The Evolving Relationship between Community Banks and Small Businesses: Evidence from the Surveys of Small Business Finances

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September 2008

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The views expressed in this paper are those of the authors, and do not necessarily reflect the views of the Board of Governors or its staff. The authors thank Courtney M. Carter and John A. Holmes for valuable research assistance.

I. Introduction

Community banks have played an important role in the U.S. economy throughout its history. Their prominent role in providing loans and other financial services to small businesses within their local communities has been particularly noteworthy. In recent years, technological and legal developments, as well as changes in the business strategies of larger banks and non-bank financial service providers, have purportedly made it more difficult for community banks to attract and retain customers. Consistent with this view, the shares of bank branches, deposits, banking assets, and small business loans held by community banks in the U.S. have declined substantially over the past two decades.

This paper uses data from the Federal Reserve Board's 1998 and 2003 Surveys of Small Business Finances (SSBFs) to examine the evolving relationship between community banks and small businesses. Specifically, we consider (i) the extent to which small businesses used community banks as providers of financial services, (ii) the types of small businesses that were most likely to obtain financial services from community banks, and (iii) the types of financial services small businesses were most likely to obtain from community banks, in both 1998 and 2003. We estimate a number of reduced form models that attempt to explain observed patterns of community bank usage by small businesses in each year and explore changes in small business usage of community banks over the five-year period between surveys. We estimate separate models for firms that use any financial service, for firms using at least one credit product (loans, credit lines, and capital leases) and for firms using at least one line of credit.

Our results suggest that (i) small business usage of financial services and financial service providers have been growing over time; (ii) the share of small businesses using

community banks has declined over time, but the average number of financial services obtained by a small business from a community bank has not fallen; (iii) the smallest, youngest, riskiest small businesses are not significantly more likely to use a community bank than are larger, older, less risky small businesses; and (iv) the scope of a small business' financial services needs, the size of its local market, and the preponderance of community banks in its local market are all important determinants of community bank usage. These results were generally consistent across the full sample, the credit product sample, and the line of credit sample.

The remainder of this paper is organized as follows: Section II briefly reviews the previous literature on the relationship between community banks and small businesses; section III describes patterns of usage of financial services and financial service providers by small businesses; section IV presents our analysis of the determinants of community bank usage by small businesses; and section V concludes our paper.

II. Review of the Previous Literature

A considerable body of scholarly research focuses on the different roles that community banks and larger banks play in the provision of credit to small businesses. One strand of this research focuses on the significant consolidation that has occurred in the U.S. banking industry over the past two decades, and its implications for the availability of credit to small businesses (see, for example, Berger et al. (1998), Critchfield et al. (2004), Avery and Samolyk (2004), and Hein et al. (2005)). The number of banks chartered in the U.S. has declined by more than 47 percent, from about 16,400 as of mid-year 1989 to about 8,600 as of mid-year 2007, with most of this decline

being due to mergers and acquisitions.[1] Although this consolidation has not diminished community banks' share of all banks in the U.S., it has led to substantial declines in community banks' shares of bank branches, domestic bank deposits, domestic banking assets, and small business loans (see figure 1).[2]

Policymakers and researchers have long been concerned that the consolidation of the banking system, and in particular the acquisition of smaller banks by larger banks, may lead to a reduction in lending to small businesses. A number of studies examining the effects of bank size on the supply of small business credit find that larger banks tend to allocate a smaller portion of their assets to small business lending than do smaller banks (e.g., Berger et al., (1995), Strahan and Weston (1996), Keeton (1995)). Other studies, focusing specifically on bank consolidation, find evidence that the ratio of small business loans to assets declines following mergers and acquisitions (e.g., Berger et al. (1998), and Strahan and Weston (1998)). More recently, a few studies have found evidence that the potential reduction in small business lending following mergers is mitigated in local markets by other banks expanding their supply of small business credit and by the creation of *de novo* banks in the affected markets (Berger et al. (1998), Avery and Samolyk (2004), and Berger et al. (2004)).

A second strand of research focuses on identifying differences between the production technologies used in small business loan underwriting by community banks and larger banks, and empirically measuring the importance of firm-lender relationships

[1] Here and throughout this paper, the term bank includes commercial banks, savings banks, savings and loan associations, cooperative banks and industrial banks.

[2] Throughout this paper, the term "community bank" refers to independent banks with total assets less than $1 billion, and banks that are subsidiaries of holding companies with total organizational banking assets less than $1 billion, all in 1998 constant dollars. As a robustness check, we re-ran our analyses defining community banks to include independent banks with total assets less than $1 billion and banks that are subsidiaries of holding companies with total organizational banking assets less than $10 billion, all in 1998 constant dollars. The results were essentially unchanged from those reported.

for the provision of credit to small businesses. The general hypothesis underlying this research is that relationships are more important to community banks than to larger banks. Berger and Udell (2002) define relationship lending as a technology dependent on the process of acquiring soft information that is gathered by the loan officer through interactions with the firm, its owner, and the community. Stein (2002) shows that large, hierarchical organizations are better able to deal with hard information than soft information because it is easier to pass information up the hierarchy when its interpretation is independent of the producer. Berger and Udell (2002) reach similar conclusions.

Most of the empirical studies in this area have used data from the Federal Reserve Board's Surveys of Small Business Finances. Examples of such studies include Petersen and Rajan (1994, 1995), Berger and Udell (1995), Cole (1998), Berger et al. (2005), and Cole et al. (2004). These studies generally find that relationships are important determinants of credit availability for small businesses. Cole et al. (2004) and Berger et al. (2005) provide empirical support for the hypothesis that larger banks rely more heavily on hard information than do community banks in their loan approval decisions. These studies present evidence that larger banks are less willing to lend to informationally opaque credits; have shorter and less exclusive relationships; and are more likely to use financial and other hard data in their loan underwriting models than are community banks.

One paper which does not find an advantage for small banks in small business lending is Jayartne and Wolken (1999). They report that the probability of a small firm having a line of credit from a bank does not decrease, in the long run, when there are

fewer small banks in the area. Furthermore, using late repayment of trade credit as an indicator that a firm is credit constrained, they find that firms located in markets with few small banks are no more likely to repay trade credit late than are firms located in markets with many small banks, suggesting that having few small banks in the market does not increase the likelihood that firms will face credit constraints.

Most relevant to our study is the fairly limited body of small business lending research that analyzes the use of community banks from the small business borrower's perspective. Jayartne and Wolken (1999) test the hypothesis that small banks have a cost advantage in small business lending by considering whether marginal small businesses (firms with poor credit histories and very young firms) that have a line of credit are more likely to obtain their line of credit from a community bank (as opposed to a larger bank) than are non-marginal small businesses. Controlling for several firm and market characteristics, they find that firms with poor credit histories and young firms were no less likely to get a line of credit from a large bank than firms with good credit histories and older firms. Hence, to the extent that marginal firms require closer scrutiny from their lenders than do non-marginal firms, this result suggests that large banks do not suffer from a cost disadvantage in monitoring small business loans.

Cole et al. (2004) attempt to determine whether firms' characteristics influence the type of bank (small vs. large) they apply to for loans in a manner that is consistent with the findings of the relationship banking literature. They hypothesize that if loan applicants believe that community banks focus more heavily on soft information and large banks focus more heavily on objective information (the cookie-cutter hypothesis), then firms should apply for loans at the type of bank which, given the firms'

characteristics, would be most favorable towards their applications. They find weak support for the hypothesis that "small firms believe that small banks reward character and relationships while large banks favor formal numbers over character" (Cole et al., p. 240).

Berger et al. (2007) extend this line of research by examining the effects of the size distribution of banks in a market on the choice of community vs. large bank for a new line of credit. Using data from the 1993 SSBF, they find that the probability of a small business borrowing from a bank in a particular size class is not declining with bank size, but is roughly proportional to the market share of that size class. These results suggest that large banks do not face a disadvantage in lending to small businesses.

Scott (2004) uses survey data from the National Federation of Independent Businesses to assess the value of community banks to small businesses. The survey asked business owners to rank the importance of a set of characteristics regarding their relationship with their primary financial institution, and then to rank their primary institution's performance on those characteristics. Several of those characteristics are related to the production of soft information, such as knowledge of the owner and his or her business, knowledge of the firm's industry, and knowledge of the local market. Using a composite measure of soft information production derived from these rankings, Scott finds that small firms doing business with community banks rate their banks' performance higher than do small firms doing business with large banks. He interprets this result as being consistent with the view that small banks are better than large banks at soft information production. He also considers whether the strength of the firm-bank relationship, as measured by duration of relationship and loan officer turnover, is

positively related to performance ratings, and finds a significant effect for the latter, but not the former measure.

In the study most closely related to our own, Haynes et al. (1999) use data from the 1993 SSBF to estimate equations explaining the probability that a firm obtains loans only from community banks; the probability that a firm obtains loans only from large banks; the share of loans obtained from community banks; and the share of loans obtained from large banks. They find that larger small businesses and small businesses located in urban areas are less likely to obtain loans only from community banks and more likely to obtain loans only from larger banks than are smaller small businesses and small businesses located in rural areas. They also find that the share of a firm's loans held at small banks (large banks) declines (increases) as the size of the firm increases, and is lower (higher) in urban than in rural markets. The effects of other variables, such as firm age, firm quality, industry, and geographic region on the use of small vs. large banks are of mixed signs and often insignificant.

Our paper differs from the existing body of literature in several ways. First, we focus on the choice of bank size from the perspective of the small business firm. With the exception of the last few studies mentioned above, most previous research has either examined these issues from the supply (bank) perspective, or attempted to infer bank behavior from firm characteristics (see Berger et al., (2007), pp. 14-16). Second, we consider the entire set of financial products and suppliers utilized by the firm (in addition to separately examining firms' use of credit products in general and lines of credit specifically). Although several studies mentioned above have a similar focus, most of these studies limit their scope to the firm's choice of provider for a line of credit. This

restriction certainly has advantages – bank-specific information and loan characteristics can be incorporated into the models – but these advantages come at the expense of generality. Focusing on lines of credit substantially reduces the sample size and ignores other types of loans, as well as the many non-loan financial services used by small businesses. Third, we extend the research by incorporating characteristics of the local banking markets, including the relative importance of community banks in these markets. And finally, our analysis uses data from the 1998 and 2003 SSBFs, whereas previous studies have generally utilized only the 1987 and 1993 survey data.

