Banking Markets and the Use of Financial Services by Small and Medium-Sized Businesses

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A longstanding and contentious problem in the antitrust analysis of proposed bank mergers has been the definition of the geographic area and services that constitute a particular market for financial services. The issues involved can be illustrated by two questions that arise in the following example. A commercial bank wants to acquire another located in the same metropolitan area. If one considers only the banks in that area, the acquisition would apparently reduce competition for banking services in that locality. The first question is, Does the presence of commercial banks outside the area mitigate the anticompetitive effects? The second is, Would the anticompetitive effects be lessened if nonbank institutions in the area offered some (but not all) of the services offered by the two banks?

Any definition of a banking market implies answers to these questions regarding the geographic extent of that market and the scope of services to be included. Although buttressed by recent general empirical evidence and market surveys conducted in specific cases, the definition of banking markets has generally relied on Supreme Court decisions from the 1960s and early 1970s. Given the deregulation and financial innovations of recent years, the definition derived from those decisions may be based on outdated perceptions and data.

The current approach to market definition holds that the costs of information and transportation incurred by customers searching for, and using, distant or specialized institutions are prohibitive, as are the information costs incurred by a financial institution in evaluating a nonlocal business seeking credit. Hence, according to this view, financial services in the main are offered by, and obtained from, local commercial banks. In terms of the opening example, the current approach would answer both questions in the negative—neither the banks outside the area nor the services available from nonbank suppliers would be viewed as important alternative supplies of banking services for the area and thus would be considered not to mitigate the anticompetitive effects within the area.

A contrary argument would answer that deregulation and advances in telecommunications in recent years have lowered the costs of information and of travel, and the lower costs have widened the range of institutions and the distance over which firms select their financial services. Hence, in terms of the opening example, this argument would answer both questions in the affirmative. First, the extent of the relevant market area would have expanded from metropolitan to regional or national. The market therefore would be less "concentrated" (that is, would have more competitors) than before, and the proposed acquisition would be less likely to reduce competition below an acceptable level. Second, because the cost of using specialized vendors for specific products has decreased, commercial banks and nonbank

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financial institutions have become closer competitors than they were in years past.

Resolution of these questions requires empirical evidence. To review its approach to market definition in antitrust analysis of bank mergers and acquisitions, the Board of Governors commissioned surveys to learn more about the use of financial services by consumers and by small and medium-sized business firms, the major customer groups whose demand is most likely to be limited to local commercial banks.

This article presents findings on the issue of market definition from the survey of businesses. This survey, sponsored jointly by the Board of Governors of the Federal Reserve System and the Small Business Administration, is the National Survey of Small Business Finances (NSSBF), a nationally representative sample of 3,405 firms that encompasses size classes we shall hereafter call small (0–49 employees) and medium-sized (50–499 employees). Such firms account for the vast majority of enterprises in the United States and for a substantial share of business output, but little is known about their use of financial services and institutions. The sample taken in the NSSBF represents the population of small and medium-sized firms more accurately and covers their use of financial services and financial institutions more thoroughly than any other survey to date. The survey data permit an investigation of the full range of financial services and institutions used by small and medium-sized firms and the distances over which these firms handle their financial affairs, an analysis that is necessary for assessing financial service markets. (See the appendix for a description of the survey.)

DEFINING BANKING MARKETS

Analyzing proposed bank mergers for their effect on competition and hence for their potential violation of antitrust statutes requires a case-by-case definition of the relevant economic market. Conceptually, defining a market involves identifying all firms affecting the price and quantity of a good or service and the specification of both the geographic extent and the variety of products to be covered.

The current approach to market definition in commercial banking was established by the 1963 decision of the Supreme Court in *United States v. Philadelphia National Bank* and was subsequently supported by numerous case studies in specific areas of the country.[1] In its decision, the Supreme Court determined that in banking cases the product line for antitrust purposes was that offered by commercial banks; only institutions offering the full "cluster" of bank services thus defined—including demand deposits and commercial loans—belonged in bank markets. As for the geographic market, the Court concluded that because the majority of bank customers are consumers and small businesses and because these customers generally restrict their purchases to local banks, the geographic market for banking is local—a definition that has not been as easy to interpret and follow as the Court's definition of product market. This market definition for commercial banking is still in use today, with some adjustments allowed for thrift institutions.[2]

1. In *United States v. Philadelphia National Bank*, 374 U.S. 321, the Court ruled that commercial banking was subject to the conditions of section 7 of the Clayton Act, which prohibits the acquisition of any firm when "in any line of commerce in any section of the country the effect of such acquisition may be to substantially lessen competition" (section 7, U.S.C. section 18, 1976). For examples of case studies of bank market definition subsequent to the Philadelphia National Bank case, see Ralph H. Gelder and George Budzeika, "Banking Market Determination—The Case of Central Nassau County," Federal Reserve Bank of New York, *Monthly Review*, vol. 52 (July–August 1970), pp. 258–66; and Clifton B. Luttrell and William E. Pettigrew, "Banking Markets for Business Firms in the St. Louis Area," Federal Reserve Bank of St. Louis, *Review*, vol. 48 (September 1966), pp. 9–12; for a more complete discussion, see John D. Wolken, *Geographic Market Delineation: A Review of the Literature*, Staff Studies 140 (Board of Governors of the Federal Reserve System, 1984).

2. In a 1974 decision, the Supreme Court noted that thrift institutions and other nonbank institutions had made competitive inroads in some services. The Court decided, however, that to be included as full competitors in bank markets, these institutions had to be important suppliers of the entire cluster of bank services; see *United States v. Connecticut National Bank*, 418 U.S. 656 (1974). The current practice of antitrust analysts is to judge whether thrift institutions in specific areas offer significant competition to commercial bank services and, if so, to include them in the structural indexes of market competition.

In recent years, technological progress, market innovations, and numerous changes in financial regulation may have invalidated the current approach to market definition regarding product and geographic markets in banking:

- Advances in telecommunications allow financial institutions to supply many services over large areas at low cost.
- Thrift institutions today can offer virtually all products that banks offer.
- Nondepository financial institutions and nonfinancial firms increasingly offer financial services similar to those traditionally offered by banks.
- Banks have much greater freedom to create branches within states, and bank holding companies can expand more readily across state lines.

Thus, the suppliers of financial products may have increased, and the difficulties in servicing larger areas may have decreased.

Nonetheless, the geographic extent of banking markets may still be limited for many financial services. Despite the changes brought about by deregulation, barriers to entry may still exist. And despite the lowering of costs through electronic technologies, distance-sensitive transaction costs such as those for transportation, information, and search are nevertheless likely to remain an important consideration in choosing financial institutions. These arguments, which are relevant particularly to small and medium-sized businesses and to households, are supported in part by the heretofore limited evidence that these groups continue to obtain most bank services from commercial banks and thrift institutions, that these institutions are usually local, and that purchases are often obtained as a cluster from a single institution.

