shift their focus and resources away from smaller customers that are more costly to serve; however, credit availability depends on the behavior of all suppliers in a given market.

It is difficult to study credit availability at the market level because call report data on small loans to businesses and farms do not include geographic detail about where loans are made. Hence most studies have focused on the behavior of individual banks.[2] One study by Berger, Saunders, Scalise, and Udell (1999) estimated the overall effect of merger and acquisition activity on small business lending during a 15-year period. Berger, et al., estimate that, in the aggregate, merger-related changes are more than offset by increases in lending by other banks and thrifts. However, given that small business credit markets are considered to be fairly local for the purposes of bank antitrust analysis, it is important to ask how consolidations affect small business lending at the local market level.

Avery and Samolyk use geographic deposit data to estimate the geographic distributions of small business loans reported by banks and thrifts since 1993 and examine whether small business loan growth in local markets is related to local merger activity during two study periods: 1993-1995 and 1995-1997.[3] Their definitions of local markets approximate those used in antitrust analyses (metropolitan statistical areas and rural counties). Small business loan growth is linked to the overall level of merger activity (the median market had 11 percent of its small business loans acquired) and to the nature of local merger activity defined in terms of the size of the merging banks and whether they are within or out of the market. Throughout, separate analysis is conducted for urban and rural markets and for high-concentration versus low- concentration markets (Herfindahl indices of more than or less than 1800).

Consistent with Berger, et al., Avery and Samolyk find that, on average, merging banks reduce lending, while other lenders offset the effect of this contraction in local markets. Multivariate regressions linking local small business loan growth to the nature of local merger activity indicate that the relationship between consolidation and local small business lending depends on the nature of the market and the nature of the merger activity affecting the market. Merger activity during the mid-1990s is broadly linked to lower loan growth in rural markets, but not in urban ones. However, consistent with an anti-competitive view, within-market mergers (where both parties had a local presence prior to the consolidation) are associated with significantly lower local small business loan growth in concentrated urban markets. Not all of the merger-related effects indicate less small business lending; there is evidence of higher loan growth in rural markets where consolidation activity involves mergers of small banking organizations. This result is consistent with bank-level evidence that mergers between small

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[2] Although their results depend on the time period studied, the sample of banks used, and how bank merger activity is measured, the evidence suggests that bank mergers of large banks into even larger ones are associated with declines in small business lending—at least as a proportion of total bank assets.

[3] Bank consolidation is quantified as the *share* of the local small business loan market (measured in dollars) that was acquired by another banking organization (holding company or independent bank) during a given study period. As in antitrust analyses, members of a given holding company are treated as part of the same banking organization; hence consolidations of affiliates are not counted in measures of local merger activity.

organizations may enhance small business credit availability (Peek and Rosengren, 1998; Strahan and Weston, 1998).

Clearly, the validity of the evidence depends on the appropriateness of the loan allocation method used. To validate the method, Avery and Samolyk compare their geographic lending patterns with those evident in Community Reinvestment Act (CRA) data reported annually since 1996 by larger banking institutions. A comparison of the patterns using 1997 data indicates that the distribution of a bank's CRA business loan originations is highly correlated with that of its branching activity, although the correlation is weaker in sparsely populated rural markets. Thus, while evolving technology may alter the geographic nature of banking activities in the future, deposit-taking patterns appear to be a reasonable proxy for small business lending during the mid-1990s.

The authors conclude that bank consolidation is a complex phenomenon that affects bank customers in the particular markets for the banking services they seek. The findings regarding bank consolidation's effects on local small business lending contrast with comparable studies of home mortgage lending that indicate no systematic merger-related effects (Avery, Bostic, Canner, and Calem, 1999). However, the evidence is consistent with the notion that small business loan markets remain more local in nature than other bank product markets. Therefore, scrutiny of proposed mergers from a small business lending perspective may become increasingly important.

Session 3: How Do Innovations in Banking (Banking Operations, New Service Offerings, etc.) Impact Lending to Small Business?

Credit Scoring and Lending to Small Business

Robert Eisenbeis, Federal Reserve Bank of Atlanta

Credit scoring has become the dominant methodology for granting many kinds of consumer loans, namely credit cards, direct and indirect consumer loans, revolving credit, and auto finance. These loans have common characteristics: large number, low dollar amount; high-cost transactions; and the potential for diversification benefits. Credit scoring has been extended to home equity lending and residential real estate loans. Freddie Mac and Fannie Mae have encouraged scoring by standardization of instruments in mortgage lending. In the last four years, scoring applications have spread to the commercial loan market.

The following are motives for the adoption of credit scoring:

- Economic considerations, as banks continued to search for means to control expenses and improve profit margins by streamlining the credit review process;
- A need to ensure uniformity in lending policies;
- Efforts to improve customer service;
- Efforts to control regulatory risks by making the loan granting process less subjective.

Credit scoring becomes acceptable to bankers because previous applications show predictable credit performance. With scoring, relationship banking is not as important, and the need for face-to-face meetings diminishes. Some traditional lenders discovered credit scoring as a way to lower brick-and-mortar costs.

Small business loans share many characteristics with other credit scoring applicants:

- Small businesses are very small: more than three-fourths had assets of less than $500,000 as of 1993;
- A relatively large number of transactions are in small loans in amounts under $100,000;
- Small loans create a need for geographical diversification.

Research also has shown that the creditworthiness of the small business is critically linked to the creditworthiness of the owners, especially for loans under $100,000. Thus, it makes sense to treat small business lending like lending to individuals

However, there are also differences between small businesses and other credit scoring applicants:

- Commercial loans are too complex for scoring;
- Small firms are too heterogeneous;
- Relationship lending is very important to small firms;
- Documentation of loans is not standard;
- Risks are more varied and complex; and
- Not enough data are available on poor performers to allow good estimates of the risk of loss.

Despite these problems, efforts to score loans have been under way for several years, especially with the availability of large data bases collected by firms like D&B and Robert

Morris Associates (RMA). Fair Issacs and RMA pooled five years of data from 17 banks. The data covered more than 5,000 loans from firms with less than $5 million in sales and loans of less than $250,000 for statistical modeling.