III. Univariate Analysis

We use data from the Federal Reserve Board's 1998 and 2003 Surveys of Small Business Finances to study small businesses' use of financial services and financial service providers. The data from the two surveys are representative of U.S. businesses that were for-profit, non-financial, non-agricultural enterprises, with fewer than 500 workers and that were in business at the end of the survey year (1998 or 2003). The data include information about the firm, its organizational structure, characteristics of its owners, its financial condition (credit scores, self reported credit history, balance sheet and income statement), the financial services used by the firm (loans, trade credit, credit cards, etc.), and the banks and other financial sources from which it obtained its financial services (see Bitler et al. (2001) and Mach and Wolken (2006)).[3] For each of the two

[3] Both the 1998 and 2003 Surveys of Small Business Finances were fielded by the National Opinion Research Center. The sample frame was the Dun & Bradstreet Market Identifier file (Dun's Marketing Service, Dun & Bradstreet, Inc.). The target population is defined as U.S. domestic for-profit, nonfinancial, nonsubsidiary, nonagricultural, nongovernmental business enterprises with fewer than 500 employees that were in operation on December 31st of the survey year (e.g, 1998 and 2003). In the 2003 SSBF, firms must also have been in business at the time of the interview. The 1998 survey has 3,561 observations representing 5.3 million firms; data were collected between June 1999 and February 2000. The 2003

years, we restrict our sample to those firms that report obtaining at least one financial service from a bank or thrift and for whom we were able to identify the sizes of all of the banks and thrifts used by that firm.[4] Our sample size is 2790 firms in 1998 and 3800 firms in 2003.

A. Firm and Banking Market Characteristics

Table 1 presents an overview of the characteristics of small businesses and the banking markets in which they were located in each survey year.[5] The average small business had 9 employees in each period and had been in existence for about 14 years.[6] Average sales (measured in 1998 dollars) increased slightly, from just under $1 million in 1998 to just over $1 million in 2003, while average assets increased more substantially, from about $410,000 to about $515,000. Firm organizational forms shifted somewhat between 1998 and 2003, with the shares of firms organized as partnerships and S-corporations rising and the shares of firms organized as proprietorships and C-corporations declining. The distribution of firms across industries was quite similar in the two periods, with business and personal services together accounting for more than 40

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survey has 4,240 observations representing 6.3 million businesses; data were collected between June 2004 and January 2005.

[4] During the survey, information was collected on the name and location of the branches of banks and thrifts used by small businesses. In order to determine the size and other characteristics of the banks and thrifts used by small businesses, the information on the names and branch locations of banks and thrifts was matched with information from the National Information Center to obtain bank identification numbers. The bank identification numbers were then used to obtain bank and thrift characteristics, including size, from the Call report files. In 2003, approximately 95 percent of the banks and thrifts were matched, whereas in 1998, approximately 88 percent of the banks and thrifts were matched. Matches were not possible when firms did not know or refused to provide the name and location of the institution, or when the name and location contained errors. In order for a firm to be included in our estimation sample, the identities of all of the banks and thrifts reported by the firm had to be known.

[5] A banking market is defined as a Metropolitan Statistical Area or rural county.

[6] All estimates in this study are weighted using sampling weights that account for nonproportional stratified sampling (large firms were oversampled) and nonresponse adjustments that differed by type of firm. These statistics can be interpreted as estimates of population (rather than sample) parameters.

percent of firms; retail trade comprising about 20 percent of small businesses; construction making up about 12 percent; and manufacturing, transportation, wholesale trade, and finance, insurance and real estate each accounting for less than 10 percent of the total.

In each year, about 80 percent of small businesses were located in a metropolitan statistical area (MSA). Between 1998 and 2003, the average population of the banking market in which a small business was located increased from about 1.96 million to about 2.13 million, and the average share of market banks that were community banks declined from 0.60 to 0.54.

B. Overview of Use of Financial Services and Financial Service Providers

Tables 2 and 3 summarize small business usage of financial services and providers. Between 1998 and 2003, small businesses, on average, expanded their use of both financial service providers and financial services. The average small business used 2.43 sources for financial services in 2003, up from 1.96 in 1998. The average number of financial services used by a small business also increased, from 3.23 in 1998 to 3.98 in 2003.[7]

Almost all small businesses that obtained at least one financial service from a bank or thrift in each year had a checking account, and just over one fifth had a savings account. The share of firms using a credit product (credit line, loan, or capital lease)

[7] We group financial services into thirteen distinct products or services: deposit products (checking or savings), credit products (lines of credit, mortgages used for business purposes, equipment loans, motor vehicle loans, capital leases, and other loans), and financial management services (transactions and credit card processing, credit services, cash services, brokerage services and pension and trust services). The number of services can range from one to thirteen at each source; thus, the total number of services used by a firm can vary from a minimum of one to a maximum of thirteen times the number of sources used.

increased from 56 percent in 1998 to 63 percent in 2003, with most of the increase coming from greater use of credit lines and motor vehicle loans. Use of financial management services (transaction or credit card processing, cash services, credit services, trust services and brokerage services) increased quite dramatically, from just over half of small businesses in 1998 to more than two-thirds in 2003, with almost all of the increase stemming from a rise in the use of transaction or credit card processing services.[8]

Table 3 summarizes small business use of financial service providers for the full sample (Table 3A), the subsample of firms that have at least one outstanding loan or line of credit (Table 3B, top panel), and the subsample of firms that have at least one line of credit (Table 3B, bottom panel). As shown in table 3A, small businesses were less likely to use community banks at all, as their primary financial institution, or to the exclusion of larger banks, in 2003 than in 1998. In 2003, 31 percent of small businesses obtained at least one financial service from a community bank, down from 34 percent in 1998. The share of small businesses using a community bank as their primary financial institution declined from 28 percent to 25 percent during this time period, and the share of firms for which the only type of bank used was a community bank declined from 24 percent to 19 percent.

The average number of financial services that a small business obtained from community banks inched up from 0.75 in 1998 to 0.76 in 2003. At the same time, the average numbers of financial services obtained from larger banks and non-bank providers increased more substantially, from 1.72 to 2.10 and from 0.76 to 1.13, respectively. As a

[8] In 1998, transactions services included credit card processing; in 2003, credit card processing services were split off from transactions services and were combined with a new question about the use of debit and credit card processing services. In this study, transactions and credit card processing services are combined into a single service for 2003. For additional information, see Mach and Wolken (2006), pp. 179-180.

result, the average share of financial services obtained from community banks declined from 24 percent in 1998 to 19 percent in 2003. Perhaps surprisingly, the average share of financial services obtained from large banks also declined, though less sharply, over this time period, from 59 percent to 58 percent. Non-bank providers, on the other hand, saw their share of financial services provided to small businesses rise substantially, from 17 percent to 23 percent over this time period.

As shown in the top panel of table 3B, the share of firms that had at least one credit product (outstanding loan, line of credit, or capital lease) from a community bank declined somewhat, from 0.28 in 1998 to 0.25 in 2003, while the shares of firms with credit products from larger banks or non-banks increased (from 0.57 to 0.62 and from 0.63 to 0.73, respectively). In addition, the average share of the total dollar value of outstanding loans and lines of credit from community banks decreased somewhat between 1998 and 2003, while the average shares from larger banks and non-banks each increased slightly. At the same time (as shown in the lower panel of table 3B), although small businesses were less likely to use community banks and more likely to use both big banks and non-banks for lines of credit in 2003 than in 1998, the average share of the total dollar value of lines of credit from community banks (whether measured by the credit limit or the outstanding balance) did not change during the five-year inter-survey period.

C. Detailed Examination of Use of Financial Services and Financial Service Providers

Tables 4 through 7 present information on usage of financial institutions and products by small businesses, broken down by firm characteristics. The first two panels

of each table show how usage varies with two different measures of firm size – number of employees and total sales. The remaining panels in each table show how usage of financial services and financial service providers vary with firm age, corporate status, geographic scope, type of market, credit score, and self-reported credit history.

1. Use of Financial Services (Tables 4 and 5).

The intensity of usage of financial services is strongly positively related to firm size in both years. The number of financial institutions used, number of financial services used, the breadth of the financial services used, and the number of services obtained from the primary financial institution were all monotonically increasing with firm size, measured by either number of employees or sales, in both years. The likelihood of having a loan, line of credit or capital lease (hereafter referred to collectively as credit products) increased with firm size, as did the likelihood of using financial management services.

Older firms generally used more financial institutions, more financial services, and more types of financial services than did younger firms. The likelihood of using any broad category of financial services (deposit products, credit products, or financial management services) is not systematically related to firm age. Corporations used more financial service providers, more financial services, and more types of financial services than did non-corporate firms. They were also more likely to use each broad category of financial services. Firms with offices outside of the local market area were more intensive users of financial services by all of the measures mentioned above than were strictly local firms. In 1998, small businesses located in rural areas were somewhat more

intensive users of financial services than were those located in urban areas; however this difference was not evident in 2003. Most measures of the intensity of financial service usage appear to be weakly positively related to a firm's creditworthiness, as measured by their D&B credit score category, but negatively related to their self-reported credit quality.

Finally, a comparison of tables 4 and 5 confirms that the intensity of financial service use has generally increased between 1998 and 2003 for small businesses of all types. The average number of sources, number of services, breadth of services and number of services at primary institutions are uniformly higher in 2003 than in 1998 for each subset of firms represented in the tables, with one exception.[9]

2. Use of Financial Service Providers (Tables 6 and 7)

In 2003, the share of firms using a community bank increased monotonically with firm size, and then fell rather precipitously for the largest size category (more than 100 employees, or sales greater than $10 million). In 1998 the pattern is similar when size is measured by sales, but it is less clear when size is measured by number of employees. There is no clear pattern to the relationship between firm size and having a community bank as the primary institution, except that in both years, firms in the largest size category were less likely to have a primary community bank. Larger firms were generally less likely to rely exclusively on community banks than were smaller firms in both time periods.

[9] The one exception is the average number of services obtained from the primary institution by firms with sales greater than $10 million, which declined from 4.07 in 1998 to 4.05 in 2003.

In general, community bank usage does not appear to vary systematically with firm age; however, in 1998 the oldest firms (age > 20 years) were more likely to use community banks at all, as their primary institution, and to the exclusion of larger banks, than were younger firms. In 1998, corporations were less likely to use community banks at all than were non-corporate firms (partnerships and proprietorships); in 2003, this difference was not apparent. However, in both years, corporations were less likely to use community banks as their primary institution or to use community banks exclusively than were non-corporate firms. Firms that had offices outside of the local market area were no less likely to use a community bank for at least one service than were strictly local firms, but they were less likely to rely primarily or exclusively on community banks.[10] Firms located in rural markets were much more likely to use community banks at all, as their primary institution, and exclusively, than were firms located in urban markets. There was no clear relationship between a firm's credit rating category and its likelihood of using a community bank in either year; however, in 1998 firms with good (self-reported) credit histories were somewhat more likely than those with poor credit histories to use community banks.

3. Use of Financial Service by Provider Type (Table 8)

We next consider the likelihood of obtaining each type of financial service from each type of provider. There was little change from 1998 to 2003 in the share of small businesses obtaining each broad category of financial service (i.e., deposit products, credit products, financial management services) from community banks; however, small

[10] In 1998 (but not in 2003), firms with non-local offices were actually more likely to use a community bank at all than were strictly local firms.

businesses were much more likely to obtain each type of financial service from a large bank or non-bank provider in 2003 than they were in 1998.

