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

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Abstract

This paper examines how bank small business lending in local markets was related to bank merger activity during the mid-1990s. The authors use deposit data reported at the branch level to impute the distribution of bank small business loans across urban and rural markets; they then study the link between various types of merger activity and the growth of small business lending in the local market. Multivariate tests indicate that bank consolidation is more broadly linked to lower estimated loan growth in rural markets than in urban ones. However, there is also evidence of lower small business loan growth in concentrated urban markets that are experiencing within-market merger activity. And, consistent with bank-level research, bank consolidation mainly involving mergers between smaller banks tends to be associated with greater small business credit availability in local banking markets. Finally, the authors validate their empirical strategy by comparing their geographic loan estimates to geographic loan originations reported since 1996 by larger institutions under the auspices of the Community Reinvestment Act. (JEL Classification: G210, L100, L400, G280)

From a historical perspective, industry consolidation is likely to be cited as the defining feature of the banking industry of the 1990s. Prospects for future merger activity seem to justify continued concern about the effects of consolidation on banking industry performance. On the one hand, mergers may increase geographic diversification of bank portfolios, enhance the safety and soundness of banking institutions, and improve the allocation of credit. On the other hand, mergers that increase local market concentration may allow lenders to extract rents in providing banking services that are inherently local in nature. In addition, as banks merge, the provision of certain banking services may be adversely affected by changes in bank scale as well as in banking cultures.[1]

Small business lending is a prime example of a banking product likely to be affected by bank consolidation. Traditionally this type of lending has been local in nature—often made to firms having idiosyncratic credit needs and risks tied to the prospects of the local economy. Thus, small business lending has generally required local expertise for underwriting and monitoring borrower-specific risks, and this requirement makes it difficult for businesses to obtain credit from lenders that do not have a local presence. In contrast, large commercial loans, consumer credit, and home mortgage lending have become increasingly standardized products transacted in what have become national markets. Although these types of loan products require expertise, they no longer require the same sort of local presence that small business loans do. The local nature of small business lending also appears to suit the inherently more local focus of smaller banks. As table 1 illustrates, small banks continue to hold a disproportionately large share of small business loans, whereas corporate loans, consumer credit, and home mortgage lending have become increasingly concentrated in large banks.

These considerations suggest two basic channels by which bank consolidation could adversely affect the provision of small business loans by banks. First, standard market analysis suggests that when there are significant costs incurred in borrowing from nonlocal lenders, bank mergers that increase the concentration of local markets may reduce the availability of bank

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[1] Berger and Udell (1996).

credit to local small businesses. Second, even if mergers do not affect the degree of local market competition, merging institutions may shift their focus to other credit products and reduce small business lending in all the markets they serve.[2] Of course, how bank consolidation has affected small business credit availability is ultimately an empirical question.

This paper examines the relationship between bank consolidation and the availability of small loans to commercial businesses (hereafter called *small business loans*) in local banking markets (*banking* refers to commercial banks as well as savings institutions).[3] Although researchers have previously studied how bank consolidation has affected small business lending, data limitations have caused them to focus on the lending behavior of banks but not on how that behavior translates into bank credit availability at the *local market level*. Most studies have used the balance sheet data on small loans to businesses (less than $1 million at origination) reported by banks in their June Reports of Condition and Income (Call Reports). Unfortunately, these data do not include any information about where banks are lending. Hence, because many banks operate in more than one geographic area, researchers cannot simply aggregate bank-level data to measure lending in most markets.

In this paper, we deal with the geographic limitations of Call Report data by using data reported by banks in the June Summary of Deposits to impute the geographic distribution of each bank's June small business loan balances.[4] We use these geographic loan estimates to assess how *local bank consolidation* (here referring to the acquisition of local banks by previously unaffiliated banks or holding companies) was related to small business lending in local banking

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[2] These two channels have different policy implications. Merger-related changes in small business lending due to reduced local competition suggest that the concern with consolidation should not be that banks are getting larger, but rather that there are fewer banks in some markets. These anticompetitive effects can be addressed through the bank merger-approval process. In contrast, merger-related changes in credit availability attributable to the lending technologies associated with bank scale may lead to long-term changes in the allocation of business credit. Although other lenders should take advantage of profitable lending opportunities foregone by merging institutions, if there is a fundamental shift in the credit extension process—for example, toward standardized credit technologies—the inherent nature of small business credit availability may be irrevocably altered.

[3] Small business loans include nonfarm business loans having an original size of $1 million or less. On their mid-year reports of condition and income, banks report the outstanding balance of small business loans not secured by real estate and the outstanding balance of small business loans secured by nonfarm nonresidential property. We define small business lending to include both of these loan categories.

[4] These data are discussed in a data appendix to this paper.

markets during the mid-1990s. This market-based approach allows us to examine how the effects of mergers depend on the characteristics of the local marketplace as well as the characteristics of local merger activity. We also report evidence about the extent to which other banks in the market offset merger-related changes in small business lending. Throughout, we analyze urban and rural markets separately.

Clearly, the validity of our conclusions depends on the appropriateness of the loan imputation method that we use. To assess the method, we compare our geographic lending patterns with those evident in Community Reinvestment Act (CRA) data reported annually since 1996 by larger banking institutions. A comparison using 1997 data indicates that the geographic distribution of a bank's CRA business loan originations is highly correlated with that of its reported deposits, although the correlation is weaker for very large banks and in sparsely populated rural markets. Thus, although evolving technology may alter the geographic nature of banking activities in the future, we believe that deposit-taking patterns are a reasonable proxy for small business lending during the mid-1990s.

By way of preview, we find that the relationship between bank consolidation and local small business lending depends on the nature of the market and the nature of the merger activity affecting the market. Our results indicate that rural markets experiencing merger activity during the mid-1990s had lower estimated small business loan growth than rural markets unaffected by mergers. In urban banking markets, only certain types of merger activity were systematically related to local small business loan growth. Consistent with an anticompetitive view, concentrated urban markets where consolidation activity was mainly within market (that is, where both parties had a local presence before the consolidation) had lower estimated loan growth. Finally, not all of the merger-related effects indicate less small business lending; we also find that rural markets where consolidation activity mainly involved mergers of small banks had higher estimated loan growth. This result is consistent with bank-level evidence that mergers between small organizations may enhance small business credit availability.[5]

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[5] Peek and Rosengren (1998); Strahan and Weston (1998).

Interestingly, our findings regarding the effect of bank consolidation on local small business lending contrast with comparable studies of home mortgage lending, which indicate no systematic merger-related effects.[6] However, this is consistent with the notion that small business loan markets remain more local in nature than other bank product markets. Thus, scrutiny of proposed mergers from a small business lending perspective may become increasingly important.

The remainder of this paper is organized as follows: The first section outlines various hypotheses about how bank consolidation affects small business lending and summarizes the existing evidence regarding these hypotheses. Section two describes the empirical methodology that we use to study small business lending at the local market level, and section three validates our methodology. Sections four and five present descriptive statistics and the results of multivariate statistical tests. Section six concludes. A data appendix discusses the sources of data and some issues involving measurement.

I. BANK CONSOLIDATION AND SMALL BUSINESS LENDING: HYPOTHESES AND EVIDENCE

Small business credit markets are considered to be local for the purposes of bank antitrust analysis and hence, it is important to understand how bank mergers affect the small business credit availability in local banking markets.[7] However, because the small business loan data reported on bank Call Reports include no geographic detail, most studies have focused on lending by particular banks rather than on credit availability at the market level. These bank-level studies have tested a number of hypotheses about how merger-related changes in bank scale or credit cultures affect a bank's small business lending activities.

One prominent hypothesis argues that since the commercial loans made by smaller banks tend to be smaller and more local (whether because of legal loan limits or the need to diversify),

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[6] Avery, Bostic, Canner, and Calem (1999b).
[7] Kwast, Starr-McCluer, and Wolken (1997) discuss the role of small business lending in the definition of relevant market for competitive analysis of bank mergers. They also present evidence as to the extent to which small business lending occurs in geographically localized markets.

small banks develop expertise with small business customers.[8] However, as banks get larger and more organizationally complex, their business focus shifts to larger commercial customers or to more standardized types of loan products. This hypothesis implies that as banking institutions merge into larger organizations, they are likely to reduce the shares of their loan portfolios earmarked for small business loans.

Conversely, it has been argued that larger banks are likely to be efficient at lending to even small borrowers because their scale allows them to reduce costs and better diversify their commercial portfolios.[9] Hence, as institutions become larger, they may be able to make more loans in general, including more small loans. In addition, larger banks may be better able to absorb the fixed costs associated with new small business lending technologies (such as credit scoring models) than their smaller counterparts. These arguments suggest that consolidation may not adversely affect small business lending.

It has also been argued that a bank's credit culture is a key determinant of its commercial lending activities. If small business lending is an important (or a desired) product line for acquiring institutions, they may increase the small business loan focus of their acquisitions over the longer term.[10] When it is not, acquirers are likely to cut back on the small business lending activities of an acquisition that are deemed to be excessive. Even if credit cultures do not vary radically, bank consolidation may disrupt small business lending if it dislocates bank personnel who have the expertise and experience with small business customers. All else equal, however, these "dislocation effects" are expected to be relatively short term.

In tandem, these arguments suggest that the processes by which bank consolidation affects small business lending are complex and the implications for the small business credit availability are complex as well. To assess the empirical significance of these hypotheses, previous studies have generally compared the small business loan-to-asset ratios of banks

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[8] Berger and Udell (1996).
[9] Strahan and Weston (1998); Morgan (1998).
[10] Peek and Rosengren (1998).

involved in merger and acquisition activity with those of a control group of banks that have not.[11] Researchers have used this approach to study various types of bank consolidation, such as mergers of institutions that vary in size or are headquartered in different states. The results of these studies are mixed. Early research tended to interpret the evidence as suggesting that merger activity reduces at least the asset share, if not the dollar volume, of smaller commercial loans. More recent papers have tended to argue that bank consolidation may even increase the small business lending of the acquirers.