Bank Use of Credit Scoring for Small Business Loans

The 1998 Federal Reserve Board of Atlanta survey study of 99 large banks found 63 percent used scoring and another 11 planned to do so by 1999. The study indicated that:

- All scoring banks used credit scoring for loans of less than $100,000 and 73 percent of banks used credit scoring for loans of less than $250,000;
- 42 percent used credit scoring to make accept/reject decisions;
- 32 percent used it in setting loan terms;
- 13 percent used it in monitoring loan performance (behavioral scoring);
- 87 percent used purchased credit scoring scorecards.

A challenge to scoring came from critics, who contended that relying on faceless statistical models perpetuates discriminatory lending patterns, especially in low- and moderate-income areas. However, recent FRB Atlanta research on the impacts of credit scoring on small business lending in low- and moderate-income (LMI) areas shows:

- Non-scoring banks made significantly fewer loans in LMI areas than did scoring banks;
- No significant differences in lending were found by scoring banks in LMI areas and elsewhere;
- Scoring banks originated a larger number of loans in LMI areas than in moderate- to high-income areas;
- Non-scoring banks originated significantly fewer loans in LMI areas than in other areas;
- The presence or absence of a branch in an LMI area did not affect lending by scoring banks; and
- Non-scoring banks made more loans in LMI areas when they had a branch there than when they did not.

In conclusion, effective scoring of commercial loans promises to continue to affect the structure of the financial services industry and the value of the traditional banking charters. The competitive position of commercial banks in consumer lending, mortgage lending, and related consumer products has deteriorated with the growth of securitization and the entry of market-funded non-bank competitors such as finance companies, merchant bankers, and brokerage firms.

Customers of small- and intermediate-sized businesses continue to depend upon commercial banks because of the banks' historical advantage in servicing, in credit assessment, and in their ability to deliver complimentary services such as revolving credit and deposit services. However, if non-banks can evaluate credit reliably, then the banks' advantage in origination and funding of these opaque credit customers goes away. Non-bank firms can originate and underwrite with funding provided by open markets. When small business loans become commodities, there is little in the way of lending to small businesses that remains for banks.

Internet Banking: Development and Prospects

Daniel Nolle, Office of the Comptroller of the Currency

Internet banking refers to the use of the Internet as a remote delivery channel for banking services. Such services include traditional ones, such as opening a deposit account or transferring funds among different accounts, and new banking services, such as allowing customers to receive and pay bills via a bank's Web site.

Banks offer Internet banking in two main ways. An existing bank with physical offices can establish a Web site and offer Internet banking to its customers. A second alternative is to establish a ''virtual,'' ''branchless,'' or ''Internet-only'' bank. The computer server that lies at the heart of a virtual bank may be housed in an office that serves as the legal address of such a bank. Virtual banks may offer their customers the ability to make deposits and withdraw funds via automated teller machines (ATMs) or other remote delivery channels.

Banking over the Internet has attracted increasing attention over the past several years, in part because of the rapid growth in electronic commerce. Electronic banking and payments will likely advance in tandem with e-commerce.

To help fill significant gaps in existing knowledge about Internet banking, Nolle presented data on the number of national banks offering Internet banking and the products and services being offered, using data from a survey of national bank examiners. The extent of Internet banking can be projected to the beginning of 2001 based on the survey. Also investigated are how national banks offering Internet banking perform relative to other national banks with respect to profitability, cost efficiency, and other characteristics; and the extent to which *de novo* or newly chartered national banks are embracing Internet banking technology in comparison with existing banks. These are the main findings:

- The number of banks and thrifts with Web sites more than doubled from approximately 1,500 to 3,500; by year-end 1999, approximately one-third of the 10,000 U.S. banks and thrifts had Web sites. Approximately 1,100 of those Web sites were transactional and allowed customers to conduct business online; the remainder were information-only sites.
- Twenty percent of national banks offered Internet banking in the third quarter of 1999. However, as a group, these ''Internet banks'' accounted for almost 90 percent of national banking system assets, and 84 percent of small deposit accounts.
- All of the largest national banks offered Internet banking, but only about 7 percent of the smallest banks offered it. Among institutions offering Internet banking, large banks are much more likely than small banks to offer a broader range of services via the Internet.
- Projecting from banks' plans as of the third quarter of 1999, 45 percent of all national banks will be offering Internet banking by the beginning of 2001. Those banks will account for 95 percent of the assets and 93 percent of the small deposit accounts at national banks.
- Most of the growth in new Internet banking will be generated by small banks coming on-line. At the same time, almost half of all national banks had no plans to offer Internet banking.
- Customer use of Internet banking is disproportionately concentrated among a few large banks.

Summary and Conclusions

The analysis indicates several significant differences in the profile of banks offering Internet banking relative to non-Internet banks. Broadly speaking, Internet banks rely more heavily on non-interest income and less on core deposits for funding than do non-Internet banks. Internet

banks have higher returns on equity than non-Internet banks for all but the smallest banks. Internet banks with assets under $100 million had significantly worse accounting efficiency and profitability ratios compared with non-Internet banks in the same size category. The differences in performance came primarily from *de novo* small banks offering Internet banking.

The current low level of customer usage of Internet banking, as well as the relatively modest cost of setting up an Internet banking Web site, makes it unlikely that Internet banking is having a sizeable direct impact on the bottom line of most institutions. However, some institutions are relying heavily on an Internet-based business strategy, and the full costs of offering Internet banking, while not prohibitive, may be significant for these banks. In addition, while *de novo* Internet banks had poorer performance ratios than *de novo* non-Internet banks, further investigation will be needed to determine whether these banks' performance improves as e-banking and e-commerce expand over time. Indeed, further research is required to give a more definitive answer to the questions of whether and how Internet banking affects bank performance in lending to small firms for banks of all sizes and ages.