In 2003, 28 percent of firms obtained a deposit product from a community bank, as compared with 30 percent in 1998. The share of firms obtaining a credit product from a community bank and the share of firms obtaining a financial management service from a community bank both inched up from 14 percent in 1998 to 15 percent in 2003. Meanwhile, the share of small businesses obtaining a deposit product from a large bank increased from 71 percent to 75 percent, and the share obtaining a deposit product from a non-bank increased from 4 percent to 7 percent. Growth in large bank and non-bank provision of credit products and financial management services to small businesses was even more impressive. In 1998, 30 percent of firms obtained a credit product from a large bank and 29 percent obtained a credit product from a non-bank provider; in 2003, 37 percent of firms obtained a credit product from each of these sources. The shares of small businesses obtaining financial management services from large bank and non-bank providers increased from 31 percent to 43 percent and from 22 percent to 36 percent, respectively, between 1998 and 2003. Thus, the relative decline in the importance of community banks as providers of financial services to small businesses is largely due to growth in small business use of other types of financial service providers rather than a decline in small business use of community banks.

IV. Multivariate Models

In this section, we explore the determinants of small business usage of community banks by estimating a number of reduced form models.[11] The models are estimated for three separate subsets of firms: firms using any financial service, firms using at least one credit product (outstanding loan, line of credit, or capital lease) and firms having at least one line of credit. For each sample, we employ several different dependent variables which reflect both the propensity to use community banks (e.g., use at least one community bank or use community banks only) and the intensity of community bank usage (e.g., the proportion of the number of services at community banks or the proportion of dollar value of loans outstanding at community banks).

The right-hand-side variables are the same for each model and are intended to capture the firm characteristics and local market characteristics that are likely to influence the type of financial institution used by a small business. Firm characteristics included in our estimations are firm size (measured by dollar value of sales), firm age, an indicator of whether the firm is a corporation or not, an indicator of whether the firm has any offices outside of the local market area, the total number of financial products used by the firm, and two measures of the firm's creditworthiness (DB credit score and a composite index of the firm's and the owner's self-reported credit history). Age and size are each captured through a series of dummy variables indicating whether the firm falls within certain value ranges. This functional form allows for the possibility that size and age influence community bank usage in a nonlinear way. We also include an interaction between the smallest size category and the youngest age category to test whether firms

[11] All models are estimated using STATA's survey procedures, which use survey weights and stratification parameters to obtain robust estimates of coefficient standard errors.

that are both young and very small (and arguably the most informationally opaque businesses) differ from other small businesses in their use of financial service providers. Market characteristics include market size (measured by the log of population), an MSA indicator, and the fraction of banks in the market that are community banks. We also include a set of dummy variables indicating the Census Division in which the market is located, to control for regional differences that might influence community bank usage.

The previous literature suggests that community banks have a comparative advantage in serving smaller, younger, and perhaps more risky firms. Thus, we would expect that, other things equal, firms that are smaller, younger, are not incorporated, have lower DB credit scores, and have worse self-reported credit histories are more likely to use community banks or are likely to use community banks more intensively. *A priori*, we expect that firms that have offices outside of the local market area may be less likely to use community banks (or likely to use community banks less intensively) because they may prefer a financial institution with a larger geographic footprint than a community bank (e.g., one that has branches in all of the markets where the firm has offices). We also expect that, as the number of financial products used by a firm increases, the firm will tend to use a larger number of financial institutions; as a result, we expect that the likelihood that all of the financial institutions used by the firm are community banks will decrease. We do not necessarily expect an increase in the number of financial services used to affect the likelihood of using a community bank at all or the likelihood of using a community bank as the primary financial institution. We do not have any prior expectations regarding the effects of market size or MSA status on the likelihood of using a community bank, but we expect that the probability of using a community bank (or the

intensity of community bank usage) will be increasing in the fraction of market banks that are community banks.

Thus, our general model, to be estimated for three samples and across two years for various dependent variables has the following specification:

$$
\begin{aligned}
Y_i = f(&\beta_0 + \beta_1 SMALL_i + \beta_2 MID\_SIZE_i + \beta_3 YOUNG_i \\
&+ \beta_4 ADOLESCENT_i + \beta_5 MID\_AGE_i + \beta_6 YOUNG\ \&\ SMALL \\
&+ \beta_7 CORP_i + \beta_8 NLOC\_OFF_i + \beta_9 TNBR_i + \beta_{10} DB\_SCORE_i \\
&+ \beta_{11} POOR\_CREDIT_i + \beta_{12} LPOP_i + \beta_{13} COMM\_BNK\_PROP_i \\
&+ \beta_{14} URBAN_i + \sum_{j=15}^{22} \beta_j CENSDIV_{j-13,i}) + \varepsilon_i
\end{aligned}
\qquad (1)
$$

where Y_i is the value of one of our dependent variables (measures of community bank use) for firm i. $SMALL_i$ and MID_SIZE_i are dummy variables, equal to one if the observation is for a firm with sales less than or equal to $1 million or greater than $1 million and less than or equal to $10 million, respectively.[12] $YOUNG_i$, $ADOLESCENT_i$ and MID_AGE_i are dummy variables indicating whether firm i's age is in the range from zero through 5 years, above 5 years through 10 years, or above 10 years through 20 years, respectively.[13] $YOUNG\&SMALL_i$ is the interaction of YOUNG with SMALL. $CORP_i$ is a dummy variable equal to one if firm i is a corporation, and $NLOC\_OFF_i$ is a dummy variable equal to one if firm i has offices outside of the local market area. $TNBR_i$ is a count of the total number of financial services used by firm i.[14] DB_SCORE_i is a measure of the observed firm's credit rating obtained from Dun and Bradstreet, with a value

[12] Firms with sales above $10 million are the excluded category.
[13] Firms more than 20 years old are the excluded category.
[14] TNBR ranges from 1 to 13x(number of sources). See footnote 7 above.

ranging from zero to one hundred.[15] $POOR\_CREDIT_i$ is a composite index of the firm's and the owner's self-reported credit history. It is equal to one if (i) the firm or owner declared bankruptcy in the past seven years, (ii) judgments had been rendered against the firm or owner in the past three years, or (iii) the firm or owner had been 60 days or more delinquent on personal or business obligations one or more times in the past three years, and zero otherwise. $LPOP_i$ is the natural logarithm of the population of the market (MSA or rural county) in which firm *i* is located; $COMM\_BNK\_PROP_i$ is the fraction of banks in firm *i*'s market that are community banks; and $URBAN_i$ is a dummy variable equal to one if the market in which firm *i* is located is a metropolitan statistical area. The variables $CENSDIV_{2\text{-}9,i}$ are a set of dummy variables indicating the Census Division of the firm's headquarters office.[16]

A. Full sample: firms that use at least one financial service

1. Propensity to use community banks:

Our first set of models examines the factors affecting the likelihood that a small business uses community banks at all, uses a community bank as its primary financial institution, or uses community banks to the exclusion of larger banks. To this end, we use the probit methodology to estimate three different versions of equation (1) for each of the two years, where the dependent variables are (i) a dummy variable equal to one if the firm obtains at least one financial service from a community bank, and zero otherwise

[15] Higher values of *DB_SCORE* represent less risky firms. This variable was constructed by the Dun and Bradstreet Corporation and was obtained at the time the sample was drawn (April 1999 for the 1998 SSBF and February 2004 for the 2003 SSBF). It is an indicator of the likelihood that the firm will be able to pay its debt and trade credit obligations on time. It is estimated solely from business data and does not incorporate any personal information about the owners of the business.

[16] Division 1 is the excluded dummy variable.

(*COMM_BNK*); (ii) a dummy variable equal to one if the firm uses a community bank as its primary financial institution, and zero otherwise (*PR_COMM*); and (iii) a dummy variable equal to one if all of the banks used by the firm are community banks (*COMM_ONLY*).

The results of estimating equation (1) for each of the two years and each of the three dependent variables are presented in table 9. Columns 1 through 3 present the results for 2003 and columns 4 through 6 contain the results for 1998. Coefficient estimates for the individual Census Divisions are not reported in the table, but the results of tests for the joint significance of the eight regional indicator variables are reported.

The estimated coefficients on the size measures, *SMALL* and *MID_SIZE*, are generally consistent with our expectations. The coefficient on *SMALL* is positive and significant at the 0.05 level or better in the equations explaining use of community banks at all and use of a community bank as the primary institution, in both years. The estimated coefficient on *MID_SIZE* is also positive and statistically significant in these four equations, with a magnitude that is slightly (but not significantly) smaller than that of the coefficient on *SMALL* in all four cases.[17] Thus firms in the smaller two size categories (sales less than or equal to $1 million, sales greater than $1 million and less than or equal to $10 million, respectively) are significantly more likely to use a community bank at all or to use a community bank as their primary financial institution than are firms in the largest size category (sales greater than $10 million), in both 1998 and 2003. Contrary to expectations, there is no significant effect of firm size on the probability of using only community banks in either year.

[17] The F test results reported at the bottom of table 9 indicate that the coefficient on *SMALL* is not significantly different from that on *MID_SIZE* in any of the equations.

The estimated coefficients on the age variables (*YOUNG*, *ADOLESCENT* and *MID_AGE*) are insignificant in all six estimated equations. The estimated coefficient on *YOUNG&SMALL* is always positive, as expected, but is significantly different from zero only in the equation explaining *COMM_ONLY* in 2003. These results suggest that community bank usage is not systematically related to firm age;[18] however, in 2003, firms that were both young and small were more likely than other firms to have obtained financial services only from community banks.

The estimated coefficient on *CORP* is generally positive (contrary to our expectations), but never significantly different from zero. Firms with offices outside the local market area were significantly less likely to use community banks by any of our three measures in 2003, but not in 1998.

Community bank usage is strongly related to the scope of a firm's financial services needs, as measured by *TNBR*. As expected, the number of financial services used has a negative, statistically significant relationship with the likelihood of using only community banks. Interestingly, the estimated coefficient on the number of services used is positive and highly significant in the equation explaining *COMM_BNK* in both years, and in the equation explaining *PR_COMM* in 2003. The former result likely reflects the fact that as a firm uses more services, the number of financial service providers used increases, and the probability that at least one of those providers is a community bank increases as well. The reason for the positive relationship between *TNBR* and *PR_COMM* in 2003 is unclear.

[18] An F test for the joint significance of the three age variables, reported at the bottom of table 9, indicates that they are not jointly significant in any of the six cases. To check the robustness of the age results, we estimated several alternative specifications in which the age variable entered the model in linear form, in log form and through various discrete age categories. The results from all of these specifications are consistent with those reported above: age is generally not a significant explanatory factor.