Some of the empirical ambiguity may stem from the fact that the general focus on bank balance sheet *ratios* does not directly indicate whether the *level* of lending (measured in terms of loan dollars) is higher or lower as a consequence of bank consolidation. In addition, studies of bank-level ratios generally weight all observations equally—regardless of bank size. And, since small banks dominate the banking population, bank-level evidence reflects the predominance of small banks in the banking population. By virtue of their small size, however, small banks account for commensurately small shares of outstanding bank credit—including small business lending; larger institutions have more of an effect on the *volume* of credit available. Finally, in bank-level analyses it is also more difficult to account for market factors, particularly the behavior of other lenders in the marketplace. A given merger can affect more than just one market, and a given market can be affected by more than one merger; hence, it is difficult to quantify how market characteristics—such as the competitive structure of the local market—are related to consolidation effects. [12] Research on other bank products suggests that the reaction of other banks in the market is a critical component of the overall impact of consolidation and that failure to consider such reactions may affect the conclusion one reaches about overall credit availability.[13]

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[11] For discussions of these studies, see Berger, Demsetz, and Strahan (1999); Berger and Udell (1998); and Samolyk (1997).

[12] Many reduced-form tests include measures of local economic condition or local market concentration, but these are frequently measured only for the market in which a bank is headquartered, which can be very different from where it does much of its business.

[13] In studies of bank branching patterns and mortgage lending patterns, Avery, Bostic, Calem, and Canner (1999a, 1999b) find that the full market response to consolidations can be quite different from the response of just the

Accounting for market structure would seem to be particularly important in characterizing small business lending, as it has been argued that this lending is the most localized banking product.[14] Thus, the standard hypotheses yielded by the market structure–conduct–performance paradigm are most relevant in assessing how bank consolidation can affect the provision of this banking product. According to this paradigm, mergers in which both parties already operate in the market before the merger (*within-market mergers*) are likely to increase local market concentration and reduce small business credit availability. Along the same lines, merger activity in highly concentrated markets is likely to have a greater effect on lending than activity in highly competitive markets, where other banks stand ready to take advantage of lending opportunities created by local merger activity.

To our knowledge, only one previous study has attempted to estimate the response of other banks in markets affected by consolidation and quantify consolidation-related changes in the overall volume of bank small business lending. Berger, Saunders, Scalise, and Udell (1999) use data from the Federal Reserve Board of Governors Survey of the Terms of Bank Lending (STBL) to generate bank-level estimates of small commercial loans for each year from 1980 through 1996.[15] They use these estimates in tandem with bank Call Report financial data, data on consolidations and acquisitions, and Summary of Deposit data to quantify changes in bank lending attributable to merger activity, including the supply effects attributable to nonmerging banks. Their findings are quite dramatic: They estimate that the response of nonmerging banks more than offsets the decline in small commercial loans attributable to bank consolidation activity. Berger et al., however, do not specifically focus on how bank consolidation is related to small business lending at the local market level.

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consolidating institutions. Generally, they find that consolidating institutions reduce their activity. However, they also find that there is virtually always a substantial positive market "offset" from other institutions.

[14] Cyrnak (1998).

[15] The STBL data are generally reported by approximately 200 banks in a given survey wave; however, smaller independent banks are generally not well represented in the survey (only about 30 per wave). Also, the STBL, unlike Call Reports, does not include any information about small business loans secured by commercial real estate.

II. METHODOLOGY

Our objective is to study how bank consolidation activity between 1993 and 1997 affected small business lending in local banking markets. Consolidation of the banking industry was certainly evident over this period. From 1993 through 1997, 2,839 banking organizations were acquired through consolidations and acquisitions; meanwhile, 40 banks were liquidated and 431 new banks were chartered. Much of this consolidation was driven by the relaxation of geographic banking restrictions, as banks sought to extend their geographic scope to other states and regions. By mid-1998, more than one quarter of banks were owned by an organization headquartered in a different state, and more than 70 percent of industry assets were controlled by the 100 largest banking organizations. These aggregate figures, however, do not tell us about how bank consolidation has affected concentration at the local market level; nor do they indicate how consolidation has affected the local availability of small business loans from banks. This study attempts to address these issues directly.

To approximate the local market definitions used in competitive analysis of bank mergers, we define banking markets in terms of Metropolitan Statistical Areas (MSAs) and rural counties. We then characterize small business lending and bank consolidation activity in these markets. The core of our statistical analysis is to measure the relationship between local consolidation activity and changes in bank small business lending at the local market level. We test how this relationship is related to the structure of the local marketplace and the nature of the consolidation activity affecting the market. Throughout, we control for local economic and demographic factors. Although in principle this process seems quite straightforward, in practice there are some fairly complex measurement issues. Below we briefly summarize our methods. A more detailed description of the data construction and analysis is presented in the data appendix.

Banks have reported data on their outstanding small business loans each June since 1993, but these reports do not include geographic information about where banks are lending. Banks do, however, report the geographic distribution of their branches and their deposits at the same

time that they report small business loan outstandings; thus we use each institution's geographic deposit data to allocate its small business loans across geographic markets. We construct mid-year estimates of outstanding small business loans for every institution in each of its markets by assuming that the proportion of a bank's small business lending in a given market equals the proportion of its deposits in that market. Mid-year estimates of total lending in a given market are then derived as the sum of the local lending by the banks operating in the market. This method of allocating loans assumes that the geographic distribution of a bank's domestic deposits is a reasonable proxy for the geographic distribution of its small business lending. As we report below, data validation work indicates that this assumption is reasonable for the period we are studying.

We examine how changes in local small business lending over a two-year period are related to local consolidation activity during the period. We chose a two-year study period because it may take some time for mergers to influence local small business lending. For example, the integration of lending operations, including the retraining of staff and the coordination of underwriting activities, may require considerable effort and time. On the other hand, a study period that is too long may make it difficult to separate the effects of consolidations from other factors that affect local lending. We believe that a two-year study period is a reasonable compromise between these two concerns. Given that the small loan data were not reported before 1993, we study small business loan growth during two periods: 1993–1995 and 1995–1997.[16]

As with any consolidation study, choosing a metric to quantify merger activity is a key step. Here we define merger activity to include transactions that change a bank's regulatory high holder. These transactions include mergers among previously unaffiliated banks and holding company acquisitions, but not mergers among institutions that are part of the same holding

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[16] In the context of ongoing research in this area, we are conducting a parallel analysis for 1997–1999. However, given the continuing evolution of banking technologies and banking structure, the use of geograghic deposit data as a proxy for the distribution of a bank's activity is likely to become somewhat tenuous.

company.[17]   Using this definition, we measure local consolidation activity in terms of the share of the local small business loan market (in the beginning of the study period) held by banks that were acquired sometime during the following 18 months.[18]   Markets where no banks were acquired are considered to have experienced no consolidation activity.[19]

The next important issue involves quantifying changes in bank credit availability at the market level.   Given the market-level estimates of small business lending for every bank, total lending in a given market is just the sum of estimated lending by all local banks.   In measuring changes in local credit availability, however, we compute beginning-of-period loan estimates that net out possible changes associated with our imputation method.   Specifically, we construct beginning-of-period loan estimates using the geographic deposit patterns implied by end-of-period bank affiliations.[20]   Loan growth for a given two-year period in a given market is thus measured as the ratio of end-of-period small business lending to pro forma beginning-of-period lending (that is, lending estimated using end-of-period bank affiliations).   This strategy allows us to isolate changes due to the actual data reported by banks in our measures of market-level small business loan growth.

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[17] Technically, a surviving banking organization could have been involved in multiple mergers and acquisitions. Since we classify consolidation activity in terms of the characteristics of each acquirer–acquisition pairing, multiple transactions by a single organization do not pose a problem for our analysis.

[18] Note that we use a shorter time window in assessing consolidation activity than we use in measuring changes in small business lending. We do not include merger activity occurring in the last six months of each study period because such activity is less likely to have had enough time to materially affect small business lending by the end of the period. It should also be noted that our consolidation measure effectively weights an acquisition by its share of local lending in measuring its importance to the market. Thus, an acquisition of an institution that does little business lending (such as a thrift) will have only a minor effect on our measures of local consolidation activity.

[19] By construction, an acquisition of a local depository institution that does no small business lending is also excluded from our measures of local merger activity.

[20] Because we use deposit data to estimate bank lending across markets, merging data for institutions with very different small business loan-to-deposit ratios can affect geographic estimates. Effectively, our method generates geographic loan estimates that reflect the ratio of loans to deposits of each bank in the market and the local deposits that these banks report. For example, if bank A and bank B lend in market j, then market j's small business loans (SBL) are calculated as SBL(j) = Deposits(a,j)(SBL (a)/Deposits(a)) + Deposits(b,j)(SBL(b)/Deposits(b)). If the SBL-deposit ratios of bank A and bank B differ, then SBL(j) would be different if calculated from the merged data for the two banks. More generally, if two banks have a very different ratio of loans to deposits, then patterns estimated using merged data for the banks would differ from patterns generated using separate data for the banks. To ensure that our market-level measures of loan growth do not reflect changes due purely to our imputation method, we calculate loan growth using [pro forma] beginning-of-period loan estimates that reflect end-of-period [post-merger] organizational structures. Thus, our "adjusted" growth measures use a lending base measured to net out any computational effects due to the combining of bank balance sheets.

The final stage of data preparation involved assembling a set of control variables measuring banking market characteristics and local economic condition to include in multivariate regressions. We use standard economic control variables generated from county-level population, personal income, unemployment, housing price, and bankruptcy data. We also use standard variables to measure the structural characteristics of local banking markets. These include a Herfindahl index of market concentration,[21] the numbers of banks operating locally, the number of bank branches per-capita, and the share of local small business lending held by large banking organizations (assets of more than $1 billion in 1993 dollars).

Because the effect of consolidation may vary for urban and rural markets, we conduct separate analyses for these two types of markets. However, we exclude a number of markets from the study samples because of concerns about the validity of results for these markets. We exclude the 15 largest MSA banking markets (defined in terms of 1993 deposit holdings), Charlotte (NC), and markets in Delaware and South Dakota because of concerns about the dominance of large institutions or credit card lenders in these areas. We also exclude rural markets that had populations below 20,000 or fewer than four local banking organizations in 1993. Table 2 reports statistics that describe the subsamples of banking markets outlined above.

III. DATA VALIDATION

The validity of our evidence about bank consolidation and local credit availability hinges on the accuracy of the method used to construct our geographic small business loans estimates. This method assumes that deposit-taking patterns are a good proxy for the geographic distribution of a bank's small business lending, both at a point in time and over time. To the extent that these patterns are dissimilar, our strategy assumes that distributional differences in lending and deposit taking are not systematically related to consolidation activity.