In this article, we use the data from the NSSBF to explore the following questions on the definition of banking markets for small and medium-sized firms:

- How wide is the area within which small and medium-sized firms obtain financial services, search among alternative suppliers, and receive solicitations?
- To what extent do financial institutions other than commercial banks provide financial services to small and medium-sized businesses? Is the geographic distribution of these suppliers the same as that for banks?
- What is the geographic area for each of the different types of financial services?
- Does a firm purchase financial services as a bundle from one financial institution? Do these services tend to be purchased only as a bundle, or do some firms purchase them separately from different institutions? Are services purchased as a bundle obtained from the same geographic area as services purchased separately?
- What factors (for example, product type, institution class, firm characteristics, local market conditions) influence the geographic reach of firms seeking financial services?

A Transaction-Cost Model of Demand for Financial Services

A key question is whether banking markets for small and medium-sized business firms are local to the firms. Our premise is that current demand patterns define market boundaries. However, because demand patterns cannot conclusively delineate market boundaries, we must consider how interactions among local supply and demand, nonlocal supply and demand, and transaction costs can affect the observed use of financial services.[3]

For two areas to be in the same economic market, prices of identical products in the two areas must be equal, and the transaction costs between the two areas that customers and institutions face must be negligible. Significant transaction costs will cause consumers to have a decided preference to purchase from local suppliers and will give those suppliers some degree of market power.[4] The greater the transaction costs for nonlocal purchases, the greater is the

3. None of the approaches discussed, including ours, can fully account for the influence of potential competitors on existing supply and demand, although studies using price data can come closest to doing so.

4. This assumes that significant entry costs exist. If entry costs are negligible, then any attempt by local suppliers to raise prices should be thwarted by the entry, or the threat of entry, of nonlocal suppliers.

potential market power for local suppliers. And the more transaction costs increase with distance, the smaller will be the geographic market.

If prices in the two areas differ, then the two areas may represent different economic markets. Generally, prices will be higher in less competitive markets and in markets with lower supply. This generalization implies that buyers in less competitive markets will more often use nonlocal suppliers than will buyers in competitive markets, other things equal. In contrast, if these two areas are not separate economic markets, local competitive conditions should not have this effect.

Determinants of Transaction Costs

Two components of transaction costs are those for transportation and those for information. Transportation costs vary directly with the number of transactions a buyer has with a financial institution, the distance between the firm and the financial institution, and the need to conduct transactions with the institution in person rather than by telephone or mail.

For buyers (firms), information costs include the cost of searching for information about alternative suppliers; for sellers (financial institutions), they include the cost of evaluating and monitoring the creditworthiness of firms. The search costs of firms tend to vary directly with the distance between the firm and the financial institutions and the degree to which financial services are heterogeneous.

Transaction costs for financial institutions arise mainly in the credit area. An institution will have greater difficulty evaluating and monitoring firms operating in distant areas than evaluating and monitoring those operating in its own marketing area. An institution will be less likely, for example, to know the reputation of distant firms or to know the product markets in which distant firms operate. Moreover, in some cases, a financial institution may need to send a representative to visit a distant firm to obtain the necessary information for credit evaluation or monitoring. Thus, the information costs of financial institutions may also vary directly with distance from the firm.

To reduce the costs of credit evaluation and monitoring, financial institutions can make arrangements such as restrictive covenants, collateral agreements, and guarantor requirements to limit loan losses in the event of default and thereby reduce their costs of dealing with distant borrowers.

Choosing the Location of Financial Service Providers

Consideration of these transaction costs suggests some hypotheses about the location of the supplier for particular financial services. First, demand deposit accounts are likely to have relatively high transaction costs because of frequent deposits and withdrawals. This consideration is particularly important for retail firms, which typically make frequent withdrawals of cash for making change and frequent deposits of receipts from sales. Therefore, checking accounts for businesses can be expected to have relatively small geographic markets. Similarly, financial products such as cash management services, currency and coin services, and credit card processing involve frequent transactions and are thus also likely to have relatively small geographic markets.

Savings and investment accounts (hereafter, savings accounts) may have larger geographic markets than checking accounts. One reason for the difference is that, with generally fewer deposits and withdrawals, savings accounts have lower transportation costs. Another reason is that the expected return from a buyer's search for a savings account may be higher than that for a demand deposit account: For a given amount of cash, firms seek to keep as little as possible in non-interest-paying checking accounts and as much as possible in savings accounts; thus, savings balances may be larger than demand deposit balances. Although search costs increase with distance, expected benefits increase with the size of the account, so firms are likely to search over a wider geographic area for savings accounts than for checking accounts.

On similar reasoning, secured credit and leases can be expected to have larger geographic markets than unsecured credit: The collateral reduces creditors' exposure to loss and hence

reduces the expenditures required for credit information and monitoring.

The Effect of Firm Size on the Choice of Institution

Generally, larger firms operate in larger geographic markets for financial services than those in which smaller firms operate simply because their demand is larger and because some specialized services usually not needed by smaller firms may be unavailable from the closest financial institution. For example, larger firms are more likely than smaller firms to seek large loans. Because search costs tend to be fixed and benefits to vary directly with the size of loan, the net expected benefit from searching outside the local area for better loan terms is likely to be greater for larger firms.

For another example of the effect of firm size, large firms are more likely than small firms to have multiple locations, some of which may be distant from the main office of the firm. Because of transaction costs, such firms would be more likely than small, single-office firms to use financial institutions located outside the local area of the main office.

The size of the firm also affects the information costs of financial institutions. Large firms are more likely than small firms to be known outside the areas in which they are located, either directly or through their contacts with other businesses. They are also more likely to have the financial information desired by financial institutions because they have more sophisticated accounting records than do small firms, which are typically managed by their owners. Moreover, because bankruptcy costs have a large fixed component, the cost of default as a share of assets is greater for small firms than it is for large firms. Thus, the amount that creditors can recover from small firms is more limited. The lack of information and the relatively high cost of bankruptcy make lending to small firms more expensive for financial institutions than lending to large firms. Thus, distant suppliers are less likely to accept applications for credit from small firms than they are to accept applications from large firms, especially when the desired credit would be unsecured.

The information costs borne by any financial institution for credit evaluation and monitoring of customer firms tend to be higher relative to the size of the transaction for small firms than for large firms, and this cost difference is likely to be greater when the financial institution is a distant one. In turn, because of these cost differentials, institutions are more likely to screen out small firms, especially distant ones, as potential customers for loans. Thus, a small firm has a greater incentive than does a large firm to borrow from the same institution from which it obtains checking and to maintain a long-term relation with that institution. A long-term checking account is pivotal because it reveals the firm's cash flow and thus reduces the cost to the financial institution of credit evaluation and monitoring. For this reason, small firms are more likely than large firms to maintain a working relationship with a financial institution rather than seek out different suppliers for different financial products. In other words, small firms are more likely than large firms to depend on their primary institution for credit and to use fewer institutions. The primary institution is likely to be local because of the transaction costs associated with checking.