On the demand side, the study estimates that a large majority of banking customers have accounts with institutions offering Internet banking. Thus, the availability of Internet banking is currently sufficient to accommodate the sudden and rapid growth in other information-intensive industries such as securities brokerage. So far, however, bank customers have not been convinced that Internet banking products and services provide sufficient value to warrant a substantial change in their banking habits. The revolutionary developments in information and communications technology are having, and will continue to have, a profound impact on the banking and financial industry. Internet banking will be an important component of these developments.

Unobserved Risk and the Choice of Borrowing Method: Evidence from Small Business Uses of Credit Cards

William Emmons, Federal Reserve Bank of St Louis

The Issues

Credit cards have been used for business purposes by small businesses and self-employed individuals. In the case of unincorporated small businesses and self-employed individuals, credit cards may be particularly attractive because they are easy to obtain and because credit-card debt is uncollateralized. Survey data indicate that a substantial portion of credit-card borrowing resembles term loans. Presumably, many people know that credit card debt is often discharged completely under Chapter 7 of the personal bankruptcy code because of its uncollateralized nature and sometimes generous asset exemptions. Given the loose underwriting and monitoring standards of most credit card lenders and pro-debtor treatment in bankruptcy, there is a clear incentive for small businesses and self-employed individuals—and particularly the most risky among them—to use credit cards to finance their businesses. A household's personal financial affairs and its (unincorporated) business activities are legally inseparable. Thus, credit card lending to self-employed households is a component of small business finance.

Credit Card Uses by Self-Employed Households in the 1998 Survey of Consumer Finances

Average and median self-employed household incomes and net worth are substantially higher than those overall. Moreover, self-employed households actually borrow somewhat more than other households. The fraction of self-employed households that have credit card, housing, installment, or any other kind of debt exceeds the comparable fraction of debt holders in the general population.

One often hears anecdotal evidence of a small business that is financed in part by the owners' personal lines of credit, most notably in the form of credit cards. This is confirmed by the Federal Reserve's 1998 Survey of Consumer Finances (1998 SCF) which reveals that:

- Fifty percent of all self-employed households carried over a balance on their last credit-card statement; [4]
- Nine percent of self-employed households reported outstanding credit card debt of $10,000 or more. Four percent had credit card debt of $20,000 or more. (For comparison, 45 percent of all 1998 SCF households carried over credit card debt at the time of survey and only 5 percent had balances of $10,000 or more.)

  These dollar figures are likely underestimated.

  Two hypotheses about the uses of credit cards are tested:

1. Are low net worth households of any kind more likely to borrow with credit cards than in other forms? The unsecured nature of credit card debt and crude risk-based pricing by lenders should appear most attractive to the riskiest households. Credit card lenders do not know a

[4] This includes all self-employed households whether or not they owned a credit card; 92 percent of self-employed households had a bank-type credit card, however.

household’s net worth (or many other financial characteristics), while the SCF allows this proxy for household riskiness to be identified.

2. Are low net worth self-employed households more likely to borrow with credit cards than other households with similar levels of net worth? If self-employment is associated with greater default (bankruptcy) risk, then the incentive to exploit a large information asymmetry between lenders and borrowers would be even more important for self-employed households.

Findings

The level of household net worth is negatively associated with credit card borrowing among all SCF households, consistent with the first hypothesis. No evidence appears that low net worth self-employed households use credit card borrowings more intensively than other households; thus the second hypothesis is not supported.

Comments/Discussion

Mary Thorpe, First Union National Bank

In general, mergers and acquisitions do not cause a contraction in lending; rather, they change the terms of lending. Changes caused by mergers and acquisitions are basically a transitional issue: the lending market is relatively competitive; the market is fluid; small business borrowers can and do search and seek alternative sources. But small businesses will have to pay more in the future, as larger banks will try to offer more services.

On technological changes and innovations:

- *Credit scoring:* It is important to give those rejected by scoring a second chance, such as bringing them into one of the SBA's programs. Credit scoring is a risk management tool, albeit still a rough one. Using information from existing borrowers can refine it, and the information gained can be shared with the borrower to help improve their performance.
- *The Internet:* Still part of the Wild West, the Internet is changing from moment to moment. It is more important to have joint products that are offered on the Net or a broad range of products offered to a special group of customers. It is likely that Internet banks will need strategic partnerships for products and services to generate fees from the broad range of products.
- *Credit Cards:* They were never intended as a bankruptcy hedge. Rather, they have been used to provide small lines of credit.

Ann Grochala, Director, Bank Operations, Independent Community Bankers of America

Credit Scoring: Historically, the cost of credit scoring tools for small banks has been high, but it has been coming down some. The credit scoring models can be too expensive when the number of loans made by the bank is small. But credit scoring by large banks provides an opportunity for small banks to provide services to those rejected applicants or businesses that like a more personal banking experience.

The Internet: The Internet is still used only by customers with a high technology flair or in high tech regions. But small banks need to have products in this area to compete with large banks.

New in the Gramm-Leach-Bliley Act Legislation: Long-term, fixed-rate loans can be used for lending to small businesses and farms, not just for housing. And types of collateral and the use of the loan are not necessarily tied together. Other collateral alternatives besides small business and farm collateral can be used, such as Treasury securities. Also new in the legislation: community financial institutions can now pledge small business and farm loans to federal home loan banks. This is a new liquidity source for community banks that will improve their ability to serve small business customers.