We examined the validity of our geographic loan estimates using the relatively new data

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[21]A Herfindahl index (HHI) based on banking deposits is a standard measure used to assess the competitiveness of banking markets. The Federal Reserve Board includes thrift deposits at 50 percent in calculating market HHI values for its bank merger analysis, a procedure we follow here.

on small business loan originations collected under the auspices of the Community Reinvestment Act.[22] Since 1996, larger banks have been required to report the number and amount of their (calendar-year) small business loan originations by census tract. Here we use 1997 data to compare the distribution of a bank's reported [midyear] deposit balance across markets with the distribution of its reported [calendar-year] CRA business loan originations. For each institution reporting 1997 CRA data, we calculate the share of its deposits and the share of its CRA loans originations in each market (as defined above). We compile these by-bank/by-market observations into a large geographic data panel and classify each observation by market type and by the asset size of the bank.

Table 3 summarizes the correlation of bank-level deposits and CRA loan originations by type of market and by bank asset size. Table 3 also compares the distributions of total 1997 CRA loan originations and estimated Call Report small business lending [for CRA filing institutions] by type of market and bank asset-size class. Reported correlations are estimated by regressing CRA loan shares (for a given bank size and market-size class) on a constant and the corresponding deposit share for each subsample. Both unweighted regressions and regressions that are weighted by a bank's Call Report small business lending indicate a strong correspondence for most groups.

Not surprisingly, the loan data are least correlated with the deposit data in sparsely populated rural markets (those with fewer than four banking offices or fewer than 20,000 inhabitants). The correlation is also weaker for the activities of very large banks in the largest MSAs. Of course, we exclude both very small and very large markets in our subsequent analysis. Although not reported in table 3, the exclusion of savings institutions and credit card banks notably increases the correlation observed for some cohorts. For example, the lower correlation observed for medium-large entities ($100M to $1B) in rural counties reflects the presence of savings institutions and credit card banks. However, since these entities tend to account for a small share of total small business lending, they generally play a minor role as local small

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[22] CRA loan origination data use loan definitions comparable to those included on the June Call Reports (including loan size categories and the separate reporting of farm and nonfarm business loans).

business lenders.

It is important to note that many small institutions are not required to report the geographic CRA data. CRA-filing institutions accounted for only 70 percent of the $390 billion of outstanding small business loans reported on the midyear 1997 financial reports of banks and saving institutions (they held 79 percent of domestic deposits). However, the CRA data suggest that geographic deposit data yield reasonable market-level estimates for these smaller institutions—particularly in urban markets. No doubt, future attempts to characterize local small business lending will continue to use deposit data to apportion midyear small business lending reported by small banks and thrifts. And, although the patterns observed in geographic banking data may shift in the future, the evidence for 1997 suggests that this allocation method is reasonable for the period examined in this study.

IV. LOCAL MERGER ACTIVITY AND SMALL BUSINESS LOAN GROWTH

A key question about bank consolidation is the extent to which other participants in the market offset merger-related effects. As with Berger et al. (1999), the market-level approach used here allows us to estimate the amount of small business lending by merging banks and other local lenders and to measure each group's contribution to overall small business loan growth in the marketplace. Table 4 presents evidence about the magnitude of loan growth that we attribute to these groups in our study samples. For each group of markets identified in table 4, we decompose local small business loan growth into the shares attributable to (1) banks involved in merger activity (by construction, data for acquirers must be included in these calculations); (2) existing local banks that are not involved in merger activity; and (3) newly chartered banks.[23] Consistent with Berger et al. (1999), we estimate that, on average, merging banks contract lending whereas other lenders more than offset the effects of this contraction, to generate the positive [average] loan growth rates that are observed for the subsamples of markets. The

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[23] For a given subgroup of markets, dollar changes attributed to each type of participant are scaled by the subgroup's total small business lending at the beginning of the period. The resulting "rates" are an additive decomposition of the subgroup's average loan growth.

positive market offsets are driven mainly by increases in lending on the part of existing market participants, although lending by new entrants also plays some role.

In assessing these decompositions, however, it is important to point out that although loan growth is generally positive on average, consolidation may have adversely affected loan growth in the sense that it could have been even higher in the absence of local merger activity. Moreover, what we observe *on average* may obscure the effects of particular types of merger activity on particular types of markets, such as more concentrated ones.

To study these questions, we subset the urban and rural samples on the basis of their degree of market concentration measured in terms of standard deposit Herfindahl indices. Markets having a beginning-of-period deposit Herfindahl of 1,800 or more are classified as *high-Herfindahl* markets; all others are *low-Herfindahl* markets. We also classify merger activity in terms of the market overlap and the respective sizes of the merging entities. Below we describe the merger classification variables in greater detail. We then present results of multivariate tests that estimate how local small business lending is related to bank consolidation as measured by these variables.

To characterize bank consolidation at the local market level, we first classify each market on the basis of its overall *level* of merger activity measured by the share of the local small business loan market that is acquired (as defined above). *No consolidation* activity implies that no local bank was acquired;[24] a *low level of consolidation activity* means that the share of small business lending by subsequently acquired banks was between zero and 11 percent (the median level of consolidation activity among markets where at least one acquisition occurred); and a *high level of consolidation activity* means that at least 11 percent of small business lending was held by subsequently acquired institutions. Thus each market in each study period can by classified by a dummy variable indicating its overall level of merger activity.

We also classify local merger activity in terms of two key characteristics of the parties

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[24] Technically, *no consolidation* defines markets where the beginning-of-period share of the small business loan market subsequently acquired equals zero. Hence, if a commercial bank or thrift that does no small business lending is acquired, it is not included in our measures of consolidation activity.

involved in the transaction. First, we measure the share of consolidation activity that is "*within-market*" in the sense that both the acquired and the acquiring organization operated there at the beginning of the period. Since within-market mergers reduce local competition, this classification can be used to test whether changes in small business credit availability can be attributed to anticompetitive effects. Then, because of evidence that the size of merging banks matters,[25] we also classify consolidation activity in terms of the *asset size* of the banks involved. We measure the shares of local merger activity where (1) both the acquirer and the acquired organization are large; (2) large organizations acquire small ones; and (3) both parties are small. (Large banks are defined as those having assets of more than $1 billion [in 1993 dollars] at the beginning of the period; all others are small banks.) Bank-level evidence suggests that acquisition activity by large banks is more likely to result in a reduction in small business loan-to-asset ratios. Here we test the extent to which this evidence manifests itself in terms of credit availability measured at the market level.

We use the merger classifications described above to construct variables that indicate the primary type of merger activity affecting a given market in a given study period. First, we decompose total consolidation activity in a given market into six shares, defined by cross-classifying the three bank-size pairings with the *within-market* versus *out-of-market classification of each acquirer.* For example, we measure the percentage of total local merger activity that is due to out-of-market big banks acquiring small banks. On the basis of the share of local merger activity in each of these six categories, we can classify each market in terms of the *main type* of merger activity that it experienced. Finally, we also cross-classify markets in terms of both the main type of merger activity and the overall level of merger activity (a *high level* versus a *low level of bank consolidation,* as defined above).

Table 5 lists the ways we classify local merger activity and reports the distribution of each subsample of market across the classifications. Given that urban banking markets tend to be larger and less concentrated than rural markets, it is not surprising to see differences across the

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[25] Peek and Rosengren (1998).

two groups. The proportion of MSA markets that experienced some consolidation activity during the mid-1990s was higher than the proportion of rural markets (of course, the number of rural markets is also much larger). Also, although out-of-market mergers of big banks predominated as the main type of merger in both urban and rural markets, mergers of smaller banks were more likely to predominate in rural markets. Indeed, it is important to note that because of rural markets' small size, consolidation activity in those markets often consists of a very small number of acquisitions—often a single one. Thus, in a rural market the *main type* of merger activity is frequently the *only type* of merger activity.

Table 6 summarizes the behavior of the key variable of our analysis—the estimated change in small business lending at the market level. It reports the average [two-year] growth rate of small business lending for each cohort of markets listed in the table. These data indicate that different groups of markets experienced different rates of small business loan growth. However, to isolate patterns related to merger activity, it is necessary to control for other factors affecting local lending.

V. MULTIVARIATE REGRESSION RESULTS

Here we report the results of multivariate regressions that include merger classification variables and a host of market-level control variables. These regressions measure the relationship between local small business loan growth and the nature of local consolidation activity, controlling for other factors that can explain differences in market-level loan growth. For each subgroup of markets in a given two-year study period, we estimate the reduced-form equation

[Small Business Loan Growth $_{t,t+24,\,m}$]= f(Consolidation Activity$_{t,t+18,\,m}$, Banking Market

Controls$_{t,m}$, Economic Controls$_{t-24,t,t+24,\,m}$) + error,

where for the mth market, *Small Business Loan Growth* from t through t+24 months and *Consolidation Activity* from t through t+18 months are measured as described above and summarized in tables 5 and 6. *Banking Market Controls* for market m are measured as of the

beginning of the analysis period t, and *Economic Controls* include both levels and growth rates measuring broader economic market conditions for two years before to the beginning of period t (t–24 months) through its end (t+24 months).[26] Table 7 defines these control variables and reports summary statistics for each of the study samples used in the multivariate tests. As these statistics indicate, rural markets tend to be more concentrated, have fewer banking organizations (per capita), and obtain a greater share of small business lending from small banks than urban markets.

To allow for the possibility that certain types of merger activity may matter only in certain types of markets, we estimate separate specifications for each of the subgroups described by tables 5 through 7, using ordinary least squares. Results for a first set of *baseline* regressions are reported in Table 8**.** The key variables in these regressions are the classification variables measuring the overall level of local consolidation activity—low, high, or no consolidation activity (markets experiencing no consolidation are the omitted group, which serves as the basis for comparison).

As table 8 reveals, the relationships between merger activity and small business lending differ in rural markets and in urban markets. There are also some differences across the two time periods examined. In the non-MSA subsamples, the coefficients on the merger activity variables are generally negative, indicating lower average loan growth in markets experiencing consolidation activity. The magnitude of the growth differential is larger in the earlier study period—a result that is consistent with bank-level evidence of a negative relationship between merger activity and small business lending in the first few years when the small business loan data were reported.[27] In the later period (1995–1997), only in concentrated rural markets is there a significant negative link between the overall level of merger activity and local small business loan growth. In MSA markets, we find no significant differences in small business loan growth

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[26] Banking market control variables are measured only as of the beginning of each study period, whereas both beginning-of-period and contemporaneous values of demographic and economic variables are also included in our tests. Implicitly, therefore, we are assuming that changes in small business lending do not contemporaneously affect demographic and economic variables.