Our measures of credit quality perform poorly in explaining community bank usage. If community banks are better able to lend to more risky firms, we would expect a positive coefficient on *DB_SCORE* and a negative coefficient on *POOR_CREDIT*. The estimated coefficients on both of these variables are always negative and statistically insignificant. This result cannot be attributed to a high correlation between the two variables, since it persists when we include either credit quality measure alone in our estimations.

The strongest predictors of community bank usage are our market variables. The likelihood of using a community bank, as measured by any of our dependent variables, is strongly negatively related to market size (*LPOP*), and strongly positively related to the fraction of market banks that are community banks (*COMM_BNK_PROP*). After controlling for market size, being located in an MSA (*URBAN*) has no significant effect on community bank usage. The coefficients on the eight Census Division indicator variables (not reported in the table) are never individually significant; but as a group they are jointly significant in explaining *COMM_BNK* in 2003.

2. Intensity of Community Bank Use:

Our second set of models employs two dependent variables that are intended to measure the strength of a firm's preference for community banks relative to other types of financial service providers. *COMM_IND* is an index that takes on a value of 1 if the firm uses only big banks; 2 if the firm uses both big banks and community banks and uses a big bank as its primary financial institution; 3 if the firm uses both big banks and community banks and uses a community bank as its primary financial institution; and 4 if

it uses only community banks.[19] Thus, higher values of the index are associated with a stronger preference for community banks. *COMM_SHR* indicates the percentage of a firm's financial services obtained from community banks. The equation explaining *COMM_IND* is estimated using an ordered probit model, and the equation explaining *COMM_SHR* employs an ordinary least squares (OLS) regression. The right-hand-side variables in these models are the same as those used in estimating the probit models.

The results of these estimations, reported in table 10, are generally consistent with those reported above. Firm size is an important determinant of strength of preference for community banks: The estimated coefficients on *SMALL* are positive and significant at the 0.10 level or better for both models in both years, suggesting that the smallest small businesses exhibit a stronger preference for community banks than do the largest small businesses. The coefficients on *MID_SIZE* are always positive and smaller in magnitude than those on *SMALL*, and are significantly different from zero only in 1998.[20]

There is no evidence of a systematic relationship between firm age and community bank preference in either year. Furthermore, the interaction between *YOUNG* and *SMALL* is never statistically significant, suggesting that younger small firms do not exhibit a stronger preference for community banks than do older small firms.

The estimated coefficient on *CORP* is not significantly different from zero in any of the equations. The estimated coefficient on *NLOC_OFF* is negative in every case; it is significant at the 0.10 level in the equation explaining *COMM_SHR* and significant at the

[19] This variable is not defined for firms that use a non-bank as their primary institution. In 2003, there were 200 firms, and in 1998, 170 firms that used a non-bank primary institution.
[20] The estimated coefficient on *MID_SIZE* is not significantly different from the estimated coefficient on *SMALL* in any of the four equations.

0.01 level in the equation explaining *COMM_IND* in 2003, but is far from statistical significance in both equations for 1998.

The scope of a firm's financial service needs, as measured by *TNBR*, is not systematically related to the share of financial products obtained from community banks. However, contrary to our expectations, there is a strong positive relationship between the number of financial services used and our community bank index. Although we are uncertain as to what is driving this result, we speculate that, because firms tend to use more financial service providers as the number of products used increases, it most likely reflects a tendency for firms to move away from exclusive reliance on big banks (the value of *COMM_IND* increasing from 1 to 2) as the scope of their financial services needs increases, rather than a tendency to move towards exclusive reliance on community banks (the value of *COMM_IND* increasing to 3 or 4).

Our measures of credit worthiness perform slightly better in these equations than in the propensity estimations. The estimated coefficients on *DB_SCORE* are negative (as expected) in every case and significant at the 0.10 level for both dependent variables in 1998. The estimated coefficients on *POOR_CREDIT*, on the other hand, are also negative (contrary to expectations), and statistically insignificant in all four estimated equations.

As in the propensity equations, the variables most strongly related to community bank preference are the market variables. Preference for community banks is negatively related to market size and positively related to the fraction of market banks that are community banks. The estimated coefficient on *URBAN* is negative in every case, but significantly different from zero only in the equation explaining *COMM_SHR* for 2003.

Once again, the coefficients on the Census Division indicators (not shown) are all individually statistically insignificant. As a group, these regional variables are significantly different from zero only in the equation explaining *COMM_SHR* for 2003.

B. Credit Product Sample: Firms that have at least one loan, line of credit or capital lease

In our third set of models, we limit the sample to those firms that have at least one credit product and employ four alternative dependent variables. The first (*COMM_BNK_LOAN*) is a dummy variable equal to one if the firm has at least one credit product from a community bank, and zero otherwise; the second (*COMM_BNK_LOAN_ONLY*) is a dummy variable equal to one if all of the firm's credit products are from community banks, and zero otherwise; the third (*SHR_NUMLOAN_COMM*) is the share of the number of the firm's credit products held at community banks; and the fourth (*SHR_BAL_COMM*) is the share of the combined balances of the firm's outstanding credit products held at community banks. The right-hand-side variables are the same as in our previous models. The first two equations are estimated using a probit model; the third and fourth equations are estimated using OLS. The results of these estimations, which are quite similar to those obtained for our first two sets of models, are reported in tables 11 and 12.

Small and mid-size firms were significantly more likely to have a credit product from a community bank in both 1998 and 2003 than were larger firms (those with sales greater than $10 million in 1998 dollars); however, they were not more likely to have all of their credit products from community banks. In 1998, both small and mid-size firms

had a significantly greater share of their credit products (measured either by number of products or outstanding balance) from community banks than did larger firms; in 2003 this was only true for mid-size firms. Neither firm age nor credit quality was significantly related to the likelihood of holding a credit product (or all credit products) from a community bank, or to the share of credit products obtained from community banks, in either year. The estimated coefficient on the interaction between *YOUNG* and *SMALL* varies in sign across equations and is never significantly different from zero. The estimated coefficient on *TNBR*, our measure of the scope of a firm's financial services needs, is significantly positive in the equation explaining *COMM_BNK_LOAN* and significantly negative in the equation explaining *COMM_BNK_LOAN_ONLY*, in both years; it is statistically insignificant in three of the four credit product share equations. As was true in our previous models, the estimated coefficients on *LPOP* are negative and highly significant, and the estimated coefficients on *COMM_BANK_PROP* are positive and highly significant, in all of the credit product equations in both years.

One minor difference between the models presented earlier and the current models involves the estimated coefficients on *URBAN*, the dummy variable indicating whether or not a firm is located in an urban market. In the models explaining the use of any financial services by the full sample of small businesses (tables 9 and 10), the coefficient on *URBAN* is generally negative but insignificant; however, in the models explaining credit product usage for the subsample of firms that have at least one credit product, the coefficient is always negative and is significantly different from zero in half of the cases.

C. Lines of Credit Sample: Firms that have at least one line of credit

Our last set of models is estimated for the subsample of firms that have at least one outstanding line of credit. The dependent variables in these models include two dummy variables and three share variables: *COMM_BNK_LINE* is a dummy variable equal to one if the firm has at least one outstanding line of credit from a community bank, and zero otherwise; *COMM_BNK_LINE_ONLY* is a dummy variable equal to one if all of the firm's outstanding credit lines are from community banks, and zero otherwise; *SHR_NUMLINE_COMM* is the share of the number of a firm's outstanding credit lines that are from community banks; *SHR_LCBAL_COMM* is the share of the outstanding balances on credit lines that are from community banks; and *SHR_LCLIM_COMM* is the share of the combined credit limits on all outstanding lines of credit that are from community banks. The right-hand-side variables are the same as in our previous models; the equations with dummy dependent variables are estimated using a probit model and the share equations are estimated using OLS. Results of these estimations are reported in tables 13 and 14.

Among firms that have a line of credit, those with sales less than $1 million (in 1998 dollars) are more likely to have at least one line of credit from a community bank and are likely to obtain a greater share of their lines of credit from community banks, compared with larger small businesses. Firm age is not a significant factor influencing the size of the banking organization from which small businesses obtain their lines of credit. The scope of a firm's financial services needs, as measured by *TNBR*, is positively related to the likelihood that the firm has at least one line of credit from a community bank and negatively related to the likelihood that it has all of its lines of

credit from community banks in both years; it is also positively related to two of the three line of credit share variables in 2003. The estimated coefficient on the poor credit quality indicator variable is negative in all five equations in 2003 and marginally significant in two of the three share equations. This suggests that, at least in 2003, small businesses with poor self-reported credit histories may have found it more difficult to obtain lines of credit from community banks (as opposed to bigger banks) than did firms with better self-reported credit histories. Firms located in urban markets generally obtain a smaller share of their lines of credit from community banks than do firms located in rural markets. As in all of our previous models, market size and community bank presence in the market are strong determinants of the use of community banks as sources of lines of credit.

D. Summary of Multivariate Results

Overall, the results of our multivariate estimations offer only weak support, at best, for the view that community banks have a comparative advantage in providing relationship banking services to small, young, high risk firms. We find that the largest small businesses (those with sales greater than $10 million) are less reliant on community banks as providers of a broad range of financial services, credit products as a whole, or lines of credit in particular than are smaller small businesses; however, we find no evidence that the very smallest firms (those with sales less than or equal to $1 million) are more likely to use community banks than mid-sized small businesses (those with sales greater than $1 million and less than $10 million). We find no systematic relationship between firm age and community bank usage in any of our samples. The

variables intended to measure firm risk (*CORP*, *DB_SCORE*, *POOR_CREDIT*) all perform poorly in explaining community bank usage. These results are similar to those of Haynes et al. in their examination of the determinants of the choice of banks for loans, using 1993 data.

We find evidence that two firm characteristics that have not been considered in previous studies – having offices outside the local market area, and the total number of financial services used (*NLOC_OFF* and *TNBR*) – are significantly related to community bank usage. In 2003, firms with offices outside the local market area are significantly less likely to use a community bank at all, as their primary financial institution, or to the exclusion of bigger banks, and exhibit significantly weaker preferences for community banks, as measured by both *COMM_IND* and *COMM_SHR*, than firms with only local offices. These effects are not apparent in the 1998 data for any of our samples or in the credit product sample or the line of credit sample in 2003. Taken together, these findings suggest that firms with non-local offices differ from those with only local offices in their usage of community banks as providers of non-credit products – most likely financial management services.[21]

In both years and in all three of our samples, we find that firms using a greater number of financial services are less likely to use a community bank exclusively, but more likely to use a community bank at all; these firms also exhibit higher values of our community bank preference index.