In sum, consideration of the effect of transportation costs, search costs, and firm size on a firm's demand for financial services and on the information costs of financial institutions suggests that medium-sized firms (50–499 employees) and large firms (500 employees or more) would be more likely than small firms to use nonlocal financial institutions.

Local Supply Conditions

Characteristics of the local area may affect the likelihood that a firm will use nonlocal financial institutions. For example, demand in rural areas for some financial services is often too small for local suppliers to offer them. Rural firms demanding such services will be forced to use nonlocal suppliers, even if they have to incur large transaction costs, whereas urban firms with similar demands may be able to obtain the services locally.

The structure of the local banking industry may be another factor affecting the use of nonlo-

cal suppliers. If prices of financial services are higher in areas in which a few banks and thrift institutions have a greatly disproportionate share of the market than they are in areas in which such institutions are less concentrated, and if transaction costs are not trivial, then we expect to find firms in concentrated areas to be more likely than firms in unconcentrated areas to use nonlocal financial institutions. Because of transaction costs, firms in an unconcentrated market will not find using nonlocal suppliers economical. Some firms in a concentrated market, however, may find using nonlocal suppliers, even with transaction costs, less expensive than using local suppliers. Such a relation between bank structure and the use of nonlocal suppliers would be consistent with local markets.

A finding of no relation between local bank concentration and the use of nonlocal suppliers by itself, however, provides no guidance as to the geographic dimensions of a banking market. The existence of a local market would be consistent with this finding if the transaction costs of purchasing nonlocally supplied services exceeded the benefits of obtaining a lower price outside the local area. In this case, local and nonlocal services would be poor substitutes. Alternatively, finding no relation between local bank structure and the use of nonlocal service suppliers could indicate that prices did not differ between local and nonlocal suppliers and thus that both sets of suppliers belonged to the same economic market.

The Locations and Types of Financial Institutions Used by the Firms

Based on an analysis of the data from the survey, this section examines the different classes of financial institutions that small and medium-sized businesses use and the degree to which those institutions are local. The importance of a type of financial institution is measured by the frequency with which the firms use it.

The financial institutions covered are commercial banks; thrift institutions (savings and loan associations, savings banks, and credit unions); finance companies; leasing companies; and money market mutual fund companies, brokerage companies, mortgage banks, and insurance companies. Firms rarely purchase financial services from nonfinancial institutions. We define an institution as local to a firm if it is located thirty miles or less from the firm's main office.[5]

The financial products covered are checking accounts; other deposit and investment (savings) accounts; credit (financial leases, lines of credit, mortgages, motor vehicle loans, equipment loans, and other credit);[6] transaction services (currency and coin services, credit card processing, and night depository); cash management services (cash management, lock boxes, and wire transfers); credit-related services (bankers acceptances, sales financing, letters of credit, and factoring); brokerage; and

1. Percentage of small and medium-sized firms using local and nonlocal financial institutions, by type of institution[1]

Financial institution	Local	Nonlocal	Total
All	**97.1**	**19.7**	**98.2**
Commercial bank	92.8	8.3	94.0
Nonbank	26.3	13.5	35.5
Thrift[2]	13.1	1.3	14.1
Finance	8.2	7.2	14.3
Leasing	2.5	3.2	5.4
Other[3]	4.9	2.6	7.4

1. Use of a financial institution consists of use of one or more of the following services: checking, savings (other deposit or investment account); leasing; line of credit, mortgage, motor vehicle, equipment, or other credit; currency and coin, credit card processing, and night depository; cash management, lockbox, and wire transfer; bankers acceptances, sales finance, letter of credit, and factoring; brokerage; and pensions, trusts, and safekeeping of securities.

Local institutions are thirty miles or less from the principal office of the firm.

Sum of components may exceed totals because some firms use more than one institution.

2. Savings and loan associations, savings banks, and credit unions.

3. Brokerage and money market mutual fund companies, mortgage banks, and insurance companies.

5. The use of exactly thirty miles as a boundary value is not critical. At a thirty-mile limit, 97.1 percent of firms use one or more local financial institutions; at a twenty-mile limit the percentage is 96.3, and at thirty-five miles the percentage is again 97.1.

A second type of definition for a local financial institution was considered: existence of a branch in the same metropolitan area (urban firms) or county (rural firms) as the firm's main office. Because miles better reflect distance, the analysis using miles is reported. The basic conclusions would be the same in either case.

6. A financial lease is a long-term lease in which the present value of the stream of payments at the inception of the lease approximates the market value of the asset; such a lease is essentially similar to the purchase of the asset using credit.

2. Mean number of local and nonlocal financial institutions used per small and medium-sized firm, by type of institution[1]

Financial institution	Local	Nonlocal	Total	MEMO Percentage of all institutions used
All	1.53	.26	1.79	100
Commercial bank	1.21	.10	1.31	73.2
Nonbank	.32	.16	.48	26.8
Thrift	.14	.01	.15	8.4
Finance	.09	.08	.17	9.5
Leasing	.03	.04	.07	3.9
Other	.06	.03	.09	5.0

1. Components may not sum to totals because of rounding. See notes to table 1 for definitions.

trust services (pensions, trusts, and safekeeping of securities).

Tables 1, 2, and 3 present survey findings on the use of various types of local and nonlocal financial institutions. The vast majority of the firms, 97.1 percent, reported using a local institution, and 92.8 percent reported using a local commercial bank (table 1).[7] On average, firms use fewer than two financial institutions (1.53), and at least one of these institutions (1.21) is almost always a local commercial bank (table 2). About 46 percent (50.1 percent of 0.92) of firms rely solely on one local commercial bank (table 3). For firms using more than one financial institution, about four-fifths of the institutions are local, and 59 percent of institutions are local commercial banks.[8] Thus, the survey shows local institutions, especially local commercial banks, to be the dominant suppliers of financial services to small and medium-sized businesses. Nonetheless, nonlocal institutions are important to some firms—one-fifth report using a financial institution located more than thirty miles from the firm's main office (table 1).

On average, the firms use nearly three times as many commercial banks as they do nonbank financial institutions—1.31 commercial banks versus 0.48 nonbanks (table 2). Finance companies, the most commonly used nonbank institutions, account for 9.5 percent of all institutions used and 35 percent of nonbank institutions used. Thrift institutions, the second most frequently used nonbank, account for 8.4 percent of all institutions used and for nearly one-third of the nonbank institutions used. The remaining third of nonbanks used includes mortgage bankers and insurance companies but consists primarily of brokerage firms and leasing companies.

Thrift institutions, like commercial banks, tend to be located close to the firms that use them (table 2). In contrast, geographic proximity is not a distinguishing characteristic of other classes of financial institutions. Finance companies and leasing companies are divided almost equally between local and nonlocal, and 34 percent of other nonbank financial institutions are nonlocal. The greater frequency of nonlocal use of these institutions could be due to the specific products they offer.