[27] Small rural banks constitute a significant share of bank-level samples.

attributable to the *overall* level of merger activity in either study period examined. One obvious question, however, is the extent to which merger-related effects depend on the nature of the merger activity—particularly in larger, more diverse metropolitan markets.

To shed some light on this question, we estimate multivariate regressions using the broader array of merger classification variables described above and summarized in table 5. These specifications include the exact same set of control variables as the baseline regressions. Table 9 reports parameter estimates for the 12 indicator variables that classify markets by the general level and by the main type of merger activity that they experienced. (Again, markets experiencing no consolidation are the omitted group that serves as the basis for comparisons.) Below we summarize the results of these tests.[28]

The merger classifications studied here yield richer insights into small business lending patterns during the mid-1990s. In non-MSA markets, the negative coefficients on many of the merger variables indicate that markets experiencing consolidation activity of many types had lower average loan growth. However, the standard errors associated with some of the estimates are large. Meanwhile, consolidation activity involving small organizations tends to be associated with greater local loan growth in both concentrated and unconcentrated markets—particularly in the later time period examined here. This evidence is consistent with bank-level findings that mergers among small banks can increase small business lending—although, we would argue, mainly in small rural markets.

Turning to the MSA study samples, we find that concentrated urban markets where the main types of merger activity involved within-market acquisitions by large banks had lower loan growth than markets experiencing no consolidation activity. The fact that these results are not mirrored in the low-Herfindahl MSA subsample can be interpreted as consistent with an anticompetitive channel by which mergers can reduce the provision of local small business lending by banks. Thus, although we do not find significant loan growth differentials attributable to overall consolidation activity in urban markets, we do find evidence of lower loan growth in

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[28] We also estimated other specifications that pooled the merger classifications in various ways, for example, to compare the effect of within-market merger activity with that of out-of-market merger activity.

concentrated MSAs where merger activity is mainly within-market.

Throughout this study, we have used geographic deposit data to estimate the geographic small business lending patterns of banks. To control for local deposit growth in measuring merger-related effects, our multivariate tests include market-level deposit growth variables. Not surprisingly, local deposit market growth is an important factor explaining local small business loan growth (as indicated in table 8)—although the explanatory power of this factor varies across market subsamples. To further test the sensitivity of our results to reported deposit growth, we reestimated all multivariate tests without the deposit-growth control variables. The results of these tests indicate that the estimated sign, magnitude, and significance level of the key consolidation variables are not sensitive to the inclusion of market-level deposit changes; hence, our estimates are measuring more than merely deposit-taking activity.

VI. CONCLUSION

Questions about the evolving U.S. financial environment are likely to become increasingly important as bank deregulation moves to new plateaus. Still, evidence on how factors such as bank consolidation affect the provision of traditional banking services is difficult to produce. Bank consolidation is inherently a complex phenomenon that affects bank customers in the particular markets for the banking services they seek. Given the evolution of these product markets, small business lending is likely to be one of the few bank products that remain local in nature.

Here we have used a market-based approach to examine whether—as many conjecture—consolidation in these markets systematically affected small business lending during the mid-1990s. We find evidence of significant differences between urban and rural markets and between markets that are concentrated and those that are not.

In rural markets, consolidation activity is broadly related to lower loan growth, except in cases where the activity involved mainly the consolidation of small banking organizations. Our result that the consolidation of small banks in rural markets is associated with higher local loan

growth is consistent with bank-level evidence that mergers among small banks may enhance small business credit availability. At the same time, small banks control only small shares of large markets; it is the behavior of larger banks that drives credit availability in large urban markets.

In urban markets, we generally find less of a link between bank consolidation and local small business lending. We do, however, find evidence that merger activity is linked to lower small business loan growth in banking markets that are already concentrated—a result that is consistent with hypothesized anticompetitive effects of bank consolidation on bank small business lending.

Our findings regarding small business lending differ from recent evidence about the effects of consolidation on the provision of home mortgage loans and branch office services (Avery, Bostic, Calem, and Canner, 1999a, 1999b) that indicated little relationship. Taken as a whole, however, these findings are consistent with the notion that small business loan markets remain more local in nature than other bank product markets. And as such, scrutiny of proposed mergers from a small business lending perspective remains justified.

Going forward, more research on small business lending at the local market level is needed to extract evidence about the role that small business lending should play in bank merger policies. Of course, one must note the limitations of the available data for any analyses of small business credit availability at the local market level. First, as is well known, banking data generally are reported by the size of the loan rather than by the size of borrowing firms.[29] Second, nonbank business lenders, such as finance companies, do not report data on their small business lending and, therefore, are not included in most statistical analyses of bank consolidation. Finally, researchers and policy makers must deal with issues involved in integrating the new CRA data into the other banking data traditionally used to analyze bank mergers. For example, although these CRA data include much-needed geographic detail, questions remain about how banks define and report credit originations for lines of credit and

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[29] The CRA data do include information about loans to firms having annual sales of less than $1 million. However, no corresponding information is available for banks and saving institutions that do not report CRA data.

business-related credit card activity. Finally, more research is needed to integrate small business-based market concentration measures into the traditional competitive analysis of bank mergers using deposit data.

The data used in this study combine information from sources covering three areas of commercial bank and thrift activity: branch office location and deposit balances, bank condition and income (including outstanding small business loans), and records of bank structure (including structure changes such as failures, mergers, and acquisitions). We also use data on population, income, housing prices, employment, and personal bankruptcies to measure economic conditions in local markets. This appendix discusses sources of data and some issues involving measurement.

Data sources

The location (county) of banking-institution depository offices and reported deposit balances are from the annual Summary of Deposits (SOD) data for commercial banks and the Branch Office Survey System filings for savings institutions, reported in the years 1993–1997. The office list includes all locations qualifying as separate institution deposit-taking offices under federal guidelines as of June 30 of each year. It does not necessarily include all drive-ins, ATMs, or loan production offices; however, virtually all staffed deposit-taking offices are reported. Because of limited data cleaning required for the analysis, the geographic deposit data used in this study may differ slightly from the publicly available files.[30]

Information on outstanding small business loans was obtained from the Federal Financial Institutions Examination Counsel (FFEIC) Reports of Condition and Income (Call Reports) and Thrift Financial Reports (TFR Reports) for June of each year from 1993 through 1997. Since 1993, all commercial banks and savings institutions have been required to report in their June Call Report the number and current outstanding balance of all commercial and agricultural loans

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[30] For example, some offices were added for a few institutions that did not submit a Summary of Deposits or Branch Office Survey System filing, and some addresses were corrected for a limited number of offices for which incorrect county location was reported. Similarly, deposit balances were imputed for some branches that reported zero deposits (some banks consolidate their deposits into a few offices and report zero deposit balances for the remaining offices).

having an original amount of less than $1 million ($500,000 for agricultural loans).[31] Lenders

report separate figures for Commercial and Industrial loans not collateralized by real estate (C&I

loans), loans collateralized by commercial real estate (CRE loans), agricultural loans

collateralized by real estate, and other agricultural loans. Our measures of small business loans

include C&I and CRE loans.

Finally, other bank-level information was used to determine the appropriate way to

classify the affiliations of banking institutions and to determine which institutions were involved

in consolidations during the study periods. Transactions and structure information recorded in

the Federal Reserve Board's National Information Center (NIC) database was used for these

purposes.

Data for most of the economic control variables were obtained from the FDIC's Data

Access Retrieval System, including annual county-level data on population and personal income

from the U.S. Bureau of the Census, annual county-level [establishment] data on the labor force

and unemployment from the U.S. Bureau of Labor Statistics, and county-level data on the

number of Chapter 11 and Chapter 7 personal bankruptcy filings as reported by county courts.[32]

Data on 1–4 family house prices were obtained from the Fannie Mae/Freddie-Mac weighted-

repeat sales index.[33] Data for the control variables, consolidation, and banking structure were

aggregated to the market level for the analysis.

Measurement issues

For urban areas, this study defines markets in terms of Metropolitan Statistical Areas

(MSAs), and for rural areas, in terms of counties. Hence, to construct market-level variables

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[31] As with any newly collected data, the small business lending numbers for the early years (especially 1993) are known to reflect some confusion as to what was supposed to be reported and they should be interpreted cautiously.

[32] In some cases, the Census Bureau combines information for small counties or for cities in Virginia that are not included in any of the adjacent counties, and we align our data to match Census Bureau information. In addition, at the time of our analysis, Census Bureau data for population and income were not available for 1997; therefore the income and population numbers for 1997 were imputed based on historical and current data (such as the employment data) that were available for each county.

[33] The index is available for a little more than one-half the MSAs, about 150 larger counties, and for states. To determine price changes, we used the lowest level of aggregation possible for a county.

from county-level data, we simply aggregate data for all the counties in a given MSA. To determine MSA boundaries, we used 1997 definitions. In total, 2,572 markets were defined, with annual information for 1993–1997; however, as described in this study, we examined only a subset of markets because of concerns about the validity of findings for very large or very small markets.[34] We examined 1,139 markets, including 295 MSAs and 844 rural counties.

We use the SOD data to geographically allocate Call Report balances of outstanding small business loans as reported by banks and thrifts across markets. The share of a lender's total loans assigned to a given market is simply equal to the share of its total [domestic] deposits that (in its mid-year SOD filing) it reported as being in that MSA or county. Total small business lending for the market is simply the sum of the amounts estimated for all institutions reporting deposits in the market.

For each of the two-year periods used in the analysis, institutions are classified by their membership in banking organizations as of June 30 of the first year of the study period (1993 or 1995).[35] The size of an organization was computed as the sum of the domestic assets reported by all affiliated banking institutions on their June Call Reports.[36] Commercial banks or thrift organizations that were not part of a larger banking organization were treated as independent organizations. These beginning-of-period classifications were used to construct control variables that measure banking market structure, such as the deposit Herfindahl (HHI) indices constructed from the SOD data.

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[34] Banking data for the largest MSAs are dominated by the behavior of the large money-center institutions concentrated in these areas. Many of these institutions have national lending programs, which may mean that our method of loan allocation is suspect. Consequently, we decided to drop the 20 largest MSAs (by deposits) from the analysis. Charlotte (NC) and MSAs in Delaware and South Dakota were also dropped because of the concentration of large nationwide lending institutions in these areas. In addition, we dropped all rural county markets with populations of less than 20,000 or with fewer than four local banking organizations in 1993. We feel that these areas are too small for the effect of consolidations to be meaningfully measured. All Delaware and South Dakota rural counties are excluded from our study sample. Of the 2,572 markets in the United States, 1,413 rural counties and 20 MSAs are excluded from our analysis by application of the above criteria.