Finally, we find that market characteristics – specifically market size and the share of banks in the market that are community banks – strongly influence all of our

[21] Recall that the use of financial management services by small businesses increased sharply between 1998 and 2003, while the use of deposit products remained essentially unchanged.

dependent variables in all of our samples. The likelihood of using a community bank at all, as the primary financial institution, or exclusively, declines as market size increases and rises as the share of community banks in the market increases. The strength of preference for community banks also shows a negative relationship with market size and a positive relationship with community bank share in the market. These results are consistent with the findings of Berger et al. (2007) for lines of credit in an earlier time period.

The results described above are robust to a variety of alternative specifications. The age and size variables were entered into the model in various different ways (linear, log, alternative categorical boundaries, and interacted with each other) and several different representations of the credit quality variables were utilized, with no appreciable effect on the results. Industry dummy variables were included, but were never jointly significant. We also estimated our models using an alternative community bank definition (defining community banks to include independent banks with total assets less than $1 billion and banks that are subsidiaries of holding companies with total organizational banking assets less than $10 billion, all in 1998 constant dollars). Again the results were similar to those reported above. These alternative results are available from the authors upon request.

V. Conclusion

In this paper, we provide new evidence on the use of community banks by small businesses. Using data from the 1998 and 2003 Surveys of Small Business Finances, we examine patterns of usage of financial services and financial service providers. We find

that small business usage of financial services and financial service providers expanded between 1998 and 2003, and that the incidence of small business usage of community banks declined somewhat over this time period. In both survey years, larger firms, older firms, corporations, and firms with offices outside the local market area of their headquarters were more intensive users of financial services. There was little change from 1998 to 2003 in the share of small businesses obtaining each broad category of financial service from community banks; however, small businesses were much more likely to obtain each type of financial service from a large bank or non-bank provider in 2003 than they were in 1998.

Our multivariate analysis provides little support for the view that community banks have a comparative advantage in serving the smallest, youngest, riskiest small businesses. The relationships between community bank usage and firm size, firm age, corporate status, credit score, and self-reported credit history are all weak or nonexistent. We do, however, find evidence that a small business' geographic scope and the extent of its financial service needs (as measured by the number of financial services used) significantly influence its likelihood of using a community bank. We also find that market characteristics such as size and the share of community banks in the market are important determinants of community bank usage patterns.

Our results are robust to a number of factors including an alternative community bank definition, alternative variable specifications, and different subsamples of products used by small businesses. It may be, however, that the heterogeneous nature of small businesses and business owners, combined with a modest sample size, limits our ability to disentangle the firm and owner effects from the market variables which seem to

dominate our findings. Richer data sets could help. However, future research should probably focus on developing structural models that might be capable of identifying the separate demand and supply factors that influence the use of community banks by small businesses.

Figure 1
Community Bank Shares 1989-2007
(Percent)

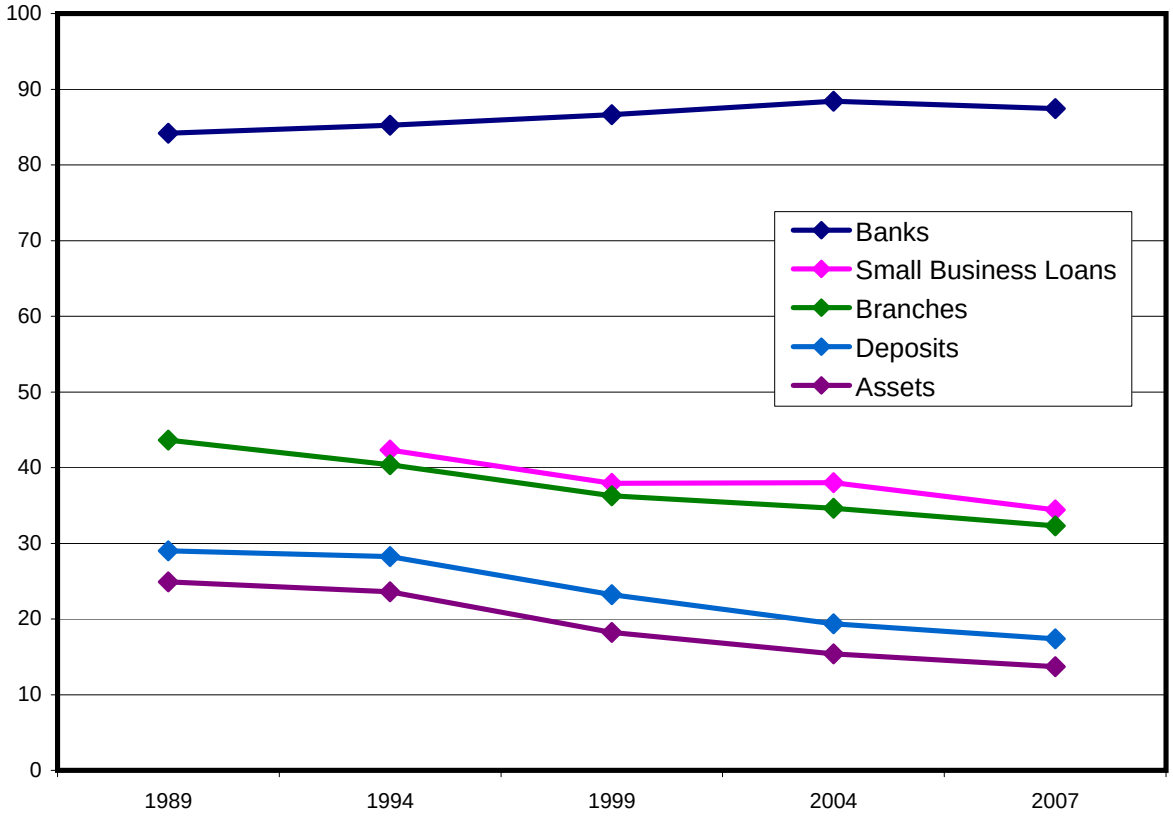

TABLE 1. Mean Firm and Banking Market Characteristics

Firm Characteristics	**2003**	**1998**
Firm Size		
Total Employment	9.01	8.99
Sales (1998 dollars)	$1,013,753	$993,849
Assets (1998 dollars)	$515,346	$411,033
Firm Age (years)	14.39	13.52
Organizational Form*		
Proprietorship	0.42	0.46
Partnership	0.09	0.07
S-Corporation	0.32	0.25
C-Corporation	0.17	0.22
Numbers of Offices		
Offices total	1.33	1.41
Offices local	1.17	1.10
D&B Credit Score	52.85	51.87
Poor Credit History*	0.24	0.22
Industry*		
SIC1 Construction	0.12	0.12
SIC2 Manufacturing	0.07	0.09
SIC3 Transportation	0.04	0.04
SIC4 Wholesale	0.06	0.08
SIC5 Retail	0.19	0.20
SIC6 FIRE	0.07	0.06
SIC7 Business Services	0.24	0.23
SIC8 Personal Services	0.21	0.19
Market Characteristics		
Urban*	0.80	0.79
Population (000s)	2127.40	1963.01
Prop of Market Banks that are Community Banks	0.54	0.60
Numbers of Observations**	3805	2790

*Categories are based on 0-1 dummy variables. Means represent the proportion of firms where the variable = 1.

**Sample includes only firms that used at least one commercial bank or thrift and for which the identity of all thrifts and banks are known.

TABLE 2. Use of Financial Services - Means

Services/Sources	2003	1998
Total number of sources	2.43	1.96
Total number of services**	3.98	3.23
Deposit Products*	0.99	0.99
Checking	0.99	0.98
Savings	0.23	0.22
Credit Products*	0.63	0.56
Line of Credit	0.36	0.28
Mortgage	0.14	0.13
Motor Vehicle Loan	0.26	0.20
Equipment Loan	0.11	0.10
Capital Lease	0.09	0.10
Other loan	0.10	0.10
Financial Management Services*	0.67	0.52
Transactions and Credit Card Processing	0.59	0.43
Cash Services	0.07	0.06
Brokerage Services	0.05	0.05
Trust Services	0.18	0.13
Credit Related Services	0.05	0.03

*Categories are based on 0-1 dummy variables. Means represent the proportion of firms where the variable = 1.

**The total number of services ranges from 1 to 13 for each firm institution pair, and can range from 1 to 13 * the number of sources for each firm. The thirteen services include two deposit products (checking and savings), six credit products (lines of credit, mortgages, capital leases, motor vehicle loans, equipment loans, and other loans) and five financial management services (transactions and credit card processing, cash services, brokerages services, trust services, and credit related services).

TABLE 3A. Use of Financial Service Providers - Means

	2003	1998
Full Sample*		
Use a Community Bank	0.31	0.34
Use a Big Bank	0.81	0.76
Use a Non-bank	0.59	0.42
Primary Inst. is a Community Bank	0.25	0.28
Primary Inst. is a Big Bank	0.70	0.67
Primary Inst. is a Non-bank	0.05	0.05
Use Community Banks Only	0.19	0.24
Use Big Banks Only	0.69	0.66
# of Community Banks Used	0.34	0.38
# of Big Banks Used	1.09	0.90
# of Non-banks Used	1.00	0.67
# of Services from Community Banks	0.76	0.75
# of Services from Big Banks	2.10	1.72
# of Services from Non-banks	1.13	0.76
Share of Services from Community Banks	0.19	0.24
Share of Services from Large Banks	0.58	0.59
Share of Services from Non-banks	0.23	0.17

NOTES:

* The 2003 main sample contains 3,805 firms; The 1998 main sample contains 2,790 firms; the 2003 loan sample contains 2,689 firms; the 1998 loan sample contains 1,735 firms; the 2003 line of credit sample contains 1,781 firms; and the 1998 line of credit sample contains 1,018 firms

For variables that are 0-1 dummy variables the means represent the proportion of firms where the variable = 1.

Firms that 'Use Community Banks only' or 'Use Big Banks only' use only one type of bank. However, these firms may also use non-bank financial service providers for some products or services.

A community bank is defined as an independent bank with less than $1 billion (1998 dollars) in total assets, or a member of a bank organization with less than $1 billion (1998 dollars) in total assets.