Session 4: Keynote Address

Keynote Speaker: Representative James A. Leach, Chairman, Committee on Banking and Financial Services, U.S. House of Representatives

When banking legislation is under consideration, the issue before Congress should never principally be what is best for a particular financial institution or the financial services industry, but what is in the best economic interests of the country. A focus of this symposium has been on how bank mergers affect credit to small businesses. Some observations:

- The 1994 Riegle-Neal Interstate Banking and Branching Efficiency Act provided for interstate banking and branching. Interestingly, what has been witnessed in many communities where mergers have occurred, is (1) many customers have transferred accounts to remaining locally owned and controlled institutions and (2) new locally run financial institutions have been chartered.
- There is a dual dynamic in banking today. The big are getting bigger from the top down through mergers, but the small banks are expanding market share from the bottom up.
- Many of the greatest challenges facing small businesses and community financial institutions come from technological advances, which, because of the cost of innovation, larger institutions often lead. But once introduced, technological innovation moves swiftly throughout the industry.
- In the future, the institutions best poised to succeed will be those that adapt to new technologies and have close personal ties with their customers. The competitive position of community institutions in this market circumstance is quite strong. It is simply far easier for smaller institutions to make technological changes than it is for larger institutions to create the same kind of customer relations that characterize most smaller banks.
- In a free market economy, it is critical that the entrepreneurial spirit be nourished and that access to capital, an essential ingredient for entrepreneurial activity, be provided to all parts of society. If entrepreneurial dreams are denied any part of America, society as a whole is short-changed.
- Despite the economic boom the country is experiencing, prosperity is not universal. Job opportunity is as strong as at any time in the last half-century, but the gap between the "haves" and "have-nots" is widening. For years, it has been evident that when functional literacy has been at issue, good wage opportunity is limited. Now the divide is growing where enumeration is the problem. The new economy rewards the mathematically functional. In this setting the Committee is obligated to look at the types of self-help initiatives that involve credit assistance for individuals and areas of our economy in which opportunity is lacking.
- Today in America, micro-enterprises—generally considered to be sole proprietorships with fewer than five employees who need loans in an amount under $15,000—have difficulty obtaining credit from commercial banks. Just as other parts of the world have borrowed from the American experience, it is appropriate that we learn from the experiences of others. The Grameen Bank model is one of decentralized, individual empowerment. It fits aspects of the American economy just as it does aspects of Bangladesh.

Session 5: Will the Impacts of Bank Mergers Lead to a Reduction in Loans to Minority, Women or Veteran Owners, and the Rural Small Business Sector?

Competition, Small Business Financing, and Discrimination

Ken Cavalluzzo, Georgetown University

Ken Cavalluzzo discussed his joint paper with Linda Cavalluzzo and John Wolken. Using data from the 1993 National Survey of Small Business Finances (NSSBF) and a multivariate model that adjusted for differing financial characteristics, they found significant differences, particularly between businesses owned by African Americans and those owned by white males (see table).[5] The NSSBF data were used in conjunction with information furnished by the Board of Governors of the Federal Reserve on local bank market structure and Dun and Bradstreet firm credit (risk) scores. The NSSBF data set is the most extensive public data set available on small businesses. An important feature of the NSSBF is that it includes firms that do not use credit markets. These data allow testing for possible selection biases, as well as investigations of the level and variation in "discouraged borrower" effects by demographic group. The following are conclusions from the study:

- Among all demographic groups, African Americans displayed the greatest need for credit (79 percent for females and 70 percent for males).
- African-American owners were almost 53 percent more likely, and Hispanic owners were almost 27 percent more likely to have avoided applying for a loan because of fear of denial than were businesses owned by white males.
- African-American business owners were more than twice as likely to have been denied credit than their white male counterparts. The estimated probability that an African-American-owned firm would have been denied credit at least once during the previous three years was 56.4 percent compared with 27.1 percent for firms owned by white males.
- Results indicate that African-American and Hispanic owners were more likely than white owners to have avoided applying for credit at least once in the three years, even after controlling for a broad range of explanatory variables.
- African-American-owned firms faced substantially higher denial rates than businesses owned by white males, particularly in concentrated markets.
- African-American-, Hispanic- and Asian-owned firms were all less likely to have their credit desires met, compared with firms owned by white males.

Different models and variables were used in the research and the results were robust, confirming that African Americans have significantly higher denial rates than white males. The research also found that it was more difficult for African Americans to get credit, even though they had a greater need for credit.

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[5] Cavalluzzo, Ken, Cavalluzzo, Linda and Wolken, John, *Competition, Small Business Financing, and Discrimination: Evidence From A New Survey* (Washington, D.C.: Georgetown University, McDonough School of Business; Center for Naval Analyses; and Federal Reserve System).

Borrowing Characteristics of Small Businesses by Demographic Group – Population Estimates (Number of observations in parentheses)

	All	White		African- American		Hispanic		Asian	
		Males	Females	Males	Females	Males	Females	Males	Females
Percent with loans	62.24 (4,570)	63.70 (2,951)	58.55* (594)	64.50 (336)	51.39* (95)	63.20 (236)	53.08 (65)	54.48* (238)	47.35* (65)
Percent applied	34.50 (4,570)	35.95 (2,951)	31.55 (594)	36.71 (336)	28.09 (95)	35.96 (236)	12.67* (65)	25.86* (238)	16.97* (65)
Percent denied within last three years	28.67 (1,985)	26.04 (1,418)	30.33 (225)	68.54* (134)	52.46* (31)	36.29 (82)	33.72 (16)	38.76 (66)	-
Percent denied on most recent loan	18.45 (1,985)	16.01 (1,418)	22.99 (225)	49.15* (134)	37.26* (31)	18.72 (82)	12.62 (16)	25.01 (66)	-
Average interest rate on most recent loan	8.77 (1,682)	8.72 (1,265)	8.78 (189)	9.71* (70)	9.27 (18)	9.13 (68)	-	9.03 (52)	-
Average interest rate on most recent LOC	8.41 (1001)	8.33 (780)	8.65 (98)	8.38 (39)	-	8.56 (34)	-	9.11 (30)	-

Notes: Population estimates are weighted to reflect differences in sample selection and response rates (see Methodology Report, 1996). An asterisk signifies that the statistic is significantly different from the white male-owned firm value at the 95 percent level of confidence. Standard errors for these tests are calculated using 1,000 bootstrap sample and weight replicates. A dash signifies that statistics were not reported because the sample size (N) was 15 observations or less.

Small Business Lending in Rural Areas by BHCs: Findings from the CRA Data Base

Robert Berney and Charles Ou, U.S. Small Business Administration, Office of Advocacy

Data from the 1993 National Survey of Small Business Finances show that no matter what the size of a small firm, rural small businesses rely more on commercial bank loans than do firms in urban areas. Rural small firms have fewer credit options and use fewer services from finance companies, and fewer business and personal credit cards. They also have fewer options to lease equipment, and they rely less on trade credit.