[35] These organizations included bank and thrift holding companies and foreign bank payment groups (U.S.-chartered banks that are subsidiaries of a common foreign bank).

[36] This amount may differ somewhat from the total assets reported by bank and thrift holding companies for their combined operations. However, consolidated information was not available for foreign bank payment groups; consequently, we decided to use a common basis in forming size. In addition, in summing the assets of component parts of an organization, we included only the assets of those entities that reported small business lending.

We also classified banks and thrifts in terms of these affiliations when measuring changes in banking structure over time. We identify the organizational membership of all banks and thrifts 18 months into a given two-year period and determine if an entity's affiliation has changed within that period. If any institutions that were unaffiliated on June 30 are affiliated 18 months later, they are deemed to have been part of a consolidation.[37] Finally, we measure consolidation activity as the share of the local small business lending held by subsequently acquired institutions; we do not count acquisitions of institutions that report no small business lending. For example, if a bank holding company acquires an independent thrift that did no commercial lending, it is not counted in our measures of consolidation activity.

For much of our analysis it is necessary to differentiate between the "acquirer" and the "acquisition" in a given consolidation. These determinations are not always apparent from the record. Consequently, we decided to designate the largest component of a consolidating entity (as measured by its size at the beginning of the period) as the acquirer. All other components were treated as acquisitions. Thus, if four previously unrelated banks merged into a common holding company within a given period, the bank with the most assets at the beginning of the period would be deemed to have acquired the other three. In characterizing different types of consolidation activity, we also classify acquirers and acquired organizations by their size. Again, organizations having total domestic assets of $1 billion or more (in 1993 dollars) are considered to be big; those having less are considered to be small.

Within a given market, an acquisition is deemed to have occurred when a bank (or organization) with small business lending in that market at the beginning of the period is acquired by another bank (or organization) during the period. If the acquiring organization also had offices (and small business lending) in the market, the consolidation was treated as within-

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[37] Note that this definition of a consolidation includes mergers of previously unaffiliated institutions, acquisition of one holding company by another, or acquisition of a previously independent institution by an existing holding company. It does *not* include "consolidation" of common members of a bank holding company into a single bank, as these institutions would not have been deemed to be independent at the start of the period. A few institutions were liquidated in each of the study periods. Similarly, a number of new de novo institutions were formed. Both of these cases were excluded from the analysis. Moreover, an organization acquiring a de novo bank would not be treated as having undergone a consolidation, since the de novo institution was not there at the beginning of the period.

market; otherwise, the acquisition was treated as an out-of-market consolidation. As noted earlier, total consolidation activity in a market is computed as the (beginning-of-period) share of the market's total small business lending held by organizations that were acquired sometime during the first 18 months of the study period. We use a shorter window to measure consolidation activity, to ensure that post-consolidation changes in lending have had some time to occur. This is particularly important, since our dependent variable measures changes in the outstanding stock of loans, which are likely to occur more slowly than changes in a flow variable, such as new loan originations. However, in measuring loan growth, we calculate the beginning-of-period amount of lending in the market (which serves as the base of the growth rate) using the post-consolidation bank affiliations to geographically apportion each bank's data. In other words, we base our market-level loan growth rates on merger-adjusted estimates of beginning-of-period lending patterns. The reason for this adjustment is to net out any changes in lending that result solely from the construction of the geographic loan estimates. Similarly, we decompose market-level changes in lending into the part that is attributable to consolidating institutions and the part that reflects the response of other firms in the markets. Here we measure the change in lending attributable to consolidating organizations as equal to the difference between the beginning-of-period [pro forma] estimates of local lending by all merging parties (including acquirers) and the end-of-period lending reported by the now-merged organizations. The annual nature of the small loan data requires that, in computing lending changes by consolidating institutions, we include all mergers during a given two-year study period in this calculation. For example, lending by banks that were acquired in the last six months of a given study period are included in the end-of-period Call Report of their acquirers and must therefore be counted as attributable consolidation activity. This is not an issue for our measures of consolidation activity, since it is measured as a share of beginning-of-period lending on the basis of the affiliation of local banks 18 months later. Again, markets that included no acquisitions but may have been served by acquirers are not considered as consolidating.

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Table 1: Distribution of Bank Assets and Deposits
by bank asset-size class

Asset Size	All	<$300M	$300M–$1B	$1B–$10B	>$10B
Organizations (number)					
1993	10,962	10,149	530	224	59
1997	9,057	8,185	587	226	59
Assets (percent)					
1993	100.0	20.1	7.6	18.3	54.0
1997	100.0	18.1	7.1	15.3	59.5
Deposits (percent)					
1993	100.0	34.6	7.2	16.4	41.8
1997	100.0	27.2	7.6	15.2	49.9
Small business loans[a] (percent)					
1993	100.0	35.1	11.4	19.9	33.5
1997	100.0	30.7	12.5	18.4	38.4
Large business loans[a] (percent)					
1993	100.0	7.2	3.8	15.2	73.8
1997	100.0	5.3	3.8	13.9	77.0
Other loans[b] (percent)					
1993	100.0	16.2	7.8	19.7	56.3
1997	100.0	12.7	7.2	15.8	64.3

Source: June Reports of Condition and Income (Call Reports) for Commercial Banks and Savings Institutions.

Note: Asset size classes are measured in 1993 dollars.

[a]Small business loans include all loans to nonfarm businesses having an original amount of less than $ 1million as reported on June Call Reports. Large business loans are calculated by subtracting small business loans from the sum of business loans unsecured by commercial real estate and loans secured by nonfarm nonresidential property as reported on June Call Reports.
[b]Other loans equal total loans and leases less the sum of business loans unsecured by commercial real estate and loans secured by nonfarm nonresidential property as reported on June Call Reports.

Table 2: Selected Statistics, All Markets
(Statistics are market aggregates)

	1993	1995	1997
Included Non-MSA Counties			
Number of markets	844	844	844
Population (1,000s)	36,431	37,162	37,845
Deposits ($ millions)	362,472	374,398	399,431
Small business loans ($ millions)	52,526	57,070	62,401
Percent held by large organizations[a]	39.98	41.86	41.06
Percent held by acquired organizations[b]	9.68	7.42	13.22
Excluded Non-MSA Counties			
Number of markets	1,413	1,413	1,413
Population (1,000s)	15,416	15,729	15,999
Deposits ($ millions)	154,317	159,716	178,836
Small business loans ($ millions)	20,147	23,469	26,884
Percent held by large organizations[a]	22.48	24.51	23.52
Percent held by acquired organizations[b]	9.48	6.60	11.80
Included MSAs			
Number of markets	295	295	295
Population (1,000s)	138,265	141,281	144,430
Deposits ($ millions)	1,510.376	1,541,804	1,641,243
Small business loans ($ millions)	170,644	177,979	196,529
Percent held by large organizations[a]	62.61	64.59	64.64
Percent held by acquired organizations[b]	12.49	11.75	20.07
Excluded MSAs			
Number of markets	20	20	20
Population (1,000s)	67,615	68,560	69,653
Deposits ($ millions)	1,138,818	1,114,976	1,253,075
Small business loans ($ millions)	92,549	90,461	102,369
Percent held by large organizations[a]	63.44	64.52	68.34
Percent held by acquired organizations[b]	8.47	17.75	18.34

Source: The U.S Census Bureau, the FFIEC, and the Federal Reserve System.

Note: All variables except population measured as of June 30th of the year. Small business lending includes C&I and commercial real estate loans that had an original denomination of less than $1 million as reported in the June 30th Call Report as allocated to markets using methods described in this study.

[a] Large organizations are those that reported assets of more than $1billion (1993 dollars) based on midyear Call Reports.
[b] Acquired organizations are those that were acquired sometime during the 18 months following the June 30th reporting date.

Table 3: Comparing Geographic Lending Patterns:
Small business loan estimates and CRA loan orginations (1997 data)

| | Correlation of bank-level geographic lending patterns [a] | | Geographic distribution of lending by CRA filers [b] | |
| | | | | Small business |
Excluded MSAs	Unweighted	Weighted	CRA originations	loan estimates
All CRA filers	0.882(.005)	0.829(.005)	26.1	29.0
By asset size				
Assets<$100M	0.928(.013)	0.942(.009)	0.6	0.4
$100 M<Assets<$1B	0.914(.007)	0.926(.006)	3.9	4.7
$1B<Assets<$20B	0.819(.010)	0.855(.008)	10.1	10.2
Assets>$20B	0.633(.014)	0.702(.010)	11.5	13.7
Included MSAs				
All CRA filers	0.880(.003)	0.834(.003)	57.7	56.7
By asset size				
Assets<$100M	0.864(.009)	0.863(.009)	1.4	1.0
$100M<Assets<$1B	0.882(.005)	0.873(.004)	11.2	11.8
$1B<Assets<$20B	0.843(.004)	0.797(.004)	24.6	24.7
Assets>$20B	0.792(.008)	0.747(.007)	21.5	19.2
Included Rural Counties				
All CRA filers	0.801(.002)	0.804(.002)	12.0	11.6
By asset size				
Assets<$100M	0.811(.006)	0.833(.006)	0.8	0.8
$100M<Assets<$1B	0.787(.006)	0.791(.005)	3.6	4.2
$1B<Assets<$20B	0.578(.007)	0.730(.006)	4.5	4.2
Assets>$20B	0.983(.014)	0.936(.011)	3.1	2.4
Excluded Rural Counties				
All CRA filers	0.776(.003)	0.734(.003)	3.2	2.6
By asset size				
Assets<$100M	0.790(.006)	0.785(.006)	0.4	0.4
$100M<Assets<$1B	0.675(.009)	0.642(.008)	0.9	0.9
$1B<Assets<$20B	0.790(.012)	0.769(.008)	1.3	1.0
Assets>$20B	0.697(.020)	0.684(.018)	0.6	0.3

[a] The reported correlation is the regression coefficient from a regression of the share of a bank's CRA lending in a given market on a constant and the share of the bank's deposits in that market (which equals the share of its small business loans estimated to be in that market based on our methodology. Weighted regressions simply weight each observation by that bank's 1997 Call Report small business lending, hence these regressions place less weight on the correspondence of geographic patterns for banks that do less small business lending (such as savings institutions). Both the Call Report outstandings and the CRA loan originations data used here include nonfarm business loans having an original denomination of less than $1 million.