The survey sought to gauge the relative importance to the firms of the various financial institutions by type and locality. Each firm that uses two or more financial institutions was asked to identify which single institution it considered to be its primary source of financial products; the institution patronized by each firm that uses only one was defined to be the primary institution for that firm. As table 4 shows, 96.9 percent of firms use a local financial institution as their primary institution; 90.8 percent of firms use a local commercial bank; and 5.9 percent use a local thrift institution. These data reinforce the conclusion that, if a firm concentrates its purchases of financial services at its primary institution,

7. By the alternative definition of *local* given in note 5—location of a branch in the metropolitan area or county of the firm's main office—the percentage of nonlocal financial institutions used was generally somewhat larger because many institutions used were located just outside the boundary of a firm's metropolitan area or county.

8. These firms use 2.663 financial institutions, 2.149 of which are local (1.561 local commercial banks and 0.588 local nonbank institutions). Hence, 80.7 percent are local institutions, and 58.6 percent are local commercial banks.

3. Mean number of local and nonlocal financial institutions used per small and medium-sized firm, by number of institutions used[1]

Number of financial institutions used	Local		Nonlocal		Total	MEMO Percentage of all firms
	Commercial bank	Nonbank	Commercial bank	Nonbank		
1	.920	.063	.012	.004	1	50.1
1 or more	1.212	.314	.094	.160	1.780	98.2
2 or more	1.561	.588	.183	.328	2.663	48.1

1. Components may not sum to totals because of rounding. See notes to table 1 for definitions.

local commercial banks are the dominant suppliers of financial products to small businesses.

Financial Services

The average number of financial services used per type of financial institution provides further evidence on the relative importance of the various institutions to businesses and indicates where businesses may be bundling, or clustering, their purchases of financial services (table 5). Firms typically obtain several services from their primary institutions, which, as just shown, are usually local commercial banks. On average, firms obtain 2.37 services from their primary institutions and 2.14 services from all local commercial banks. Firms obtain somewhat fewer financial services from their primary institution when the provider is a thrift institution (2.06) than when it is a commercial bank (2.40).

In contrast, nonlocal institutions and all nonbank financial institutions other than thrifts tend to be used for single services—on average, between 1.04 and 1.26 services (table 5). However, only 35.5 percent of firms use a nonbank financial institution, and only 19.7 percent use a nonlocal financial institution of any type (table 1). These data also suggest that service clustering occurs at local commercial banks and at primary financial institutions (table 5, memo).

In sum, local commercial banks are the dominant suppliers of virtually every financial service considered. Almost all small and medium-sized businesses use a local commercial bank regardless of the number of nonbank or nonlocal institutions they use. A local commercial bank is typically the firm's primary financial institution, which the firm uses for more than one financial service. A significant number of firms use nonbank or nonlocal suppliers for a few services, but not frequently and usually only for a single service.

4. Percentage of small and medium-sized firms designating selected types of local and nonlocal financial institutions as their primary institution, by type of institution[1]

Financial institution	Local	Nonlocal	Total
All	96.9	3.1	100
Commercial bank	90.8	2.0	92.7
Thrift	5.9	*	6.3
Other	*	.6	.9

1. For firms using more than one financial institution, the respondent chose which institution is the primary institution; otherwise, the institution used by the firm is the primary institution. See notes to table 1 for definitions.
* Less than 0.05 percent.

Distribution of Suppliers for Selected Financial Services

The first part of the analysis of the survey indicated that the manner in which small and medium-sized firms use nonlocal and nonbank financial institutions may differ from the way they use local commercial banks. Here we investigate this issue further by comparing the services firms purchase from nonbank and nonlocal institutions to the services they purchase from commercial banks and local institutions. In essence, this analysis helps to answer the second of the five questions posed earlier: To what extent do financial institutions other than commercial banks provide financial services to small and medium-sized businesses, and is the geographic distribution of these suppliers the same as that for banks? It also provides evidence on the way in which the products of nonbank financial institutions differ from those of commercial banks.

5. Mean number of services used by small and medium-sized firms per financial institution, by type and selected characteristics of institution[1]

Type of financial institution	All	Local	Nonlocal	Primary	Nonprimary
All	1.86	1.95	1.25	2.37	1.26
Commercial bank	2.09	2.14	1.55	2.40	1.42
Thrift	1.59	1.62	1.26	2.06	1.28
Leasing	1.04	1.02	1.05	*	1.04
Finance	1.04	1.03	1.05	*	1.03
Other	1.16	1.20	1.09	*	1.15
MEMO					
When services include checking	2.29	2.30	2.05	2.40	1.78
When services exclude checking	1.08	1.10	1.07	1.36	1.08

1. Number of services range from one to thirteen. Each of the following services counts as a single service: leasing, line of credit, mortgage, motor vehicle loan, equipment loan, transactions, cash management, credit-related, brokerage, and trust. See notes to tables 1 and 4 for definitions.
* Too few observations to provide a reliable estimate.

Table 6 shows the percentage of firms using various financial services and the percentage of firms obtaining these services from financial institutions grouped by location, primary/nonprimary status, and class. The service used by the greatest proportion of firms (97 percent) is checking. In contrast, only one-fourth of firms have savings (other deposit or investment) accounts. Credit is also an important service, used by 59.0 percent of firms; lines of credit and motor vehicle loans, the most frequently used forms of credit, are each used by one-fourth of the firms. Nearly 60 percent of firms use some other financial product; by far the greatest incidence of use in this category (47.3 percent of firms) is in transaction services, defined as currency and coin services, credit card processing, and night depository services.

Use by Type of Supplier

The dominant role of local suppliers for most financial services is remarkable, particularly for those services hypothesized to have high transaction costs: Local financial institutions supply 95.7 percent of firms with checking services, 54 percent with credit, and 46.6 percent with transaction services.

Nonlocal institutions are used by only 19.7 percent of all small and medium-sized firms (table 1). However, for the minority of firms that use specific services, such as leasing, nonlocal

6. Percentage of small and medium-sized firms that use various financial services, by service and selected characteristics of financial institutions[1]

Service	Any financial institution	Local	Nonlocal	Primary	Nonprimary	Commercial bank	Nonbank	Nonfinancial source
Checking	97.0	95.7	4.0	96.9	12.5	92.0	7.8	0
Savings	25.0	23.5	2.5	19.3	9.4	20.4	6.8	0
Credit	59.0	54.0	14.3	43.8	32.3	47.9	24.5	15.9
Leasing	7.4	4.6	3.5	1.6	6.0	2.3	5.6	2.6
Line of credit	24.1	22.8	1.7	22.0	4.0	22.2	2.6	.5
Mortgage	15.0	13.8	1.8	10.4	5.5	11.8	3.6	4.1
Motor vehicle loan	25.1	20.2	6.4	10.2	16.8	15.3	11.6	1.3
Equipment loan	12.4	10.6	2.3	7.8	5.5	9.3	3.8	2.8
Other loan	8.9	8.1	1.1	6.3	3.1	7.1	2.1	6.5
Other[2]	59.3	57.8	4.2	55.3	13.2	55.7	8.1	2.6
Transactions	47.3	46.6	2.4	45.4	6.9	45.2	3.6	1.8
Cash management	15.0	14.3	.8	13.5	2.4	14.0	1.1	.1
Credit-related	7.4	6.7	.8	6.3	1.6	6.6	1.0	.3
Brokerage	3.3	2.7	.6	.6	2.8	.4	2.9	.2
Trust	3.8	3.5	.3	2.2	1.7	3.1	.8	.2