TABLE 3B. Use of Financial Service Providers - Means

	2003.00	1998.00
Credit Sample*		
Use Community Bank for Credit Products	0.25	0.28
Use Big Bank for Credit Products	0.62	0.57
Use Non-bank for Credit Products	0.73	0.63
Use Community Banks Only for Credit Products	0.18	0.23
Use Big Banks Only for Credit Products	0.66	0.62
Share of # of Credit Products from Community Banks	0.16	0.19
Share of # of Credit Product from Large Banks	0.43	0.42
Share of # of Credit Product from Non-Banks	0.42	0.39
Share of Total $ Outstanding Credit Products from Community Banks	0.17	0.20
Share of Total $ Outstanding Credit Products from Large Banks	0.41	0.40
Share of Total $ Outstanding Credit Products from Non-Banks	0.42	0.40
Line of Credit Sample*		
Use Community Bank for Lines of Credit	0.30	0.32
Use Big Bank for Lines of Credit	0.79	0.77
Use Non-bank for Lines of Credit	0.68	0.55
Use Community Banks Only for Lines of Credit	0.16	0.19
Use Big Banks Only for Lines of Credit	0.66	0.64
Share of Number of Lines of Credit from Community Banks	0.19	0.20
Share of Number of Lines of Credit from Large Banks	0.55	0.57
Share of Number of Lines of Credit from Non-Banks	0.27	0.23
Share of Total $ Outstanding Lines from Community Banks	0.24	0.24
Share of Total $ Outstanding Lines from Large Banks	0.67	0.66
Share of Total $ Outstanding Lines from Non-Banks	0.09	0.10
Share of Total $ Line of Credit Limits from Community Banks	0.24	0.24
Share of Total $ Line of Credit Limits from Large Banks	0.67	0.67
Share of Total $ Line of Credit Limits from Non-Banks	0.09	0.09

NOTES:

* The 2003 main sample contains 3,805 firms; The 1998 main sample contains 2,790 firms; the 2003 loan sample contains 2,689 firms; the 1998

For variables that are 0-1 dummy variables the means represent the proportion of firms where the variable = 1.

Firms that 'Use Community Banks only' or 'Use Big Banks only' use only one type of bank. However, these firms may also use non-bank financial service providers for some products or services.

A community bank is defined as an independent bank with less than $1 billion (1998 dollars) in total assets, or a member of a bank organization with less than $1 billion (1998 dollars) in total assets.

TABLE 4. Use of Financial Services by Firm Characteristic, 2003

	# of sources	# of services	# of distinct services**	# of services at primary institution	use deposit product*	use credit product*	use fin mgt services*
All Firms	2.43	3.98	3.23	2.22	0.99	0.63	0.67
Size							
0<employees<=2	1.89	2.79	2.44	1.75	0.98	0.48	0.52
2<employees<=5	2.33	3.77	3.10	2.13	0.99	0.65	0.67
5<employees<=20	2.92	5.00	3.92	2.59	1.00	0.76	0.82
20<employees<=100	3.53	6.35	4.80	3.20	1.00	0.84	0.91
employees>100	4.02	8.45	5.99	4.25	1.00	0.94	0.96
sales<=1M	2.23	3.52	2.92	2.03	0.99	0.60	0.63
1M<sales<=10M	3.36	6.05	4.66	3.04	1.00	0.81	0.90
sales>10M	4.23	8.31	5.85	4.05	1.00	0.90	0.95
Age							
firmage<=5	2.27	3.61	3.00	2.06	0.99	0.64	0.65
5<firmage<=10	2.46	4.00	3.20	2.21	0.99	0.64	0.71
10<firmage<=20	2.48	4.08	3.36	2.28	0.99	0.64	0.70
firmage>20	2.53	4.23	3.35	2.31	0.99	0.62	0.65
corporation	2.74	4.64	3.69	2.50	1.00	0.70	0.76
not corporation	2.14	3.35	2.79	1.94	0.98	0.57	0.59
non loc offices	3.12	5.67	4.16	2.85	1.00	0.75	0.83
only loc offices	2.38	3.85	3.16	2.17	0.99	0.63	0.66
urban	2.45	3.98	3.23	2.20	0.99	0.63	0.68
rural	2.35	3.98	3.26	2.30	0.99	0.64	0.65
db cs low (0<=db_score<=40)	2.38	3.83	3.11	2.13	0.99	0.63	0.68
db cs med (40<db_score<70)	2.46	3.99	3.21	2.19	0.99	0.62	0.64
db cs high (db_score>=70)	2.46	4.12	3.38	2.32	0.99	0.65	0.70
poor credit	2.64	4.28	3.43	2.26	0.99	0.69	0.72
good credit	2.37	3.89	3.17	2.20	0.99	0.62	0.66

*Categories are based on 0-1 dummy variables. Means represent the proportion of firms where the variable = 1.
**# of distinct products ranges from 1-13 and represents the breadth of financial services used by the firm. See footnote from text.
NOTE: all dollar values denominated in 1998 dollars

TABLE 5. Use of Financial Services by Firm Characteristic, 1998

	# of sources	# of services	# of distinct services**	# of services at primary institution	use deposit product*	use credit product*	use fin mgt services*
All Firms	1.96	3.23	2.82	2.06	0.99	0.56	0.52
Size							
0<employees<=2	1.59	2.33	2.14	1.63	0.98	0.39	0.41
2<employees<=5	1.85	2.99	2.67	1.95	0.99	0.55	0.50
5<employees<=20	2.37	4.12	3.46	2.45	1.00	0.72	0.63
20<employees<=100	2.71	5.28	4.37	3.10	1.00	0.84	0.75
employees>100	3.22	6.70	5.22	3.71	1.00	0.91	0.84
sales<=1M	1.81	2.85	2.53	1.87	0.99	0.51	0.47
1M<sales<=10M	2.75	5.21	4.29	3.01	1.00	0.83	0.75
sales>10M	3.08	6.91	5.60	4.07	1.00	0.93	0.90
Age							
firmage<=5	1.84	2.85	2.55	1.84	0.99	0.51	0.48
5<firmage<=10	1.94	3.27	2.87	2.12	0.98	0.60	0.53
10<firmage<=20	2.03	3.45	2.95	2.15	0.99	0.56	0.54
firmage>20	2.02	3.38	2.94	2.14	0.99	0.56	0.53
corporation	2.20	3.82	3.27	2.33	1.00	0.64	0.61
not corporation	1.74	2.71	2.42	1.81	0.98	0.48	0.44
non loc offices	2.71	4.94	3.90	2.64	1.00	0.76	0.73
only loc offices	1.91	3.12	2.75	2.02	0.99	0.54	0.50
urban	1.95	3.18	2.79	2.03	0.99	0.54	0.52
rural	1.99	3.43	2.93	2.17	0.98	0.61	0.50
db cs low (0<=db_score<=40)	1.92	3.12	2.72	2.01	0.98	0.54	0.52
db cs med (40<db_score<70)	1.87	3.04	2.66	1.98	0.99	0.52	0.46
db cs high (db_score>=70)	2.07	3.51	3.06	2.18	0.99	0.60	0.56
poor credit	2.12	3.49	2.99	2.12	0.99	0.61	0.57
good credit	1.91	3.16	2.77	2.04	0.99	0.54	0.50

*Categories are based on 0-1 dummy variables. Means represent the proportion of firms where the variable = 1.

**# of distinct products ranges from 1-13 and represents the breadth of financial services used by the firm. See footnote 5 from text.

NOTE: all dollar values denominated in 1998 dollars

TABLE 6. Detailed Use of Financial Service Providers by Firm Characteristic, 2003

	Use a Community Bank	Use a Big Bank	Use a Non-bank	Primary Inst. Comm Bank	Primary Inst. Big Bank	Primary Inst. Non-bank	Use Community Banks Only*	Use Big Banks Only*
All Firms	0.31	0.81	0.59	0.25	0.70	0.05	0.19	0.69
Size								
0<employees<=2	0.27	0.79	0.45	0.23	0.73	0.05	0.21	0.73
2<employees<=5	0.31	0.81	0.59	0.27	0.67	0.06	0.19	0.69
5<employees<=20	0.35	0.82	0.71	0.26	0.69	0.05	0.18	0.65
20<employees<=100	0.39	0.86	0.81	0.30	0.65	0.04	0.14	0.61
employees>100	0.30	0.93	0.83	0.16	0.80	0.04	0.07	0.70
sales<=1M	0.30	0.80	0.55	0.25	0.69	0.05	0.20	0.70
1M<sales<=10M	0.35	0.86	0.78	0.26	0.69	0.04	0.14	0.65
sales>10M	0.28	0.90	0.84	0.16	0.76	0.08	0.10	0.72
Age								
firmage<=5	0.28	0.81	0.57	0.24	0.70	0.06	0.19	0.72
5<firmage<=10	0.32	0.80	0.61	0.27	0.68	0.05	0.20	0.68
10<firmage<=20	0.30	0.82	0.59	0.24	0.72	0.04	0.18	0.70
firmage>20	0.34	0.81	0.58	0.27	0.68	0.05	0.19	0.66
corporation	0.31	0.83	0.66	0.24	0.71	0.04	0.17	0.69
not corporation	0.31	0.79	0.52	0.26	0.68	0.06	0.21	0.69
non loc offices	0.31	0.92	0.67	0.21	0.72	0.07	0.08	0.69
only loc offices	0.31	0.80	0.58	0.26	0.69	0.05	0.20	0.69
urban	0.23	0.87	0.60	0.18	0.77	0.05	0.13	0.77
rural	0.61	0.57	0.56	0.54	0.42	0.04	0.43	0.39
db cs low (0<=db_score<=40)	0.32	0.79	0.59	0.27	0.67	0.06	0.21	0.68
db cs med (40<db_score<70)	0.30	0.82	0.58	0.23	0.72	0.06	0.18	0.70
db cs high (db_score>=70)	0.31	0.82	0.59	0.26	0.70	0.03	0.18	0.69
poor credit	0.31	0.82	0.65	0.24	0.70	0.06	0.18	0.69
good credit	0.31	0.81	0.57	0.26	0.69	0.05	0.19	0.69

*Firms that 'Use Community Banks Only' or 'Use Big Banks only' use only one type of bank. However, these firms may also use non-bank financial service providers for some products or services.

NOTE: all dollar values denominated in 1998 dollars

TABLE 7. Detailed Use of Financial Service Providers by Firm Characteristic, 1998

	Use a Community Bank	Use a Big Bank	Use a Non-bank	Primary Inst. Comm Bank	Primary Inst. Big Bank	Primary Inst. Non-bank	Use Community Banks Only*	Use Big Banks Only*
All Firms	0.34	0.76	0.42	0.28	0.67	0.05	0.24	0.66
Size								
0<employees<=2	0.31	0.73	0.31	0.28	0.68	0.04	0.27	0.69
2<employees<=5	0.32	0.77	0.40	0.26	0.68	0.06	0.23	0.68
5<employees<=20	0.39	0.76	0.54	0.29	0.64	0.07	0.24	0.61
20<employees<=100	0.36	0.82	0.67	0.26	0.68	0.06	0.18	0.64
employees>100	0.34	0.83	0.83	0.22	0.71	0.07	0.17	0.66
sales<=1M	0.34	0.75	0.38	0.28	0.67	0.05	0.25	0.66
1M<sales<=10M	0.38	0.78	0.67	0.29	0.65	0.06	0.22	0.62
sales>10M	0.22	0.90	0.82	0.15	0.81	0.04	0.10	0.78
Age								
firmage<=5	0.33	0.75	0.40	0.27	0.67	0.07	0.25	0.67
5<firmage<=10	0.32	0.78	0.44	0.25	0.69	0.06	0.22	0.68
10<firmage<=20	0.32	0.79	0.44	0.25	0.70	0.05	0.21	0.68
firmage>20	0.41	0.71	0.41	0.34	0.62	0.04	0.29	0.59
corporation	0.33	0.79	0.51	0.26	0.69	0.05	0.21	0.67
not corporation	0.35	0.73	0.34	0.29	0.65	0.06	0.27	0.65
non loc offices	0.40	0.81	0.65	0.26	0.64	0.11	0.19	0.60
only loc offices	0.34	0.76	0.41	0.28	0.67	0.05	0.24	0.66
urban	0.27	0.82	0.44	0.21	0.73	0.05	0.18	0.73
rural	0.63	0.55	0.37	0.51	0.43	0.06	0.45	0.37
db cs low (0<=db_score<=40)	0.33	0.76	0.41	0.27	0.67	0.05	0.24	0.67
db cs med (40<db_score<70)	0.35	0.75	0.39	0.29	0.66	0.05	0.25	0.65
db cs high (db_score>=70)	0.34	0.78	0.47	0.27	0.67	0.05	0.22	0.66
poor credit	0.32	0.78	0.48	0.26	0.67	0.07	0.22	0.68
good credit	0.35	0.76	0.41	0.28	0.67	0.05	0.24	0.65

*Firms that 'Use Community Banks Only' or 'Use Big Banks only' use only one type of bank. However, these firms may also use non-bank financial service providers for some products or services.