[b] The percentage share of total CRA or total Call Report small business lending reported by CRA-filing banks for a given market type and bank asset-size class. The distribution for the CRA data reflects data as reported, while the distribution for the Call Report data is estimated using 1997 Summary of Deposit data which is merger adjusted to reflect year-end banking structure.

Table 4: Decomposition of Market-Level Small Business Loan Growth Rates
Estimates are means for the banks in each cohort

	93–95	*95–97*
Non-MSA Counties		
Overall growth (rate in percent)	12.18	12.65
Growth due to consolidators[a]	0 .15	-0.43
Growth due to other banks (offset) [b]	12.03	13.08
Existing banks	10.51	11.09
New charters	1.52	1.99
Small MSAs		
Overall growth	9.19	10.43
Growth due to consolidators[a]	-0.14	-0.36
Growth due to other banks(offset) [b]	9.33	10.79
Existing banks	8.36	9.26
New charters	0.97	1.53
Large MSAs		
Total net change	4.81	10.32
Growth due to consolidators[a]	-0.52	-0.84
Growth due to other banks (offset) [b]	5.33	11.16
Existing banks	4.38	10.17
New charters	0.96	0.99

Source: Authors' calculations.

[a] Total net change in small business lending for organizations involved in consolidations in the intervening two-year period. times 100 and divided by the same denominator as used to compute total net growth rates.

[b] Total net change in small business lending for all organizations not involved in consolidations times 100 and divided by the same denominator as used to compute the market-level growth rates. The numerator is also decomposed into the change due to banks that existed in the beginning and banks that were newly chartered during the study period.

Table 5: Consolidation Activity in Sample Markets

	All markets		High Herfindahl Markets		Low Herfindahl Markets	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*
Non-MSA counties: percent of sample experiencing						
No consolidation	***46.2***	***59.0***	***48.4***	***61.2***	***38.9***	***52.0***
Low level of consolidation activity	***25.7***	***18.1***	***24.0***	***16.9***	***31.6***	***22.2***
Where the main type of consolidation activity is						
In-market big bank acquires big bank	1.4	0.7	1.2	0.4	2.1	1.5
In-market big bank acquires small bank	3.6	2.8	3.4	2.8	4.2	3.0
In-market small bank acquires small bank	2.4	1.3	2.2	1.0	3.1	2.0
Out-of-mkt. big bank acquires big bank	8.2	5.8	7.2	5.6	11.4	6.6
Out-of-mkt. big bank acquires small bank	4.9	3.9	5.7	4.0	2.1	3.5
Out-of-mkt. small bank acquires small bank	5.3	3.6	4.3	2.9	8.1	5.6
High level of consolidation activity	***28.1***	***22.9***	***27.7***	***22.0***	***29.5***	***25.8***
Where the main type of consolidation activity is						
In-market big bank acquires big bank	0.8	1.5	0.5	1.4	2.1	2.0
In-market big bank acquires small bank	1.8	1.7	1.8	1.0	1.6	3.5
In-market small bank acquires small bank	1.3	0.8	1.0	0.6	2.6	1.5
Out-of-mkt. big bank acquires big bank	12.9	9.2	12.8	9.1	13.5	9.6
Out-of-mkt. big bank acquires small bank	7.0	5.7	7.4	5.7	5.7	5.6
Out-of-mkt. small bank acquires small bank	4.3	3.9	4.3	4.0	4.2	3.5
Number of non-MSA markets	*844*	*844*	*651*	*646*	*193*	*198*
MSA markets: percent of sample experiencing						
No consolidation	***11.9***	***22.7***	***23.3***	***35.6***	***5.7***	***16.0***
Low level of consolidation activity	***44.8***	***46.4***	***37.9***	***38.6***	***48.4***	***50.5***
Where the main type of consolidation activity is						
In-market big bank acquires big bank	4.4	9.5	1.9	4.0	5.7	12.4
In-market big bank acquires small bank	11.5	10.9	10.7	6.9	12.0	12.9
In-market small bank acquires small bank	4.8	6.1	0.0	4.0	7.3	7.2
Out-of-mkt. big bank acquires big bank	13.9	6.8	12.6	6.9	14.6	6.7
Out-of-mkt. big bank acquires small bank	5.1	5.8	5.8	6.9	4.7	5.2
Out-of-mkt. small bank acquires small bank	5.1	7.5	6.8	9.9	4.2	6.2
High level of consolidation activity	***43.4***	***30.9***	***38.8***	***25.7***	***45.8***	***33.5***
Where the main type of consolidation activity is						
In-market big bank acquires big bank	5.8	10.9	1.0	5.9	8.3	13.4
In-market big bank acquires small bank	7.1	3.1	1.9	2.0	9.9	3.6
In-market small bank acquires small bank	1.7	1.4	0.0	0.0	2.6	2.1
Out-of-mkt. big bank acquires big bank	21.4	10.5	25.2	10.9	19.3	10.3
Out-of-mkt. big bank acquires small bank	7.1	4.4	9.7	5.9	5.7	3.6
Out-of-mkt. small bank acquires small bank	0.3	0.7	1.0	1.0	0.0	0.5
Number of markets	*295*	*295*	*103*	*101*	*192*	*194*

Notes: High (low) level of consolidation if more (less) than 11 percent of the small business lending was made by organizations that were acquired in the 18 months following the beginning of the study period. " In-market" refers to an acquisition by another organization that is already operating in the market as of the beginning-of-period June 30th reporting date. "Big acquires big" refers to consolidations where both the acquired and acquired organizations had greater than $1 billion in assets. "Big acquires small" indicates that the acquirer had more than $1 billion in assets but the acquired bank had less. "Small acquires small" implies both parties had less than $1 billion in assets.

Table 6: Mean Small Business Loans Growth (percent)

	All Markets		High Herfindahl Markets		Low Herfindahl Markets	
	93-95	*95-97*	*93-95*	*95-97*	*93-95*	*95-97*
Non-MSA samples						
No consolidation	*14.5*	*13.5*	*13.7*	*13.5*	*17.7*	*13.2*
Low level of consolidation activity	*8.7*	*10.8*	*6.5*	*9.5*	*14.3*	*13.9*
Classified by main type of consolidation activity						
In-market big bank acquires big bank	11.8	6.8	10.8	12.3	13.7	1.2
In-market big bank acquires small bank	5.9	8.5	4.0	7.2	11.0	12.5
In-market small bank acquires small bank	11.9	11.8	8.3	9.3	20.3	16.0
Out-of-mkt. big bank acquires big bank	6.8	8.3	2.4	7.7	16.1	9.9
Out-of-mkt. big bank acquires small bank	6.6	13.8	5.7	12.7	14.6	17.5
Out-of-mkt. small bank acquires small bank	13.1	13.9	14.1	10.4	11.3	19.8
High level of consolidation activity	*11.6*	*12.0*	*11.1*	*12.1*	*13.1*	*11.7*
Classified by main type of consolidation activity						
In-market big bank acquires big bank	14.1	6.3	14.5	9.0	13.8	0.2
In-market big bank acquires small bank	7.8	11.1	6.7	10.0	12.1	12.3
In-market small bank acquires small bank	26.7	19.5	40.1	11.6	10.7	30.1
Out-of-mkt. big bank acquires big bank	11.5	10.1	10.4	9.9	14.8	10.7
Out-of-mkt. big bank acquires small bank	7.0	11.0	6.3	10.9	9.9	11.3
Out-of-mkt. small bank acquires small bank	16.0	18.7	16.9	20.1	13.1	13.2
Number of nonMSA markets	*844*	*844*	*651*	*646*	*193*	*198*
MSA samples						
No consolidation	*7.6*	*12.7*	*6.3*	*11.8*	*10.3*	*13.7*
Low level of consolidation activity	*9.6*	*11.2*	*9.6*	*9.2*	*9.6*	*12.0*
Where the main type of consolidation activity is						
In-market big bank acquires big bank	-3.3	4.8	-20.7	-19.8	-0.2	8.9
In-market big bank acquires small bank	13.2	14.8	12.3	19.8	13.7	13.4
In-market small bank acquires small bank	5.6	9.6	--	8.8	5.6	9.9
Out-of-mkt. big bank acquires big bank	12.1	11.4	11.1	7.6	12.6	13.4
Out-of-mkt. big bank acquires small bank	9.1	14.9	8.8	17.3	9.2	13.3
Out-of-mkt. small bank acquires small bank	9.9	12.1	12.0	8.9	8.0	14.7
High level of consolidation activity	*6.5*	*7.6*	*8.3*	*6.3*	*5.7*	*8.1*
Where the main type of consolidation activity is						
In-market big bank acquires big bank	1.6	4.6	-1.0	-6.0	1.8	7.0
In-market big bank acquires small bank	7.7	10.2	-14.6	8.9	10.1	10.6
In-market small bank acquires small bank	1.6	14.2	--	--	1.6	14.2
Out-of-mkt. big bank acquires big bank	6.7	6.8	6.4	3.9	6.9	8.3
Out-of-mkt. big bank acquires small bank	11.5	8.5	22.4	12.3	1.6	5.2
Out-of-mkt. small bank acquires small bank	-28.0	37.7	-28.0	64.9	--	10.6
Number of markets	*295*	*295*	*103*	*101*	*192*	*194*

Notes: High (low) level of consolidation if more (less) than 11 percent of the small business lending was made by organizations that were acquired in the 18 months following the beginning of the study period. In-market refers to an acquisition by an another organization that is already operating in the market as of the beginning-of-period June 30th reporting date. "Big bank acquires big bank" refers to consolidations where both the acquirer and acquired organizations had greater than $1 billion in assets. "Big acquires small bank" indicates that the acquirer had more than $1 billion in assets but the acquired bank had less. "Small bank acquires small bank" implies both parties had less than $1 billion in assets.

Table 7: Variable Definitions

Baseline merger variables

Low Merger Activity: Dummy variable that equals one if the market had a low level of consolidation activity
High Merger Activity: Dummy variable that equals one if the market had a high level of consolidation activity

Merger variables: Classifying markets in terms of the overall level of consolidation activity and by the main type of consolidation activity

Low MA-In/BigBig: A low level of consolidation activity, mainly in-market big bank acquires big bank(s).
Low MA-In/BigSm: A low level of consolidation activity, mainly in-market big bank acquires small bank(s).
Low MA-In/SmSm: A low level of consolidation activity, mainly in-market small bank acquires small bank(s).
Low MA-Out/BigBig: A low level of consolidation activity, mainly out-market big bank acquires big bank(s).
Low MA-Out/BigSm: A low level of consolidation activity, mainly out-market big bank acquires small bank(s).
Low MA-Out/SmSm: A low level of consolidation activity, mainly out-market small bank acquires small bank (s).