Data just becoming available as a result of the requirements of the Community Reinvestment Act (CRA) allow an exploration of the current geographic lending patterns of larger commercial banks. With two years of data from the CRA now available, it should be possible to analyze the changes taking place in small business loans (SBLs). Unfortunately, it is not known what is happening to the non-CRA-reporting banks—that is, it is not known whether the gains are attributable to mergers of non-CRA-reporting banks with CRA-reporting banks.

Small Business Lending in Rural America, a recently released study by the Office of Advocacy, had good news for rural small businesses. The study showed that the dollar value of rural micro-business loans (loans under $100,000), while just 20 percent of total micro-business loans (SBLs) in 1998, increased by 14 percent over the previous year—more than the 10 percent increase in urban areas. The number of micro-loans increased in a similar pattern.

The dollar value of rural small business loans of less than $1 million, while only 16 percent of total small business loans, increased by 22 percent from the previous year, also more than the 17 percent increase in urban areas. And again, similar trends were found in the number of loans. It appears that CRA-reporting commercial banks are increasing their lending in rural areas.

For this conference, the authors looked at how the largest bank holding companies (BHCs) were changing their investment patterns in rural areas. But with all the mergers that were taking place, it was difficult to ascertain whether the change in SBLs was attributable to changing lending patterns, or just to the fact that the BHCs have merged with other banks. An attempt was made to limit the study to BHCs where mergers and acquisitions could be accurately tracked. Using this smaller set of BHCs (38 of a possible 57), the researchers analyzed changes between 1997 and 1998, comparing rural and urban areas. The following comparisons were made for each BHC and each state:

- Ratio of rural small business loans to total business loans and the rural percentage of total deposits in 1998;
- Changes in these relationships between 1997 and 1998;
- Ratio of rural small business loans to total business loans;
- Rural percentage of small businesses from Census files, as a proxy for demand.

The data show which BHCs are the most rural-small-business-friendly and which states appeared to have a more adequate amount of rural SBLs.

Discussant: Robert Collender, U.S. Department of Agriculture

Rural areas are politically important. While they include only 20 percent of the population, they cover 80 percent of the country's land mass. In addition, rural interests and concerns have been important in recent legislation modernizing the banking industry (Graham-Leach-Bliley) and in granting China permanent trade status.

Rural economies face specific issues. Their isolation and low population density means that transportation, information, and utility infrastructures are more costly to maintain or develop. Their small market size means that they are less likely to support competitive local markets offering a wide range of goods and services. In addition, individual rural markets are characterized by less diversified, more cyclical local economies, which can create risk management issues for small, undiversified local lenders.

Rural areas are diverse. The Economic Research Service (ERS) of the U.S. Department of Agriculture has several ways of classifying the 2,276 non-metropolitan counties: by economic type, by policy type, and by degree of ruralness along a rural-urban continuum (often known as Beale codes). The resource bases, economic vigor, and sociological and demographic characteristics of counties vary widely. Rarely do general statistics accurately reflect this diversity. This diversity is important to consider when contemplating public policies. While rural residents are, on average, poorer than non-rural residents, many are quite affluent.

Many rural areas are growing rapidly in both economic affluence and population. Targeting federal programs to rural areas without regard for other considerations may have the inadvertent effect of disproportionately benefiting well-off rural residents and areas. The ERS county typologies and Beale codes provide a way to view subsets of rural areas that should be of greater interest for policy purposes.

Information about the performance of rural financial markets is generally encouraging, although good reasons exist for concern in areas with particular characteristics. *Credit in Rural America* concluded, after examining available data on agricultural, housing, small business, and community development loans, that rural financial markets work reasonably well. While rural small businesses are more likely to rely on bank financing than are their urban counterparts, they also rate the performance of their financial institutions more highly. While financial market problems exist in some rural communities, and not all segments of the rural economy are equally well served, financial market failures are neither endemic to nor epidemic in rural America. Areas of greatest concern include those counties served by two or fewer banks, areas of persistent poverty, transfer-payment dependency, and persistent out-migration. Such counties are generally sparsely populated or poor.

In commenting on the paper of Berney and Ou, Collender cautioned the readers in interpreting the statistics used in the paper—especially on the interpretation of those "shares," "ratios," and estimates that imply "fairness." Collender indicated his preference for a measure of fairness that would reveal more about the level of economically viable loan demand relative to local wealth.

Combining performance measures across all rural areas will not tell us how the areas of greatest public policy concern may be faring. Even if large banks appear to be serving rural small businesses well in general, those in the most vulnerable areas may not be. Therefore, Collender suggested that SBA consider using the Economic Research Service's county typology, Beale codes, and data on highly concentrated rural banking markets to compile statistics on these areas in addition to those for rural areas as a whole. Concern for rural financial market performance in smaller, poorer, and more isolated rural areas is what is needed.

Session 6: Will the Changing Structure Impact Competition in the Small Business Loan Market?

De Novo Banks and Small Business Lending: What Do We Know ? What Should We Know?

Lawrence White, New York University

Small Business Lending

Lending (finance) has an inherent, unavoidable time aspect: lenders lend at an "early" point in time and borrowers repay at a "later" point in time. Lenders want/expect their money back; they fear being stiffed. With this time aspect, information about the future business prospects of the borrower becomes crucial.

Small business lending encounters significant problems of asymmetric information: the availability and the perception of information differ significantly between the borrower and the lender. Those borrowers who are informationally transparent and those lenders who are better at gathering information and monitoring the borrowers will be successful in this market. Different financial markets will serve different types of borrowers with different degrees of information transparencies—those most transparent borrowers, large firms with audited returns, will access the public markets, while those with least transparency will rely on self-finance and affinity groups. Financial institutions that are already serving small businesses have informational advantages that competitors will not have. Thus, the high cost of lending to small business—in gathering and evaluating information in the decision-making process and in monitoring the borrower during the term of the loan—falls especially on institutions entering the marketplace.

Banking Consolidation

The total number of banks declined from 14,416 in 1985 to 8,580 in 1999. More than 10,000 large and small mergers occurred in the 1980s and 1990s.