NOTE: all dollar values denominated in 1998 dollars

TABLE 8. Proportion of Firms Using Financial Services by Provider Type

	2003	1998
Use Deposit Product*	0.99	0.99
Use Deposit Product from a Community Bank	0.28	0.30
Use Deposit Product from a Big Bank	0.75	0.71
Use Deposit Product from a Non-bank	0.07	0.04
Use Credit Product*	0.63	0.56
Use Credit Product from a Community Bank	0.15	0.14
Use Credit Product from a Big Bank	0.37	0.30
Use Credit Product from a Non-bank	0.37	0.29
Use Line of Credit	0.36	0.28
Use Line of Credit from a Community Bank	0.10	0.07
Use Line of Credit from a Big Bank	0.26	0.20
Use Line of Credit from a Non-bank	0.04	0.03
Use Fin. Mgt. Service*	0.67	0.52
Use Fin. Mgt. Service from a Community Bank	0.15	0.14
Use Fin. Mgt. Service from a Big Bank	0.43	0.31
Use Fin. Mgt. Service from a Non-bank	0.36	0.22

*Deposit products include checking and savings accounts. Credit products include lines of credit, mortgages, motor vehicle loans, equipment loans, capital leases, and other loans. Financial managements services include transactions and credit card processing services, credit services, brokerage services, trust services, and cash services.

TABLE 9. Probit Models (Full Sample; 1998 Dollars)

Year	2003			1998		
Dependent Variable:	COMM_BNK	PR_COMM	COMM_ONLY	COMM_BNK	PR_COMM	COMM_ONLY
Independent Variables						
small (<$1M sales)	0.519	0.511	-0.007	0.698	0.424	0.347
	(3.05)***	(2.91)***	(0.04)	(3.42)***	(1.99)**	(1.38)
mid_size ($1M<=sales<$10M)	0.385	0.413	-0.048	0.555	0.423	0.358
	(2.33)**	(2.36)**	(0.24)	(2.82)***	(2.06)**	(1.45)
young (<5 years)	-0.234	-0.048	-0.461	-0.162	-0.216	-0.025
	(1.24)	(0.24)	(1.62)	(0.91)	(1.06)	(0.11)
adolescent (5 years<=age<10 years)	-0.081	0.000	0.025	-0.119	-0.120	-0.074
	(0.91)	(0.00)	(0.26)	(1.24)	(1.22)	(0.72)
mid_age (10<=age<20 years)	-0.102	-0.078	0.009	-0.097	-0.104	-0.112
	(1.28)	(0.93)	(0.10)	(1.09)	(1.15)	(1.17)
young*small	0.181	0.034	0.571	0.088	0.118	0.005
	(0.90)	(0.16)	(1.94)*	(0.47)	(0.55)	(0.02)
corp	0.094	0.066	0.077	0.006	0.025	-0.029
	(1.39)	(0.94)	(1.04)	(0.09)	(0.35)	(0.39)
nloc_off	-0.192	-0.270	-0.564	0.080	-0.101	-0.157
	(1.65)*	(2.37)**	(3.83)***	(0.69)	(0.79)	(1.19)
tnbr	0.097	0.040	-0.079	0.095	0.005	-0.042
	(7.55)***	(3.03)***	(4.90)***	(6.22)***	(0.35)	(2.51)**
db_score	-0.002	-0.001	-0.001	-0.002	-0.002	-0.002
	(1.57)	(1.21)	(1.18)	(1.45)	(1.37)	(1.54)
poor_credit	-0.059	-0.113	-0.051	-0.072	-0.040	-0.028
	(0.77)	(1.38)	(0.59)	(0.92)	(0.49)	(0.33)
lpop	-0.278	-0.274	-0.230	-0.236	-0.217	-0.239
	(9.19)***	(8.72)***	(6.89)***	(7.30)***	(6.66)***	(7.14)***
comm_bnk_prop	2.132	2.033	1.804	1.551	1.552	1.599
	(9.17)***	(9.02)***	(7.84)***	(5.81)***	(5.94)***	(5.94)***
urban	-0.170	-0.133	-0.192	-0.139	-0.045	0.049
	(1.44)	(1.09)	(1.48)	(1.12)	(0.35)	(0.37)
Constant	1.467	1.468	1.689	1.192	1.230	1.451
	(3.64)***	(3.57)***	(3.69)***	(2.66)***	(2.65)***	(2.92)***
Observations	3805	3798	3805	2790	2782	2790
F Test: censdiv(2-9) = 0	1.82	0.86	1.59	1.45	1.05	1.15
Prob > F	0.07	0.55	0.12	0.17	0.39	0.33
F Test: 2 size vars = 0	4.78	4.23	0.08	5.88	2.19	1.07
Prob > F	0.01	0.01	0.92	0.00	0.11	0.34
F Test: small=mid-size	2.18	0.94	0.14	1.91	0.00	0.01
Prob>F	0.14	0.33	0.71	0.17	0.98	0.92
F Test: 3 age vars = 0	0.89	0.36	0.95	0.68	0.79	0.47
Prob > F	0.45	0.78	0.41	0.56	0.50	0.70

absolute values of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

TABLE 10. Ordered Probit and Linear Regression Models (Full Sample; 1998 Dollars)

Year	2003		1998	
Dependent Variable:	COMM_IND	COMM_SHR	COMM_IND	COMM_SHR
Independent Variables				
small (<$1M sales)	0.359	0.048	0.526	0.074
	(2.42)**	(1.85)*	(2.73)***	(2.28)**
mid_size ($1M<=sales<$10M)	0.230	0.028	0.457	0.063
	(1.58)	(1.09)	(2.45)**	(2.04)**
young (<5 years)	-0.241	-0.019	-0.165	-0.037
	(1.41)	(0.60)	(0.88)	(0.76)
adolescent (5 years<=age<10 years)	-0.049	-0.015	-0.114	-0.027
	(0.58)	(0.87)	(1.22)	(1.11)
mid_age (10<=age<20 years)	-0.072	-0.022	-0.122	-0.021
	(0.95)	(1.43)	(1.43)	(0.89)
young*small	0.225	0.012	0.084	0.016
	(1.20)	(0.35)	(0.42)	(0.32)
corp	0.059	0.010	-0.011	-0.007
	(0.92)	(0.78)	(0.17)	(0.39)
nloc_off	-0.267	-0.035	-0.014	-0.005
	(2.74)***	(1.87)*	(0.13)	(0.17)
tnbr	0.044	-0.003	0.044	-0.005
	(4.02)***	(1.28)	(3.36)***	(1.50)
db_score	-0.002	-0.000	-0.002	-0.001
	(1.45)	(1.21)	(1.65)*	(1.80)*
poor_credit	-0.060	-0.022	-0.051	-0.013
	(0.80)	(1.54)	(0.65)	(0.67)
lpop	-0.248	-0.057	-0.227	-0.063
	(8.49)***	(10.05)***	(7.22)***	(7.60)***
comm_bnk_prop	1.842	0.467	1.498	0.442
	(9.02)***	(10.58)***	(5.98)***	(6.98)***
urban	-0.169	-0.067	-0.060	-0.050
	(1.50)	(2.51)**	(0.49)	(1.42)
Constant		0.756		0.860
		(10.13)***		(8.06)***
Observations	3604	3805	2620	2790
r-squared		0.24		0.18
F Test: censdiv(2-9) = 0	1.65	2.01	1.32	1.26
Prob > F	0.11	0.04	0.23	0.26
F Test: 2 size vars = 0	3.27	1.98	3.74	2.77
Prob > F	0.04	0.14	0.02	0.06
F Test: small=mid-size	2.39	1.67	0.51	0.24
Prob>F	0.12	0.20	0.48	0.63
F Test: 3 age vars = 0	0.82	1.98	0.86	0.50
Prob > F	0.48	0.14	0.46	0.68

absolute values of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

TABLE 11. Probit Models (Loan Sample; 1998 Dollars)

Year	2003		1998	
Dependent Variable:	COMM_BNK_LOAN	COMM_BNK_LOAN_ONLY	COMM_BNK_LOAN	COMM_BNK_LOAN_ONLY
Independent Variables				
small (<$1M sales)	0.371	-0.419	0.627	0.266
	(1.98)**	(1.13)	(3.30)***	(0.81)
mid_size ($1M<=sales<$10M)	0.498	-0.249	0.634	0.195
	(2.80)***	(0.65)	(3.55)***	(0.61)
young (<5 years)	-0.248	0.181	0.145	0.272
	(1.09)	(0.36)	(0.72)	(0.58)
adolescent (5 years<=age<10 years)	-0.165	-0.041	0.166	-0.015
	(1.40)	(0.22)	(1.27)	(0.09)
mid_age (10<=age<20 years)	0.018	0.070	0.129	0.028
	(0.18)	(0.44)	(1.08)	(0.17)
young*small	0.295	0.110	-0.221	-0.461
	(1.21)	(0.21)	(1.02)	(0.96)
corp	0.174	-0.085	0.020	0.013
	(2.00)**	(0.64)	(0.21)	(0.10)
nloc_off	-0.053	-0.192	-0.025	-0.477
	(0.37)	(0.78)	(0.17)	(1.82)*
tnbr	0.110	-0.352	0.119	-0.196
	(6.79)***	(7.76)***	(6.15)***	(4.97)***
db_score	-0.001	0.002	-0.002	-0.004
	(0.84)	(1.04)	(1.54)	(1.85)*
poor_credit	-0.138	-0.112	-0.050	-0.097
	(1.51)	(0.71)	(0.51)	(0.66)
lpop	-0.222	-0.165	-0.186	-0.164
	(5.98)***	(2.70)***	(4.48)***	(2.97)***
comm_bnk_prop	1.392	1.595	0.880	0.738
	(4.74)***	(3.48)***	(2.75)***	(1.98)**
urban	-0.080	-0.133	-0.321	-0.258
	(0.55)	(0.55)	(1.98)**	(1.15)
Constant	0.741	1.343	0.322	1.260
	(1.56)	(1.63)	(0.59)	(1.54)
Observations	2689	2689	1735	1735
F Test: censdiv(2-9) = 0	2.87	0.94	2.04	1.73
Prob > F	0.00	0.48	0.04	0.09
F Test: 2 size vars = 0	4.12	0.88	6.70	0.33
Prob > F	0.02	0.41	0.00	0.72
F Test: small=mid-size	1.42	0.80	0.00	0.15
Prob>F	0.23	0.37	0.96	0.70
F Test: 3 age vars = 0	1.26	0.16	0.63	0.13
Prob > F	0.29	0.93	0.60	0.94

absolute values of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

TABLE 12. Linear Regression Models (Loan Sample; 1998 Dollars)