High MA-In/BigBig: A high level of consolidation activity, mainly in-market big bank acquires big bank(s).
High MA-In/BigSm: A high level of consolidation activity, mainly in-market big bank acquires small bank(s).
High MA-In/SmSm: A high level of consolidation activity, mainly in-market small bank acquires small bank(s).
High MA-Out/BigBig: A high level of consolidation activity, mainly out-market big bank acquires big bank(s).
High MA-Out/BigSm: A high level of consolidation activity, mainly out-market big bank acquires small bank(s).
High MA-Out/SmSm: A high level of consolidation activity, mainly out-market small bank acquires small bank(s).

Banking market control variables

Offices Per-Capita: Offices per 10,000 persons, beginning of period (BOP).
Deposit Herfindahl: Herfindahl Index of deposit market (out of 10,000), BOP.
Big Bank Share: Share of the small business loans held by large organizations (assets>$1billion), BOP.
Number of Banks: Number of banking organizations having branches in the market, BOP.
Thrift Deposit Share: Share of the deposit market held by thrifts, BOP.
Deposits Per-Capita: Deposits per capita ($1000s), BOP.
Deposit Growth Lagged: Deposit growth in the two years before to the current period.
Deposit Growth Current: Deposit growth in the current two-year period.

Other market control variables

Population Lagged: Population (1000s) beginning of prior two-year period.
Population Growth Lagged: Population growth in the two years before the current period.
Population Growth Current: Population growth in the current two-year period.

Per-Capita Income Lagged: Income per capita ($1000s) beginning of prior two-year period.
PC Income Growth Lagged: Per capita income growth in the two years before the current period.
PC Income Growth Current: Per capita income growth in the current two-year period.

Unemployment Rate Lagged: Unemployment rate (%) beginning of prior two-year period.
UE Rate Change Lagged: Change in the UE rate in the two years before the current period.
UE Rate Change Current: Change in the UE rate in the current two-year period.

House Prices Change Lagged: Change in index measuring median housing prices in the two-years before the current period.
House Prices Change Current: Change in index measuring median housing prices in the current two-year period.

Personal Bankruptcy Rate: Personal bankruptcies per capita, beginning of period.
Bkrpcy. Rate Chg.: Current:Change in the personal bankruptcies per capita in the current period.

Table 7 (continued): Variable Definitions

	All Markets		High Herfindahl Markets		Low Herfindahl Markets	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*

MSA Samples

Banking Market Control Variables

Offices Per Capita, BOP	3.06	3.04	2.99	2.98	3.19	3.07
Deposit Herfindahl, BOP	1627	1645	2299	2339	1266	1284
Large-Bank Share, BOP	56.81	59.43	62.76	66.90	53.62	55.54
Number of Banks, BOP	23.94	22.28	13.96	12.38	29.30	27.44
Thrift Deposits Share, BOP	22.21	19.34	17.72	13.62	25.15	22.32
Deposits Per Capita lagged	10.16	10.33	9.67	10.15	10.43	10.42
Deposits Growth Lagged	-0.27	4.08	2.54	6.68	-1.78	2.73

Other Market Control Variables

Population Lagged	456.8	468.69	311.26	290.24	534.90	561.60
Population Growth Lagged	2.57	2.07	2.53	1.98	2.59	2.12
Per Capita Income Lagged	17.99	19.63	16.95	18.67	18.54	20.12
PC Income Growth Lagged	9.22	9.32	9.82	9.757	8.89	9.09
UE Rate Lagged	6.70	6.83	6.61	6.42	6.75	7.05
UE Rate Change Lagged	0.13	-1.16	-0.11	-0.98	0.30	-1.25
Housing Price Growth Lagged	7.13	7.83	7.93	9.20	6.71	7.12
Bankruptcy Rate Change	0.23	0.34	0.23	0.35	0.23	0.34

Non-MSA Samples

Banking Market Control Variables

Offices Per Capita, BOP	4.12	4.08	3.97	3.92	4.63	4.60
Deposit Herfindahl, BOP	2405	2384	2683	2662	1465	1480
Large-Bank Share, BOP	37.76	40.05	39.03	42.02	33.47	33.64
Number of Banks, BOP	7.64	7.57	6.63	6.58	11.06	10.81
Thrift Deposits Share, BOP	17.20	15.15	16.14	14.30	20.78	17.92
Deposits Per Capita lagged	10.07	10.21	9.70	9.86	11.31	11.37
Deposits Growth lagged	0.27	4.08	2.01	4.11	0.86	2.82

Other Market Control Variables

Population Lagged	42.29	43.16	39.50	40.53	51.70	51.76
Population Growth Lagged	2.03	2.03	2.06	2.09	1.91	1.84
Per Capita Income Lagged	14.94	16.36	14.68	16.14	15.85	17.08
PC Income Growth Lagged	8.86	16.36	9.90	8.82	8.47	9.05
UE Rate Lagged	7.86	7.71	8.03	7.86	7.31	7.20
UE Rate Change Lagged	-0.15	-1.24	-0.17	-1.20	-0.11	-1.39
Housing Price Growth Lagged	7.68	10.03	7.81	10.11	7.24	9.75
Bankruptcy Rate Change	0.21	0.33	0.20	0.33	0.22	0.30

Table 8: Small Business Loan Growth
Baseline Regressions

Non-MSA Markets	Non-MSA counties		High Herfindahl		Low Herfindahl	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*
Intercept	23.270***	1.650	27.213	-5.140	16.365	27.074
	(7.804)	(6.517)	(9.260)	(7.850)	(18.988)	(14.391)
Low Merger Activity	-4.639***	-1.481	-4.512***	-3.273*	-5.469**	2.693
	(1.469)	(1.346)	(1.814)	(1.683)	(2.589)	(1.991)
High Merger Activity	-2.366	0.305	-1.522	0.733	-6.541***	-0.036
	(1.455)	(1.234)	(1.722)	(1.520)	(2.675)	(1.909)
Number of Offices	0.104	-0.014	0.198	0.041	-0.500	-0.560
	(0.620)	(0.522)	(0.743)	(0.629)	(1.146)	(0.851)
Deposit Herfindahl	-0.003***	0.000	-0.004***	0.000	0.000	-0.003
	(0.001)	(0.000)	(0.001)	(0.001)	(0.007)	(0.005)
Large-Bank Share	-0.060***	-0.032	-0.062***	-0.012	-0.025	0.149***
	(0.022)	(0.019)	(0.025)	(0.022)	(0.050)	(0.042)
Number of Banks	0.847***	0.240	0.620	0.380	1.356**	-0.140
	(0.340)	(0.302)	(0.494)	(0.440)	(0.620)	(0.486)
Thrift Deposit Market Share	0.039	-0.031	0.039	0.011	0.027	-0.150**
	(0.046)	(0.037)	(0.054)	(0.044)	(0.093)	(0.064)
Deposits Per Capita	-0.269	-0.200	-0.165	-0.180	-0.788	-0.393
	(0.271)	(0.235)	(0.314)	(0.277)	(0.587)	(0.419)
Deposit Growth Lagged	0.066	0.051	0.098	0.037	-0.108	0.145
	(0.089)	(0.088)	(0.101)	(0.109)	(0.213)	(0.131)
Deposit Growth Current	0.789***	0.769***	0.773***	0.804***	0.899***	0.398***
	(0.107)	(0.079)	(0.119)	(0.090)	(0.308)	(0.161)
Population	-1.649***	-0.548	-1.532***	-0.450	-2.008***	-0.196
	(0.372)	(0.307)	(0.471)	(0.383)	(0.634	(0.487)
Population Growth Lagged	0.128	0.294	0.413	0.316	-1.644*	0.059
	(0.365)	(0.300)	(0.415)	(0.350)	(0.832)	(0.589)
Population Growth Current	-0.301	0.653	-0.441	0.603	0.403	1.135
	(0.335)	(0.370)	(0.380)	(0.423)	(0.785)	(0.757)
Income Per Capita	-0.127	0.179	-0.340	0.222	0.754	-0.017
	(0.363)	(0.280)	(0.425)	(0.331)	(0.744)	(0.491)
PC Income Growth Lagged	-0.193	-0.170	-0.206	-0.369	-0.357	0.332
	(0.190)	(0.163)	(0.224)	(0.200)	(0.373)	(0.254)
PC Income Growth Current	-0.013	0.510**	0.105	0.624**	-0.481	0.396
	(0.195)	(0.252)	(0.235)	(0.294)	(0.357)	(0.501)
Unemployment Rate	-0.200	-0.295	-0.280	-0.177	0.061	-1.319***
	(0.277)	(0.226)	(0.318)	(0.261)	(0.653)	(0.512)
UE Rate Change Lagged	-0.783*	-0.602	-1.039**	-0.712	1.006	-1.136
	(0.415)	(0.433)	(0.469)	(0.494)	(0.959)	(0.985)
UE Rate Change Current	-1.064**	-0.754	-1.365**	-0.578	1.159	-2.757***
	(0.527)	(0.465)	(0.595)	(0.525)	(1.288)	(1.126)
Housing Price Change Lagged	0.986***	-0.247*	0.955***	-0.357**	1.505***	0.115
	(0.269)	(0.133)	(0.314)	(0.161)	(0.543)	(0.218)
Housing Price Change Current	-0.504***	0.493***	-0.578**	0.672***	-0.354	-0.103
	(0.200)	(0.205)	(0.237)	(0.238)	(0.381)	(0.408)
Personal Bankruptcy Rate	4.310	2.361	4.389	3.049	0.252	5.584
	(2.690)	(1.703)	(3.055)	(1.922)	(6.262)	(4.324)
Banktcy Rate Change Current	2.548	7.626**	2.806	9.095***	-7.127	6.101
	(1.602)	(3.381)	(1.708)	(3.868)	(7.687)	(7.140)
Number of Observations	843	843	650	645	192	197
Mean Dependent Variable	12.18	12.65	11.27	12.54	15.24	13.00
R Squared	.207	.188	.208	.198	.264	.339

*, **, *** : Significant at the 10%, 5%, 1% level, respectively. Standard errors are in parentheses.