1. See notes to tables 1 and 4 for definitions.
2. Transactions services include currency and coin, credit card processing, and night depository; cash management services include cash management, lockbox, and wire transfer; credit-related services include bankers acceptances, sales finance, letter of credit, and factoring; trust services include pensions, trusts, and safekeeping.

institutions become more important. For example, 7.4 percent of all firms use leases, and 3.5 percent of all firms obtain leases from nonlocal institutions (table 6, columns 1 and 3). Thus, 47.3 percent of the firms that use leases obtain them from nonlocal suppliers (3.5 divided by 7.4; see table 7, column 2). In fact, leasing, motor vehicle loans, equipment loans, and brokerage services are the services for which users rely most heavily on nonlocal institutions.

Nonbank financial institutions are important for some services, particularly credit. About one-fourth of the firms obtain credit from these institutions (table 6). This importance can be seen more clearly in table 7: 75.7 percent of the firms using leases, 46.2 percent of firms using motor vehicle loans, and 30.6 percent of firms using equipment loans obtain these services from nonbanks. In contrast, nonbank institutions are not frequent sources for checking accounts, transaction services, and cash management services. Only 8 percent or fewer firms using these financial products obtain them from nonbank institutions, whereas about 95 percent of users obtain them from commercial banks.

Nonfinancial sources are not important to most small and medium-sized businesses. No more than 6.5 percent of firms obtain any one specific service from a nonfinancial institution (table 6). The services most frequently obtained from such sources (mainly owners, other individuals, and other business firms) are financial leases, mortgages, equipment loans, and other credit.

Geographic Dispersion of Service Use

Data on the geographic dispersion of the financial institutions supplying firms with various services can provide further insights into how large geographic markets might be. The survey results reveal the preferences that small and medium-sized businesses have for local suppliers. Indirectly, the survey data suggest the relative importance of transaction costs for different financial services.

Firms use local suppliers to a remarkable extent (table 8). For all but one service, leasing, at least 75 percent of the financial institutions are within thirty miles of the firms that use them, and the median distance between the institutions and the firms is less than eight miles for twelve of the thirteen product categories in table 8.

The institutions in which firms have checking accounts have the smallest geographic distribution: 50 percent of the institutions used for checking are within one mile of the firms using them, and 90 percent of the institutions so used are within twelve miles of the firms. The suppliers of transaction and cash management services have similar spatial distributions.

7. Percentage of small and medium-sized business users of various financial services that obtain such services from financial institutions with selected characteristics[1]

Service	Local	Nonlocal	Primary	Nonprimary	Commercial bank	Nonbank
Checking	98.4	4.1	99.9	12.9	94.8	8.0
Savings	94.0	10.0	77.2	37.6	81.6	27.2
Credit	91.5	24.2	74.2	54.7	81.2	41.5
Leasing	62.2	47.3	21.6	81.1	31.1	75.7
Line of credit	94.6	7.1	91.3	16.6	92.1	10.8
Mortgage	92.0	12.0	69.3	36.7	78.7	24.0
Motor vehicle loan	80.5	25.5	40.6	66.9	61.0	46.2
Equipment loan	85.5	18.5	62.9	44.4	75.0	30.6
Other loan	91.0	12.4	70.8	34.8	79.8	23.6
Other	97.5	7.1	93.3	22.3	93.9	13.7
Transactions	98.5	5.1	96.0	14.6	95.6	7.6
Cash management	95.3	5.3	90.0	15.0	93.3	7.3
Credit-related	90.5	10.8	85.1	21.6	89.2	13.5
Brokerage	81.8	18.2	5.2	84.8	12.1	87.9
Trust	98.5	5.1	96.0	14.0	95.6	7.6

1. Values can be obtained by dividing the value for each type of institution in table 6 by the corresponding value in column 1 of table 6. For example, the first value in this table, 98.4, can be obtained by dividing 95.7 (table 6, row 1, column 2), by 97.0 (table 6, row 1, column 1). See notes to tables 1, 4, and 6 for definitions.

8. Miles between small and medium-sized firms and their financial institutions, by financial service used and selected percentiles of institutions

Service	Percentile of institutions			MEMO Percentage of firms using service
	50th	75th	90th	
Checking	1	4	12	97.0
Savings	1	7	24	25.0
Leasing	21	260	1,200	7.4
Line of credit	2	9	44	24.1
Mortgage	3	11	65	15.0
Motor vehicle loan	7	29	128	25.1
Equipment loan	5	25	275	12.4
Other loan	3	15	80	8.9
Other[1]	1	5	21	59.3
Transactions	1	5	15	47.3
Cash management	1	5	16	15.0
Credit-related	4	12	43	7.4
Brokerage	5	29	80	3.3
Trust	2	6	25	3.8

1. See table 6, note 2, for definitions.

Financial institutions used for savings accounts and for the category of "other" services are also located quite close to the firm: 90 percent or more are located within twenty-four miles of the firm. Suppliers of motor vehicle loans, equipment loans, and leases are relatively more distant than those of other services. As mentioned in the section on nonbank suppliers, however, most suppliers are local. Although these statistics do not define markets, they suggest how large geographic markets might be. They also suggest that the markets for different services may have different geographic dimensions.

In sum, local commercial banks are the dominant suppliers of virtually every financial product considered. Almost all of the small businesses surveyed used a local commercial bank, most often for checking, regardless of the number of nonbank or nonlocal institutions used. The variations in nonlocal and nonbank suppliers for different types of products and the geographic distribution of suppliers for specific services do not appear to support the hypothesis that businesses purchase all of their financial services at a single financial institution. However, businesses using nonbank and nonlocal financial institutions generally did so to obtain a few specific products, namely leases, motor vehicle loans, and equipment loans.

THE ROLE OF URBANIZATION AND FIRM SIZE

We now consider why firms choose particular financial service suppliers by examining the level of urbanization of a firm's locale and the size of the firm. Urban and rural areas may differ in the range of alternatives generally available locally because of differences in economic integration, market size, and market structure.[9] And the financial behavior of larger firms may differ from that of smaller firms because of differences in transaction costs associated with financial sophistication, the use of financial products, and the need for financial products. After the discussion of these factors, we consider other characteristics of the firm and of the local market in assessing why firms may choose nonlocal suppliers in particular.

Urbanization

The overall number of financial institutions used by urban firms (those whose principal office is in a metropolitan statistical area as defined by the Census Bureau) is on average larger, by a statistically significant amount, than the number used by rural firms (table 9). Urban firms also use more local banks and local nonbanks than do rural firms, but the latter use more nonlocal banks and nonbanks than do urban firms. Although most of these differences are statistically significant, none is large.