Year	2003		1998	
Dependent Variable:	SHR_NUMLOAN_COMM	SHR_BAL_COMM	SHR_NUMLOAN_COMM	SHR_BAL_COMM
Independent Variables				
small (<$1M sales)	0.044	0.051	0.080	0.090
	(1.35)	(1.31)	(2.44)**	(2.27)**
mid_size ($1M<=sales<$10M)	0.066	0.071	0.079	0.104
	(2.06)**	(1.87)*	(2.73)***	(3.00)***
young (<5 years)	-0.005	0.024	0.010	0.044
	(0.11)	(0.45)	(0.18)	(0.71)
adolescent (5 years<=age<10 years)	-0.036	-0.038	0.023	0.025
	(1.55)	(1.43)	(0.76)	(0.76)
mid_age (10<=age<20 years)	-0.011	-0.007	0.021	0.019
	(0.57)	(0.27)	(0.76)	(0.62)
young*small	0.014	-0.016	-0.029	-0.055
	(0.29)	(0.28)	(0.51)	(0.86)
corp	0.017	0.027	-0.003	-0.008
	(1.03)	(1.42)	(0.15)	(0.34)
nloc_off	0.002	0.003	-0.016	-0.054
	(0.06)	(0.11)	(0.42)	(1.41)
tnbr	0.000	0.008	0.004	0.005
	(0.15)	(2.08)**	(0.95)	(1.23)
db_score	-0.000	-0.000	-0.001	-0.001
	(0.19)	(0.81)	(1.52)	(1.49)
poor_credit	-0.019	-0.013	-0.010	0.004
	(1.10)	(0.62)	(0.47)	(0.16)
lpop	-0.041	-0.042	-0.039	-0.031
	(5.38)***	(4.76)***	(4.03)***	(3.02)***
comm_bnk_prop	0.332	0.358	0.302	0.259
	(5.09)***	(4.96)***	(3.88)***	(3.15)***
urban	-0.065	-0.052	-0.116	-0.144
	(1.87)*	(1.31)	(2.70)***	(3.17)***
Constant	0.555	0.535	0.509	0.429
	(5.94)***	(4.96)***	(4.36)***	(3.41)***
Observations	2689	2456	1735	1573
R-squared	0.16	0.14	0.18	0.18
F Test: censdiv(2-9) = 0	2.35	1.83	2.04	3.51
Prob > F	0.02	0.07	0.04	0.00
F Test: 2 size vars = 0	2.22	1.77	4.31	4.63
Prob > F	0.11	0.17	0.01	0.01
F Test: small=mid-size	1.07	0.58	0.00	0.18
Prob>F	0.31	0.45	0.97	0.67
F Test: 3 age vars = 0	0.84	1.78	0.25	0.29
Prob > F	0.47	0.17	0.86	0.83

absolute values of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

TABLE 13. Probit Models (Line of Credit Sample; 1998 dollars)

Year	2003		1998	
Dependent Variable:	COMM_BNK_ LINE	COMM_BNK_ LINE_ONLY	COMM_BNK_ LINE	COMM_BNK_ LINE_ONLY
Independent Variables				
small (<$1M sales)	0.204	-0.526	0.695	0.140
	(1.02)	(1.20)	(3.26)***	(0.41)
mid_size ($1M<=sales<$10M)	0.378	-0.150	0.643	0.033
	(2.04)**	(0.34)	(3.41)***	(0.10)
young (<5 years)	-0.148	0.016	0.074	-0.074
	(0.54)	(0.02)	(0.31)	(0.18)
adolescent (5 years<=age<10 years)	0.009	-0.134	0.110	0.433
	(0.06)	(0.56)	(0.66)	(1.75)*
mid_age (10<=age<20 years)	0.147	-0.119	0.033	0.211
	(1.25)	(0.60)	(0.22)	(0.89)
young*small	0.253	-0.299	-0.222	0.266
	(0.85)	(0.44)	(0.81)	(0.65)
corp	0.055	-0.410	0.103	0.072
	(0.49)	(2.35)**	(0.78)	(0.41)
nloc_off	-0.164	-0.584	0.107	-0.095
	(1.11)	(1.56)	(0.64)	(0.30)
tnbr	0.080	-0.486	0.095	-0.270
	(4.15)***	(7.00)***	(3.84)***	(5.62)***
db_score	-0.000	0.003	-0.003	-0.003
	(0.14)	(1.00)	(1.58)	(1.05)
poor_credit	-0.161	-0.065	-0.134	-0.034
	(1.42)	(0.31)	(0.99)	(0.17)
lpop	-0.264	-0.187	-0.178	-0.124
	(5.85)***	(2.31)**	(3.11)***	(1.60)
comm_bnk_prop	1.117	1.120	0.938	1.180
	(3.16)***	(1.88)*	(2.10)**	(2.15)**
urban	-0.073	-0.249	-0.411	-0.344
	(0.41)	(0.84)	(1.87)*	(1.09)
Constant	1.635	2.635	0.633	0.431
	(2.83)***	(2.31)**	(0.91)	(0.40)
Observations	1781	1685	1018	1018
F Test: censdiv(2-9) = 0	2.81	1.26	1.24	0.75
Prob > F	0.00	0.27	0.27	0.65
F Test: 2 size vars = 0	2.53	1.52	6.54	0.14
Prob > F	0.08	0.22	0.00	0.87
F Test: small=mid-size	1.86	2.32	0.11	0.21
Prob>F	0.17	0.13	0.74	0.65
F Test: 3 age vars = 0	0.81	0.17	0.16	1.39
Prob > F	0.49	0.92	0.92	0.24

absolute values of t statistics in parentheses

[1] 96 firms were dropped due their being perfectly predicted by observations where censdiv6 = 1
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

TABLE 14. Linear Regression Models (Line of Credit Sample; 1998 dollars)

Year	2003			1998		
Dependent Variable:	SHR_NUMLINE_COMM	SHR_LCBAL_COMM	SHR_LCLIM_COMM	SHR_NUMLINE_COMM	SHR_LCBAL_COMM	SHR_LCLIM_COMM
Independent Variables						
small (<$1M sales)	0.073	0.073	0.095	0.114	0.105	0.124
	(1.63)	(1.36)	(2.10)**	(2.50)**	(1.75)*	(2.70)***
mid_size ($1M<=sales<$10M)	0.123	0.122	0.133	0.131	0.152	0.139
	(2.84)***	(2.33)**	(3.08)***	(3.52)***	(3.20)***	(3.66)***
young (<5 years)	-0.004	-0.005	-0.001	-0.008	0.029	-0.001
	(0.06)	(0.06)	(0.02)	(0.13)	(0.39)	(0.01)
adolescent (5 years<=age<10 years)	0.011	-0.010	-0.000	0.060	0.035	0.066
	(0.30)	(0.19)	(0.00)	(1.32)	(0.61)	(1.43)
mid_age (10<=age<20 years)	0.010	-0.009	0.011	0.047	0.055	0.050
	(0.30)	(0.22)	(0.35)	(1.19)	(1.04)	(1.25)
young*small	0.032	0.009	0.029	0.035	0.019	0.029
	(0.42)	(0.10)	(0.37)	(0.49)	(0.22)	(0.41)
corp	0.002	0.017	-0.002	0.040	0.060	0.035
	(0.07)	(0.53)	(0.07)	(1.18)	(1.56)	(1.01)
nloc_off	-0.011	-0.039	-0.012	0.019	-0.043	0.019
	(0.28)	(0.79)	(0.29)	(0.39)	(0.78)	(0.40)
tnbr	0.007	0.013	0.009	0.000	-0.003	0.002
	(1.43)	(2.06)**	(1.93)*	(0.08)	(0.41)	(0.24)
db_score	-0.000	0.000	-0.000	-0.000	-0.001	-0.001
	(0.10)	(0.07)	(0.07)	(0.81)	(1.02)	(0.96)
poor_credit	-0.057	-0.057	-0.058	0.006	0.018	0.002
	(1.87)*	(1.57)	(1.87)*	(0.17)	(0.46)	(0.06)
lpop	-0.060	-0.060	-0.058	-0.053	-0.043	-0.051
	(5.23)***	(4.17)***	(5.00)***	(3.46)***	(2.44)**	(3.31)***
comm_bnk_prop	0.333	0.258	0.322	0.494	0.429	0.488
	(3.47)***	(2.18)**	(3.32)***	(4.14)***	(3.03)***	(4.06)***
urban	-0.095	-0.074	-0.095	-0.153	-0.223	-0.155
	(1.78)*	(1.10)	(1.76)*	(2.26)**	(2.74)***	(2.28)**
Constant	0.783	0.922	0.757	0.704	0.443	0.677
	(5.63)***	(4.93)***	(5.34)***	(3.76)***	(2.07)**	(3.59)***
Observations	1781	1207	1781	1018	672	1018
R-squared	0.21	0.21	0.21	0.18	0.22	0.17
F Test: censdiv(2-9) = 0	1.86	1.82	1.92	0.72	2.64	0.73
Prob > F	0.06	0.07	0.05	0.68	0.01	0.67
F Test: 2 size vars = 0	4.09	2.72	4.73	6.66	5.11	7.28
Prob > F	0.02	0.07	0.01	0.00	0.01	0.00
F Test: small=mid-size	1.90	1.17	1.09	0.16	0.83	0.12
Prob>F	0.17	0.28	0.30	0.69	0.36	0.73
F Test: 3 age vars = 0	0.05	0.02	0.05	0.86	0.36	0.94
Prob > F	0.99	1.00	0.98	0.46	0.78	0.42

absolute values of t statistics in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%
all models include eight census division dummy variables

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