Bank Size Matters in Small Business Lending

- Larger banks tend to devote a smaller percentage of their assets to small business lending than do smaller banks and tend to use different criteria ("by the numbers" or "cookie-cutter") for loan approval/denial decisions than do smaller banks, which are more likely to use "character" loans;
- *De novo* banks tend to devote a larger percentage of their assets to small business loans than do otherwise similar incumbents;
- This is also true for *de novo* banks' lending to farmers, although the relationship is considerably weaker;
- "Adolescent" banks tend to devote a smaller percentage of their assets to small business lending than *de novo* banks but a larger percentage than older banks.

The inverse age effect persists even after bank size, urban location, market concentration, and holding company membership are controlled.

Facts about *De Novo* Banks in the United States

- *De novo* banks have been quantitatively important: 3,875 new banks entered the market between 1980-1998.
- *De novo* bank entry is positively related to prior mergers and acquisitions. About 20 percent of urban entry can be explained by prior mergers and acquisitions.
- *De novo* bank entry is also positively related to urban location, larger markets, market profitability, higher state growth rates and a state history of unit banking.

Why Do *De Novo* and Adolescent Banks Focus on Small Business Lending?

Hypothesis: Young banks may find it easier to lend to young enterprises whose pre-existing ties with a bank are weak or non-existent than to try to "steal" a business customer away from an incumbent bank (the importance of relationships). This is consistent with the asymmetric information paradigm, as young enterprises tend to be small.

Conclusions

- There is an important, interesting link between *de novo* banks and small business lending.
- Open entry for banks (subject to safety and soundness considerations) should be encouraged for general competition reasons and because it benefits small business lending.

Further Research

Small business lending and in particular the subject of *de novo* banks are ripe areas for interesting research and policy applications. Among the topics that should be considered for further research:

- Has the application of credit scoring technology to small business lending significantly changed any of the empirical regularities?
- Why does bank age matter?
- Do *de novo* banks focus on lending to younger enterprises?
- Who starts *de novo* banks?
- Why are so few *de novo* banks focusing exclusively on the Internet as a business strategy?

Mega-Mergers and Small Business Lending in the Banking Industry
J. Robert Kramer, U. S. Department of Justice

The small business lending market is very important in decisions regarding antitrust cases in banking; it is more relevant because small businesses do not have as much choice as other borrowers in the market.

In reviewing merger and acquisition applications in banking, the Department of Justice focuses on small business lending. It looks at all parts of the market—products, geographic areas, demand and supply, as well as market competition.

The approach taken is different from that of the regulatory agency—the Federal Reserve adopts the cluster approach, which treats commercial banking as a whole, including a package of product and services. The view about small business banking is that many of the product lines are not interchangeable—lines of credit are different from funding to start a business. There is limited substitution between among the different kinds of credit for small firms. Although small businesses can use personal credit cards for business needs, these are not very attractive because of the high personal risk involved.

So, when we look at a merger and acquisition case and try to evaluate whether a bank will find it profitable to increase fees (because of increased market power), and whether a small business can move to alternative sources, we find that small firms usually cannot move. So we see the market as less competitive than does the Federal Reserve.

In the geographic area, the issue of the existence of other "suppliers" near by is important. Most small firms use a single supplier. Relationship banking is very important to both small business borrowers and to the bankers. But there is an argument that with credit scoring and with large out-of-state banks entering the market, market competition should have increased. However, this seems to be true only for those micro-loans in credit cards or lines of credit. In fact, those loans range between $15,000 to $20,000. So out-of state banks are not competing in the market of small business loans over $100,000 at all. So out-of- state competition should not be a factor here.

When we look at the impact in a geographic area, again, the market area we have is much narrower than those reviewed by the Federal Reserve. Their areas are usually broader to include several counties. An example is the case for the First Union/CoreStates bank merger. For the market in Philadelphia:

- The Fed's definition of market area included the city of Philadelphia plus some neighboring counties in Pennsylvania and some counties in New Jersey.
- Using CRA data and on-site interviews, we found out that those New Jersey banks did not have any small business lending at all. Neither are those Pennsylvania banks in nearby counties.

After the market is defined, we then go ahead with the analysis of market concentration. We usually use deposit shares rather than CRA loan shares because CRA data are still difficult to use and the year-to-year changes in the CRA can be large. However, we did see a high correlation between deposit shares and CRA loan shares.

With an analysis of market concentration, we usually demand a lower market concentration ratio than in other industries because of the importance of banking in the economy and the adequacy of statistical work on market concentration and profitability. We also look at a bank's merger and acquisition activity differently from that of other industries. In a regular M&A investigation, a high price after an M&A is likely to attract new entrants to the market, thus

mitigating the concentration power. This does not seem to be the case in the small business lending market, because small loans account for such a small percentage of a bank's total portfolio. So we don't see banks entering the local market as soon as the perceived opportunity of higher price and high profits emerge. So the possibility of new market entry as a mitigating factor to the anti-competitiveness of an M&A activity in banking is less.

When we propose a divestiture plan, we try to suggest steps that will preserve the present level of market competition. We would specify the sales of a network of branches in a particular market to a single buyer so that the buyer could duplicate the services/product offerings provided by the pre-merger lender. We would also demand that the transfer of the totality of the banking relationship be included in the divestiture package—so that the new entrant can maintain those services. We will even have additional requirements so that competition from new entrants can be maintained—for instance, the location of a proposed branch closing should be made available to any potential new entrant and the employee non-competing clause should not be used by the post-merging bank to affect new entry or another bank's effort to attract employees.

Session 7: Will the Changing Structure Change the Impact of a "Credit Crunch" on Small Business?

The Credit Crunch and the Availability of Credit to Small Business

Research by Diana Hancock and James Wilcox

Has the changing banking structure changed the effectiveness of monetary policy and monetary policy's impact on small business lending? If the Federal Reserve Board is forced to restrict the availability of credit to control the rate of economic growth and/or inflation, will the impacts on small business be changed?