Rural firms use more nonlocal financial institutions than do urban firms perhaps because the demand in rural areas for some services may be too small for institutions to offer them. Rural firms are thereby forced to obtain such services from nonlocal suppliers, whereas urban firms can obtain them locally. Perhaps another factor contributing to this difference is that the structure of the banking market in rural areas is

9. For example, see Federal Reserve Bank of Chicago, U.S. Department of Agriculture, and Farm Foundation, *Rural Financial Markets: Research Issues for the 1980s* (Federal Reserve Bank of Chicago, 1982); and Ron Shaffer and Glen Pulver, "Rural Nonfarm Businesses' Access to Debt and Equity Capital" (paper presented at the Southern Regional Science Association Meetings, Washington, D.C., March 22–24, 1990).

9. Use of selected types of financial institutions and services, by urbanization of firm location[1]

Financial institution or service[2]	Percentage of firms using institution or service		Mean number of institutions or services used	
	Urban firms	Rural firms	Urban firms	Rural firms
All institutions	98.2	98.0	1.81*	1.69*
Commercial bank	94.1	93.4	1.31	1.29
Local	92.9	92.1	1.22*	1.18*
Nonlocal	7.6	9.2	.09	.11
Local	97.1	96.9	1.57*	1.38*
Nonlocal	18.3	22.9	.24*	.30*
Nonbank	26.7	30.2	.50*	.40*
All services	98.2	98.0	3.26*	3.46*
Checking	97.1	96.7	1.57	1.38
Savings	25.3	24.3	.31	.29
Leasing	7.8	6.2	.10	.08
Line of credit	24.6	22.1	.27	.25
Mortgage	12.4	24.5	.14*	.27*
Motor vehicle loan	25.8	22.7	.31*	.26*
Equipment loan	11.9	14.1	.14	.16
Other loan	8.2	11.5	.09*	.13*
Other	57.6	65.1	.70*	.78*

1. A firm is urban if its principal office is in a metropolitan statistical area. In the sample of 3,405 firms, 1,873 are urban and 1,532 are rural.

Selected characteristics of the sampled firms have the following mean values:

	Urban	Rural
Number of employees	11.68*	9.58*
Market Herfindahl index	.09*	.24*
Market CR3	.42*	.70*
Number of firm's locations	1.56	1.32
Number of firm's local locations	1.19	1.16
Sales (millions of dollars)	1.36*	.93*

The market Herfindahl index measures the degree of deposit concentration, with higher numbers representing greater concentration; the market CR3 is the percentage of deposits held by the top three institutions in the market; and the number of firm's local locations is the number that is thirty miles or less from the principal office of the firm.

2. See notes to table 1 for definitions.

* Difference significant at the 95 percent confidence level.

significantly more concentrated than that in urban areas. As shown in the notes to table 9, the average Herfindahl index of the local concentration of banks and thrift institutions is 0.24 for rural firms and 0.09 for urban firms. If prices of financial services were higher in more concentrated banking areas, buyers in those areas would purchase fewer services locally and more services nonlocally than would firms in less concentrated areas. Thus, simply comparing urban and rural firms cannot resolve this question; we shall address it again, with a multivariate model, after discussing the role of firm size in the firm's choice of institutions.

Firm Size

The size of a firm can usually be expected to correlate with the firm's overall demand for financial services and the complexity of financial services it requires. When we divide our sample of firms into two employment-size categories—small (0–49 employees) and medium-sized (50–499 employees)—we find that the average number of financial institutions and services used is significantly greater for medium-sized firms than for small firms in all but one of seventeen comparisons (table 10). Overall, medium-sized firms use nearly twice as many financial institutions on average as do small firms (3.1 versus 1.73). The size-related differences (both in terms of percentage of the size class using the institution or service and the average number used) are greatest for nonlocal institutions and for leasing and lines of credit. One characteristic that does not differ much between small and medium-sized firms is bank market structure, measured either by a Herfindahl index or a concentration ratio (table 10, note 1), although the observed difference is statistically significant.

The findings that the use of distant institutions and complex services increases with firm size suggest that transaction costs relative to the value of financial services purchased by the firm are important in explaining differences between the use of local and the use of nonlocal financial institutions.

Factors Influencing the Choice of Nonlocal Suppliers

In preceding sections, we examined firms' use of financial institutions and services by type and distance of institution, by service, and by location and size of the firm. We next identify those characteristics of firms and of the geographic areas in which they are located that indicate the use of nonlocal institutions. We present two types of evidence on these questions. The first is a univariate analysis of small and medium-sized firms that use only local financial institutions and of those that use at least one nonlocal institution. We test the hypothesis that the means of several business and geographic characteristics for the

10. Use of selected types of financial institutions and services, by size of firm[1]

Financial institution or service[2]	Percentage of firms using institution or service		Mean number of institutions or services used	
	Small firms	Medium-sized firms	Small firms	Medium-sized firms
All institutions	98.1	100.0	1.73*	3.10*
Commercial bank	93.7	99.8	1.27*	2.20*
Local	92.6	96.9	1.19*	1.71*
Nonlocal	7.4	29.3	.08*	.50*
Local	97.0	98.6	1.50*	2.24*
Nonlocal	18.3	44.8	.23*	.86*
Nonbank	34.6	50.0	.46*	.90*
All services	98.1	100.0	3.20*	6.47*
Checking	96.9	99.8	1.12*	1.71*
Savings	24.3	42.8	.29*	.70*
Leasing	6.8	22.9	.09*	.36*
Line of credit	22.7	58.5	.25*	.69*
Mortgage	14.4	30.6	.16*	.38*
Motor vehicle loan	25.1	26.7	.29*	.44*
Equipment loan	11.8	25.9	.13*	.34*
Other loan	8.8	12.0	.10	.13
Other	58.3	83.0	.70*	1.32*

1. Small firms are those with 0 to 49 employees, and medium-sized firms are those with 50 to 499. In the sample of 3,405 firms, 2,899 are small and 506 are medium-sized; see table A.1, note 3.

Selected characteristics of the sampled firms have the following mean values (see table 9, note 1):

	Small	Medium-sized
Number of employees	6.96*	116.56*
Market Herfindahl index	.12*	.11*
Market CR3	.48*	.45*
Number of firm's locations	1.38*	4.82*
Number of firm's local locations	1.14*	2.19*
Sales (millions of dollars)	.76*	13.70*

2. See notes to table 1 for definitions.

* Difference significant at the 95 percent confidence level.

two classes of firms are equal. The second type of evidence, derived from a multivariate model based on the theoretical results discussed above, is an estimate of the effect of each of the variables in the univariate analysis on the probability that a small or medium-sized firm will use one or more nonlocal financial institutions.