Table 8 (continued): Small Business Loan Growth
Baseline Regressions

MSA Markets	All MSAs		High Herfindahl		Low Herfindahl	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*
Intercept	32.660***	6.694	50.742	0.707	18.503	14.631
	(11.067)	(7.668)	(30.046)	(21.204)	(11.746)	(8.386)
Low Merger Activity	3.437	0.020	2.227	0.864	4.385	-0.119
	(2.911)	(1.633)	(5.832)	(3.649)	(3.617)	(1.821)
High Merger Activity	-0.361	-0.794	0.547	1.077	1.654	-1.337
	(2.894)	(1.889)	(5.475)	(4.074)	(3.666)	(2.129)
Number of Offices	0.384	0.981	-0.822	0.848	-0.896	1.345
	(1.358)	(1.017)	(2.985)	(2.405)	(1.463)	(1.126)
Deposit Herfindahl	-0.001	-0.001	-0.001	-0.003	0.010***	-0.006***
	(0.002)	(0.001)	(0.006)	(0.004)	(0.004)	(0.003)
Large-Bank Share	-0.007	-0.044	0.082	-0.053	-0.095	-0.016
	(0.044)	(0.032)	(0.093)	(0.069)	(0.050)	(0.037)
Number of Banks	89.000	-0.026	0.508**	-0.173	0.037	-0.051
	(0.087)	(0.069)	(0.237)	(0.364)	(0.086)	(0.066)
Thrift Deposit Market Share	0.021	-0.036	0.136	-0.082	-0.009	-0.017
	(0.078)	(0.053)	(0.191)	(0.138)	(0.077)	(0.053)
Deposits Per Capita	-0.182	-0.599	-0.683	-0.384	-0.031	-0.485
	(0.502)	(0.341)	(1.174)	(0.875)	(0.537)	(0.395)
Deposit Growth Lagged	0.025	0.025	0.054	0.015	0.328**	-0.053
	(0.051)	(0.050)	(0.100)	(0.098)	(0.152)	(0.143)
Deposit Growth Current	0.103	0.734***	0.058	0.611***	0.956***	0.932***
	(0.056)	(0.083)	(0.826)	(0.174)	(0.183)	(0.105)
Population	-.068**	0.011	-0.143	0.0060	-0.032	0.020
	(0.033)	(0.023)	(0.083)	(0.066)	(0.032)	(0.023)
Population Growth Lagged	0.049	-0.349	-0.646	-0.485	-0.854	-0.383
	(0.784)	(0.583)	(1.692)	(1.508)	(0.860)	(0.592)
Population Growth Current	0.132	0.859	-0.223	0.199	0.375	1.327*
	(0.698)	(0.688)	(1.662)	(1.661)	(0.692)	(0.741)
Income Per Capita	-0.785	0.184	-1.341	0.941	-0.427	-0.350
	(0.435)	(0.283)	(1.042)	(0.732)	(0.458)	(0.311)
PC Income Growth Lagged	-0.504	-0.307	-0.983	-0.904	-0.911**	-0.028
	(0.432)	(0.33)	(1.09)	(0.889)	(0.421)	(0.348)
PC Income Growth Current	0.335	0.169	0.893	0.154	0.536	0.387
	(0.459)	(0.367)	(1.212)	(0.819)	(0.454)	(0.424)
Unemployment Rate	1.574***	0.042	-2.535**	-0.049	-0.688	0.186
	(0.434)	(0.291)	(1.068)	(0.646)	(0.441)	(0.332)
UE Rate Change Lagged	-0.363	0.749	-0.003	0.777	0.012	1.364
	(0.764)	(0.779)	(1.602)	(1.66)	(0.800)	(0.908)
UE Rate Change Current	0.693	-0.531	2.304	-0.468	1.402	-0.736
	(1.111)	(0.892)	(2.492)	(2.223)	(1.217)	(0.945)
Housing Price Change Lagged	0.629**	0.197	0.541	0.427	0.652***	0.094
	(0.258)	(0.146)	(0.731)	(0.356)	(0.238)	(0.159)
Housing Price Change Current	-0.346	0.497***	-0.349	0.887	-0.526**	0.344
	(0.236)	(0.211)	(0.577)	(0.519)	(0.233)	(0.229)
Personal Bankruptcy Rate	3.100	-1.863	4.520	-0.522	-1.220	-2.464
	(5.188)	(3.291)	(11.261)	(7.645)	(5.446)	(3.592)
Bankruptcy Rate Change Current	1.200	4.757	-3.403	-8.588	-3.504	5.961
	(6.424)	(4.975)	(20.541)	(10.722)	(6.071)	(5.765)
Number of Observations	294	294	102	100	191	193
Mean Dependent Variable	8.00	10.40	8.34	9.36	7.82	10.94
R Squared	.181	.459	.202	.468	.385	.537

*, **, *** : Significant at the 10% , 5%, and 1% level, respectively. Standard errors are in parentheses.

Table 9: Small Business Loan Growth
Coefficients on Consolidation Variables
(Classification by level and main type of consolidation activity)

	All Markets		High Herfindahl		Low Herfindahl	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*
Non-MSA Sample						
Low MA-In/BigBig	-2.838	-4.091	-2.266	-0.275	-5.249	-3.249
	(4.900)	(5.830)	(6.240)	(8.748)	(7.525)	(6.502)
Low MA-In/BigSm	-4.893	-5.402*	-5.268	-7.111**	-2.072	2.085
	(3.246)	(3.013)	(3.940)	(3.685)	(5.847)	(4.741)
Low MA-In/SmSm	-5.634	0.382	-5.329	-1.323	-6.891	2.766
	(3.893)	(4.300)	(4.819)	(5.712)	(6.497)	(5.485)
Low MA-Out/BigBig	-5.328**	-2.485	-6.986***	-3.443	-3.334	-0.293
	(2.262)	(2.176)	(2.853)	(2.694)	(3.724)	(3.253)
Low MA-Out/BigSm	-4.283	0.219	-4.295	-0.995	-2.316	3.538
	(2.783)	(2.550)	(3.089)	(3.052)	(7.876)	(4.311)
Low MA-Out/SmSm	-3.564	0.541	-0.425	-4.024	-10.297***	7.087**
	(2.656)	(2.673)	(3.472)	(3.550)	(4.052)	(3.386)
High MA-In/BigBig	0.440	-2.520	6.369	0.032	-11.858	-5.504
	(6.469)	(4.089)	(10.021)	(5.194)	(8.224)	(5.874)
High MA-In/BigSm	-5.500	-2.316	-5.832	-4.867	-6.671	-0.749
	(4.411)	(3.910)	(5.125)	(5.809)	(8.891)	(4.446)
High MA-In/SmSm	12.665***	5.962	26.182***	0.280	-4.243	15.203**
	(5.132)	(5.365)	(7.151)	(7.525)	(7.152)	(6.165)
High MA-Out/BigBig	-1.107	-0.714	-0.863	-0.632	-4.640	-0.489
	(1.958)	(1.796)	(2.323)	(2.199)	(3.618)	(2.768)
High MA-Out/BigSm	-7.549	-1.772	-7.497***	-1.445	-8.657*	-1.313
	(2.357)***	(2.150)	(2.725)	(2.609)	(4.840)	(3.502)
High MA-Out/SmSm	-0.736	6.033**	1.222	8.142***	-8.341	-1.697
	(2.913)	(2.542)	(3.438)	(3.045)	(5.615)	(4.211)
Number of Observations	*843*	*843*	*650*	*645*	*192*	*197*
Mean Dependent Variable	*12.18*	*12.65*	*11.27*	*12.54*	*15.24*	*13.00*
R Squared	*.224*	*.200*	*.239*	*.212*	*.281*	*.381*

*, **, ***: Significant at the 10%, 5%, and 1 % level, respectively. Standard errors are in parentheses.

Table 9 (continued): Small Business Loan Growth
Coefficients on Consolidation Variables
Classification by the level and the main type of Consolidation Activity

	All Markets		High Herfindahl		Low Herfindahl	
	93–95	*95–97*	*93–95*	*95–97*	*93–95*	*95–97*
MSA Sample						
Low MA-In/BigBig	-5.480 (4.947)	-2.699 (2.470)	-28.428* (14.817)	-13.815* (8.249)	-2.429 (4.874)	-0.868 (2.563)
Low MA-In/BigSm	5.366 (3.566)	0.864 (2.300)	-3.300 (7.281)	3.179 (5.603)	6.487 (4.063)	0.600 (2.432)
Low MA-In/SmSm	-0.801 (4.943)	0.224 (2.720)	NA	-4.670 (7.142)	1.355 (4.754)	0.965 (2.816)
Low MA-Out/BigBig	5.333 (3.483)	-0.602 (2.619)	-0.331 (7.566)	-2.586 (5.467)	6.142 (3.989)	1.156 (2.879)
Low MA-Out/BigSm	3.041 (4.524)	2.796 (2.795)	6.789 (8.779)	7.485 (5.648)	1.019 (4.901)	-0.761 (3.202)
Low-MA-Out/SmSm	3.021 (4.505)	-0.838 (2.487)	1.457 (8.403)	-0.011 (4.703)	6.207 (5.173)	0.260 (2.907)
High MA-In/BigBig	-1.283 (4.474)	-1.864 (2.705)	4.139 (19.064)	-14.200** (7.050)	2.221 (4.478)	0.908 (3.067)
High MA-In/BigSm	0.979 (4.078)	-4.581 (3.636)	-27.453** (13.529)	-6.358 (9.420)	5.786 (4.266)	-3.998 (3.623)
High MA-In/SmSm	-3.664 (7.150)	0.590 (5.736)	NA	NA	-4.393 (6.323)	-2.589 (5.201)
High MA-Out/BigBig	-1.037 (3.189)	-0.353 (2.391)	-6.456 (6.198)	-1.916 (4.725)	0.192 (3.860)	0.711 (2.706)
High MA-Out/BigSm	3.233 (4.011)	-3.829 (3.212)	16.485** (6.915)	6.601 (6.713)	-4.303 (4.849)	-5.838 (3.657)
High MA-Out/SmSm	-31.931** (14.238)	22.185*** (7.197)	-29.607* (18.021)	48.454*** (12.936)	NA	-0.829 (8.815)
Number of Observations	*294*	*294*	*102*	*100*	*191*	*193*
Mean Dependent Variable	*8.00*	*10.40*	*8.34*	*9.36*	*7.82*	*10.94*
R Squared	*.223*	*.491*	*.395*	*.621*	*.436*	*.551*

*, **, *** : Significant at the 10%, 5%, and 1 % level, respectively. Standard errors are in parentheses.