The recent research most closely addressing these questions is the work of Diana Hancock and James Wilcox, who recently published their results in the *Journal of Banking and Finance.* In an article titled "The Credit Crunch and the Availability of Credit to Small Business," using data from 1989 to 1992, they set for th a number of findings:

- Banks reduced the total supply of bank credit after loan losses around 1990 reduced their capital. (Data were gathered from end-of-year call reports.)
- The heavy dependence of small businesses on banks for their credit needs means that a "capital crunch" on banks may affect small firms more than large firms.
- Real economic activity in small businesses did shrink more than in larger businesses around 1990.
- In response to declines in their bank capital, small banks shrank their loan portfolios considerably more than large banks did.
- Large banks were affected because of the correspondent relationship with small banks rather than because of business loan losses.
- Real economic activity was reduced more by loan declines at small banks than at large banks.
- Small banks were making more "high-powered" loans, since their loan declines had larger impacts on economic activity than the loan declines at large banks.
- The volume of loans made under the SBA 7(a) loan guarantee program shrank less in response to the declines in bank capital than did the volume of loans not made under the guarantee program.

Discussant: William Lang, Office of the Comptroller of the Currency

In summarizing the Hancock-Wilcox paper, Lang made the following points:

- Decreases in bank capital lead to decreases in the supply of bank loans, which lead to decreases in real economic variables. Consequently, banks are important in the macro economy.
- Small banks are more sensitive to capital constraints, and therefore their actions have larger macro multiplier impacts than larger banks. Consequently, allocation of credit to small banks is more important than allocations to large banks.

Lang raised several questions to be answered in evaluating the impact of the credit crunch:

1. Does finance matter for investment decisions?

Contrary to traditional theory, the new credit theory comes to the conclusion that finance does matter. Uncertainty and asymmetric information create a wedge between "external" and "internal" finance. A significant amount of research now exists showing that this wedge exists and significantly affects the allocation of capital at individual firms. Empirical papers have demonstrated that investment decisions are tied to cash flow and that this link is most significant for small firms, since the costs of obtaining information about these firms is high relative to the loan size.

2. Is the wedge between external and internal finance an example of a "market failure" or is the allocation of finance a "constrained optimal equilibrium"?

The existence of a wedge between the costs of internal and external finance is a capital market imperfection but not necessarily a capital market failure. The existence of a wedge tells us that endowments matter and thus might raise questions of social equity, but it doesn't necessarily mean that we could do better from an efficiency standpoint. However, the Hancock/Wilcox finding that small banks make "high-powered loans" lends support to the view that system design matters and can improve the efficiency of capital allocation.

3. Do these imperfections in the capital markets have macroeconomic significance? Is this credit channel and (in particular bank credit) an important component of monetary policy and why?

The empirical evidence clearly indicates that loans and real activity at small and relatively information-intensive borrowers are significantly more sensitive to monetary contractions. Small (or informationally intensive) businesses react more quickly and more intensely to monetary shocks relative to larger firms.

The pro-cyclical nature of asset valuations and the availability of information from market activity have much to do with the cyclicality of small business credit and consequently the cyclicality of small business activity. For example, since a borrower's net worth is used as a "substitute" for costly efforts to obtain information and to monitor activities of the firm, pro-cyclical variation in net worth leads to an exacerbation of shocks to the economy.

In addition, entrepreneurial activity involves the creation of new markets and new products. Thus the quality of information produced by the market about these activities is pro-cyclical, and this effect is particularly important in thin markets. Financial intermediaries can mitigate these risks through "relationship lending." Relationship lending creates private incentives for information creation since the information obtained is not easily captured by third parties.

4. Does the structure of financial institutions matter for economic performance? Are banks special and why? How important are relationships in the lending decision? Are small banks different from large banks and why?

The Hancock/Wilcox paper (as well as other research) shows that shocks to the supply of bank loans (capital of banks, supervisory ratings) have macro impact. In other words, there are no perfect substitutes for bank credit. Banks can better establish "special relationships" relative to other intermediaries.

Does bank size matter? Indications are that smaller banks are better or more willing to make loans to small firms.

If relationship lending is profitable, why don't large banks do it? There is not a great deal of economic theory on organizational forms and outcomes. Stiglitz has done some work on this that argues that large organizations have incentives for creating hierarchies that make it more difficult to base decisions on less formal information sources.

5. What issues are raised by the changing structure of the banking system? Will banking consolidation reduce the importance of relationship lending? Are banks losing their "specialness"? Will technology enable non-banks to acquire the same information and develop the same types of relationships as banks? What will be the overall impact of financial deepening (credit scoring, securitization, etc.) on the efficient allocation of capital and the riskiness of small and large banks?

Lang felt that the Hancock/Wilcox results indicating that small bank lending was more sensitive to capital declines had several causes:

- During the recession of the 1980s there was the traditional flight to quality in bank lending. Thus small business lending declined, while loans to large businesses increased.
- In addition, when capital accounts of banks fall because of loan losses, small banks face a more severe capital constraint since they are less able to access the capital markets to obtain additional funding. Thus the activity of small banks, like that of other small businesses, is more sensitive to the availability of funds and to cash flow.

Banks appear to be losing their uniqueness in providing small businesses with credit. Overall, this financial deepening is a boon to small business entrepreneurs, who benefit from the greater competition generated by the changing financial structure.

Concluding Session: Are Policy Actions Needed?

Thomas Hall, Capital Studies, Milken Institute

Hall began by emphasizing Rep. LaFalce's statement on the importance of viewing policy not solely for its effect on the macro-economy, but also for its effect on individuals, especially those who may be excluded from the credit markets. Hall also reiterated Glover's statement that small firms need and use credit (as opposed to equity) as their primary form of external finance; and referred to Rep. Leach's reminder that within recent memory, small businesses have created more jobs than Fortune 500 firms have.

Hall noted that the major purpose of this conference was to examine the link between policy and research, and how research can aid the policy process in ensuring that the changing nature of the financial services industry will not negatively affect small business access to capital. Research progresses more or less linearly, with a growing number of papers written each year. Policy reform progresses in a mostly non-linear fashion, as was evidenced last year with the passage of the Gramm-Leach-Bliley bill, which essentially repealed the decades-old Glass-Steagall restrictions on the financial services industry in one stroke. Data availability and research are now in the phase of catching up to this recent surge in policy reform, so any objective jury will be out on this new legislative change for quite some time.