Univariate Analysis

The univariate comparisons find the following significant differences (table 11): Compared with firms using only local financial institutions, firms using nonlocal institutions tend to have more employees and greater sales and to use more institutions and more financial services (and thus presumably have more complex financial operations and demands). A greater proportion of firms using nonlocal institutions are corporations. Such firms also tend to have relatively greater proportions of sales derived from exports, have more nonlocal branches or offices, have smaller cash sales, use trade credit more frequently, and are more frequently denied credit. Statistically significant differences also arise in terms of industry classification. Firms using nonlocal institutions tend to be slightly more widely represented in manufacturing and real estate and less well represented among retailing and service industries.

Local supply conditions also reveal statistically significant differences between the two classes of firms (table 11). Firms using nonlocal institutions are more frequently located in rural areas; in areas with significantly smaller deposits in banks and thrift institutions (a proxy for market size); and in areas with a slightly higher concentration index and Herfindahl index, which suggests less local competition among banks and thrift institutions.

Multivariate Analysis

The univariate analysis highlights characteristics that are significant in distinguishing firms likely to use a nonlocal financial institution. A multivariate analysis is required to show the relative importance of the characteristics and to assess the effect of one variable when all others are held constant. Such an analysis is crucial if variables associated with hypotheses about the size of economic markets are to be distinguished from variables associated with hypotheses about unique firm characteristics.

The analysis, reported in detail in the authors' Staff Study 160, shows that firms that are relatively large, have multiple locations, have been denied credit, have obtained trade credit, and are located in rural counties or in areas with higher concentrations of banks and thrift institutions have a significantly greater probability of obtaining financial products from one or more nonlocal suppliers. Firms having relatively large cash sales, however, are more apt to use only local financial institutions.

Of particular importance for bank market definition is the finding concerning the Herfindahl

11. Population characteristics of small and medium-sized firms, by locality of financial institutions they use[1]

Mean, except as noted

Characteristics of firm	Uses only local institutions	Uses local and nonlocal institutions
Number of financial institutions and services used		
Institutions	1.53*	2.98*
Services	2.97*	5.07*
Number of employees		
1987	9.25*	20.16*
1986	8.76*	18.62*
Sales		
Total (millions of dollars)		
1987	.99	2.45
1986	.96	2.22
Indicators (percent of sales)		
Exports	1.54	2.02
Cash sales	19.31*	13.26*
Age		
Year acquired	1975	1973
Year established	1968	1964
Years from acquisition to 1989	14.1	13.8
Organizational form (percent of firms)		
Partnership	8.6	7.0
Sole proprietorship	41.3*	30.5*
Corporation	50.1*	62.5*
Industry, by Standard Industrial Classification (percent of firms)		
Construction (1000≤SIC<2000)	13.8	12.0
Primary manufacturing (2000≤SIC<3000)	3.9*	5.8*
Manufacturing (3000≤SIC<4000)	5.0	4.8
Transportation (4000≤SIC<5000)	2.7*	4.3*
Wholesale (5000≤SIC<5200)	9.8	12.0
Retail (5200≤SIC<6000)	24.3	21.4
Insurance agents and real estate (6400≤SIC<7000)	6.4*	8.9*
Services (7000≤SIC<8000)	18.9*	14.9*
Other (8000≤SIC<9000)	13.2	12.9
Office locations		
Has nonlocal offices (percent of firms)[2]	6.8*	14.9*
Number of all offices	1.46	1.79
Number of local offices	1.16*	1.30*
Firm's geographic area[3]		
Percent of firms in rural areas	20.7*	25.7*
Deposits in area (billions of dollars)	29.05	25.60
Market Herfindahl index	.12*	.13*
Market CR3	.47*	.50*
Other (percent of firms)		
Managed by owner	90.8	88.6
Has been denied credit	3.5*	7.4*
Has used trade credit	75.1*	82.9*

1. See notes to tables 1 and 9 for definitions.
2. A firm's nonlocal office is located more than thirty miles from the firm's principal office.
3. Metropolitan statistical (urban) area or non-MSA (rural) county in which principal office of the firm is located.
* Difference significant at the 95 percent confidence level.

index of local market structure. The estimated effect of the Herfindahl index on the probability of using nonlocal institutions suggests that, for many businesses, banking markets are locally limited. However, all firms in the sample may not be equally limited. The significant effect of firm size indicates that medium-sized businesses may not be as constrained as the small firms in the sample: Their transaction costs for financial services may be a smaller relative cost than it is for small firms. Perhaps other complexities associated with size make medium-sized firms more likely to use products, such as leases, for which nonlocal suppliers are more important. The next section analyzes why business firms choose different types of financial institutions for different types of services.

Reasons for Choosing Particular Types of Financial Institutions

The NSSBF asked business owners "What were the factors that influenced the firm's decision to obtain this set of services from this institution?" The question was asked for the primary financial institution and up to five additional institutions used by the firm.

Reasons by Type of Institution

The answers to the survey questions cover a broad range of factors, including proximity, ease of conducting business (convenience other than proximity), prices, services offered, and a variety of professional and personal relationships. About one-fourth of the reasons given for the choice of particular local and primary institutions are proximity and ease of conducting business, which are closely associated with transaction costs. The second largest category of reasons for the choice of these institutions is personal relationships.

The most frequently cited reason for choosing nonlocal, nonbank, and nonprimary financial institutions is seller relationships (such as those in which a motor vehicle dealer helps a customer to obtain financing from a particular financial institution or captive finance company). The second most important factor—nearly one-fifth of the

reasons for choosing nonlocal institutions—is price. In contrast, price is considerably less important for choosing local and primary institutions. This finding suggests that pricing may induce firms to use nonlocal institutions for some products and may be consistent with the hypothesis that financial service markets are local. As discussed earlier, firms in concentrated markets have a greater incentive to purchase products in more competitive nonlocal markets.

In sum, systematic differences appear in the reasons cited for the choice of various types of financial institutions. Lower transaction costs is the reason behind the choice of particular local and primary institutions, whereas seller relationships and prices are more often the basis for choosing particular nonlocal and nonbank institutions. Another reason for using nonlocal suppliers may be the lack of availability of certain services in some areas. We consider this possibility in the next section, which covers specific financial services and the reasons for choosing the particular institutions offering them.

Reasons by Type of Service

Proximity and ease of conducting business are important reasons for the choice of almost every service used by the firms. Prices (including interest) are most important for leases, mortgages, and vehicle loans, a finding consistent with the importance of transaction costs to small and medium-sized businesses. Leases, vehicle loans, and equipment loans are also the services that, when purchased, are most frequently obtained from nonlocal and nonbank suppliers (tables 6 and 7); the products for which seller relationships and other referrals are most important; and, as table 8 shows, the financial services with the widest geographic distribution of suppliers.

The reasons associated with the use of institutions and services suggest that certain products tend to be purchased at local institutions for reasons associated with transaction costs. Checking, savings, other services, and, to a lesser extent, lines of credit and other loans are in this category. For these services and for local financial institutions, price is apparently not as important a consideration as it is for motor vehicle loans and leases, which tend to be purchased over a relatively wide area on the basis of seller recommendations or price. Hence, the data suggest that a pronounced local preference exists for some services, but that other services may not be part of local banking markets.