Hall then turned to the effect on small business of merger and acquisition activity in the banking and financial sector. With some 10,000 mergers since 1980, it appears that the various regulators are doing their job, in that this activity has not translated into non-competitive markets. This situation stems in large part from much new entry; despite voluminous M&A activity, more than 8,000 banks still exist in the United States. Indeed, the research presented here shows that the statistical effect of market power is not that evident. The M&A activity might affect minority-owned, rural, and women-owned businesses, but the industry will probably continue to be competitive as long as it remains a hotbed of innovation.

As technological innovation continues to shift the spectrum from relationship banking toward impersonal and Internet transactions, smaller banks (which are small businesses) that specialize in personal relationships will be under pressure, unless they can squeeze profitability out of their special community knowledge. There are natural limits to how far the spectrum can shift toward impersonal relationships—the digital divide applies to small borrowers, for example. This will mean that some people won't have access to even the most accessible on-line loan applications. The idea of "smart-bots" for comparison shopping of various loan terms will certainly allow small business people to maximize their options and will serve to keep markets competitive.

Hall referred to an earlier discussion concerning subsidizing loans for small business. He noted that before subsidies are considered, decision makers should address a series of related policy issues:

- Are there any remaining regulatory blockages that hinder the flow of capital to small business? For instance, are large financial service firms permitted to hold securitized packages of small business loans—and if so, are they properly placed in the regulatory risk spectrum (i.e., in which risk tranche are such holdings permitted for purposes of capital adequacy and diversification of asset requirements)?
- If large-scale securitization of small business loans is to occur, how will the moral hazard issue (i.e., the only firms that apply for loans are those which were shut out of the traditional bank loan process) be overcome?
- Rep. Leach noted that with the passage of Gramm-Leach-Bliley, there is likely to be more secondary market activity for small business loans. He noted, however, that Farmer Mac

provides an example of how not to stimulate a secondary market, and pointed to that experience as something to avoid. The question remains whether or not there are any lessons for small business loan securitization that could be learned from examination of what made the secondary home mortgage market possible and successful.

Hall said he looks forward to assessing the future effects on small business of change in the financial services industry. The growing international nature of capital markets was not covered in any of the discussions. Although the United States has in many ways the most sophisticated markets in the world, there will be at least some effect from the internationalization of the financial services industry. Will this internationalization increase or decrease the likelihood or impact of a future credit crunch? More research is needed to determine these impacts on women-owned, rural, and minority-owned businesses. Clearly, in the wake of upheavals being brought about by the enactment of Gramm-Leach-Bliley, more research will be needed in order to determine the impact on small business access to capital. It may well be 10 or 20 years before questions concerning the effect of recent regulatory and policy changes on small business financing can be answered with confidence.

Summary

Despite all the merger activity, most of the markets serving small business remain competitive. Entry (or the potential for entry) into local markets by existing competitors, out-of state competitors, and *de novo* banks appears to be taking place. Indeed, the research presented here shows that the statistical effects of market power are not evident. If there is a negative effect on minority-owned, rural, and women-owned businesses, that effect needs to be addressed with further research. (For example, Avery and Samolyk found that loans tend to decrease after mergers in rural areas: this is an area for further exploration.)

The impact of technological changes and product innovation on small business lending is indeterminate at this time. These changes are shifting banks' lending policies between relationship lending and toward transaction-based lending. A good definition of the two terms is:

- Relationship lending: the close personal relationships between bankers and small business owners that are prevalent, for example, in small towns;
- Transaction-based lending: the impersonal nature of computerized capital market transactions exemplified by deep and liquid international markets for currency, bonds, and equities.

The Internet will tend to shift the spectrum toward more transaction-based lending. Because of the lower transaction costs of credit scoring models in small business lending and because of economies of scale, large banks have found it profitable to increase small business lending. Credit scoring may also facilitate the securitization of small business lending by standardizing and quantifying credit information requirements and credit evaluation criteria.

The impact of these technological changes on small community banks, because of economies of scale, may not be desirable. As White commented, smaller banks (which are small businesses) that specialize in personal relationships will be under pressure unless they can squeeze profitability out of their special community knowledge. There are limits to how far the spectrum can shift—the digital divide applies to small borrowers, and that will mean some people do not have access to even the most accessible on-line loan applications. On the other hand, technologies will continue to evolve to enable small banks to offer services and products in competition with large banks. Ann Grochala's example of "smart-bots" for comparison shopping of various loan terms will certainly allow small business people to maximize their options and will serve to keep markets more competitive.

Rep. Leach pointed out the potential benefits from the development of a secondary market for small business loans and from the enactment of Gramm-Leach-Bliley. "Are there lessons for small business loan securitization that we could learn by examining what made the secondary mortgage market possible and successful?" Leach asked. More transaction-based lending should encourage more large bank lending for securitization in the secondary market.

In his argument for continuous scrutiny of regulatory problems, Hall asked, "Should large financial service firms be able to hold securitized packages of small business loans—and if so, will they be properly placed in the regulatory risk spectrum (i.e., in which risk tranche are such holdings permitted)?"

The real unknown is how the changing banking structure and the changing technology used in banking will affect small business lending during the next tight money period and in the next recession. The "credit crunch" in the early 1990s had more significant negative impacts on small banks and small businesses, making the recession more serious. Whether the stronger national and regional banking systems that have developed since then, with more transaction-based

lending, will reduce or magnify these impacts will be unknown until the next downturn. But the policy makers need to be concerned that the negative impacts may be magnified.

As always, the plea is for more and better data. The annual call reports and CRA data are a start. More frequent National Surveys of Small Business Finances would be helpful. Having the bank regulatory agencies interested in these issues is crucial: thanks to those who participated as presenters. Thanks also to the academic community for their help in making the conference successful in advancing the understanding of the changing banking structure's effects on small business.