Survey data on the behavior of firms in shopping for financial services and on the efforts of financial institutions to solicit sales show that local commercial banks clearly are the type of institution that firms consider most in shopping for financial services and that is dominant in seeking business from local and nonlocal firms. The data on shopping and solicitation, which include potential as well as current suppliers, do not change the conclusions concerning market definition that were reached on the basis of patterns of demand.

CONCLUSION

Local commercial banks are still the main suppliers for most of the financial services used by small and medium-sized businesses. Local commercial banks, and sometimes local thrifts, supply an array of financial services centered on checking and transactions services. Nonbank institutions, whether local or not, rarely supply such an array. These findings support the current approach to market definition in the antitrust analysis of proposed bank mergers and proposed acquisitions by bank holding companies. However, the findings also suggest that economic markets for certain services, especially leases and motor vehicle loans, include nonlocal and nonbank financial institutions and hence justify a broader market definition for these services. This broader market definition would apply to acquisitions by bank holding companies of certain prospective nonbank subsidiaries.

APPENDIX

The National Survey of Small Business Finances is a survey of small and medium-sized business firms in the United States, conducted in 1988–89 for the Board of Governors of the Federal Re-

A.1. Population and sample characteristics of the National Survey of Small Business Finances[1]

Class	Percent of population (weighted)[2]	Number of businesses in sample (unweighted)
Number of employees[3]		
0–4	58.8	1,733
5–9	18.9	556
10–24	13.6	395
25–49	4.8	215
50–99	2.3	283
100–499	1.6	223
Years under current owner		
5 or fewer	24.1	749
6–10	23.6	783
11–20	30.6	1,060
More than 20	21.7	813
Annual sales (1988 dollars)		
Less than 50,000	16.3	501
50,000–100,000	13.9	420
100,001–250,000	24.0	707
250,001–1,000,000	28.1	845
1,000,001–2,500,000	9.9	346
2,500,001–5,000,000	3.8	222
5,000,001–10,000,000	2.3	154
More than 10,000,000	1.8	210
Organizational form		
Sole proprietorship	39.9	1,255
Partnership	8.3	274
Corporation	51.8	1,876

Class	Percent of population (weighted)[2]	Number of businesses in sample (unweighted)
Type of industry, by Standard Industrial Classification		
Construction ($1000 \le SIC < 2000$)	13.4	473
Primary manufacturing ($2000 \le SIC < 3000$)	4.2	213
Manufacturing ($3000 \le SIC < 4000$)	5.0	195
Transportation ($4000 \le SIC < 5000$)	3.0	117
Wholesale ($5000 \le SIC < 5200$)	10.2	344
Retail ($5200 \le SIC < 6000$)	25.6	929
Insurance agents and real estate ($6400 \le SIC < 7000$)	6.9	195
Services ($7000 \le SIC < 8000$)	18.7	578
Other ($8000 \le SIC < 9000$)	13.1	361
Characteristics of business location		
Herfindahl index[4]		
Less than 1,000	51.3	1,281
1,001–1,800	32.2	1,127
1,801–2,500	9.0	516
More than 2,500	7.4	481
Urban[5]	78.3	1,873
Rural	21.2	1,532

1. Survey conducted in 1988–89 among for-profit, nonagricultural, nonfinancial small and medium-sized businesses (with fewer than 500 employees); total number of respondents was 3,405.
2. All statistics unless otherwise noted are weighted to adjust for unequal rates of sampling and response so that results represent the population of small and medium-sized firms. Components may not sum to 100 because of rounding.
3. Full-time equivalents; the end-point of each size class has been rounded down to the nearest whole number.
4. Herfindahl index is based on the aggregate deposit level of all banks, savings and loan associations, and savings banks in the metropolitan statistical area or rural county in which the principal office of the business firm is located.
5. Principal office of the business firm is located in a metropolitan statistical area.

serve System and the Small Business Administration.[10] The survey drew its sample from the population of all for-profit, nonagricultural, nonfinancial enterprises listed in Dun's Market Identifier file. The sample consisted of those firms that were in operation with fewer than 500 employees at the end of December 1987. The number of such firms in the Dun's file was 5,188,490; the number sampled was 5,547; the number eligible was 5,190; and the number of respondents used for this analysis was 3,405, for a response rate of those eligible of 66 percent.[11]

The sample design was that of a stratified random sample with oversampling to ensure the ability to estimate separately the reporting domains defined by census region, urban/rural status, and class of employment size. Table A.1 displays the characteristics of the sample.[12]

10. For detailed information on the methodology and content of the National Survey of Small Business Finances, see Brenda G. Cox, Gregory E. Elliehausen, and John D. Wolken, *The National Survey of Small Business Finances: Final Methodology Report*, RTI Report 4131–00F (Research Triangle Park, N.C.: Research Triangle Institute, September 1989).

11. The Small Business Administration estimates that the 5,188,490 firms in the Dun's Market Identifier file at the end of 1987 accounted for about 93 percent of private employment in the United States at that time. See U.S. Small Business Administration, *The State of Small Business: A Report of the President* (Government Printing Office, 1988); and U.S. Small Business Administration, *Handbook of Small Business Data 1988* (GPO, 1988) for a discussion of population coverage of the Dun's file; and Brenda G. Cox, Gregory E. Elliehausen, and John D. Wolken, "The National Survey of Small Business Finances: Description and Preliminary Evaluation," Finance and Economics Discussion Series 93 (Board of Governors of the Federal Reserve System, November 1989).

12. All statistics presented in the tables and used in the analysis were obtained from the survey except the variables describing the number and size distribution of banks and thrift institutions in specific geographic areas, which were obtained from the Summary of Deposits reports of the Federal Deposit Insurance Corporation.

Unless otherwise indicated, the results in this table and other tables in the article were weighted to adjust for disproportionate rates of sampling and response and to permit inferences about the population of small and medium-sized business firms.[13]

The survey collected the following types of information from each business:

- An inventory of the business's deposit and savings accounts, financial leases, credit lines, mortgages, motor vehicle loans, equipment loans, other loans, and selected other financial products for each financial service supplier used by that business
- The business's reasons for choosing each of its financial institutions, the location of the office of the financial institution it uses for noncredit services, the most frequent method of conducting noncredit business with the financial institution (in person, telephone, mail), the location of the financial institution office it uses to apply for credit, the method of applying for credit, and the number of years the firm has done business with the institution
- Experience in the past year in searching for financial products, changes in its choices of financial institutions, and solicitations it has received in the past year from financial institutions
- Data from each firm's income statement and balance sheet, demographic information on the owners and their employees, and other characteristics of the firm such as the industry to which it belongs and its age.

Each business selected for the survey received a worksheet in advance to encourage the use of written records in responding to the subsequent computer-assisted telephone interviews, which were conducted by Research Triangle Institute. Interviews lasted an average of fifty minutes.

13. The firms analyzed include all those surveyed that completed the entire questionnaire and were part of the main sample (see Cox, Elliehausen, and Wolken, *The National Survey of Small Business Finances: Final Methodology Report*).