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The Impact of Bank Structure on Small Business and Small Farm Lending

Steven G. Craig , Polly T. Hardee

Abstract

This paper empirically explores the impact of bank size, holding company affiliation and the degree of branching on small business and farm lending through a conceptual analysis encompassing private information asymmetries inherent in these bank dependent borrowers. The study expands the literature by removing the influence of capital constraints in bank dependent lending through comparing real estate secured to non real estate loans in a reduced form model. Furthermore, it encompasses an allocation analysis over bank dependent loans, its large loan counterpart and other assets. Overall the findings indicate that not only small banks, but instate and more particularly one bank holding company banks devote more of their assets to small business and farm loans. Banks owned by out-of-state holding companies do not. Low to moderately branched banks are also active in these markets. In this respect the smaller, more simply structured bank may possess a relative advantage in the bank dependent loan market arising from the capacity to mitigate acute informational asymmetries.

JEL Classification: **G21, L11**

Keywords: **Bank structure, small business lending, farm lending, bank consolidations**

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1. INTRODUCTION*

With increased consolidations among financial services firms and the continued breakdown of regulatory barriers, will some of the smaller, more simply structured banks remain due to some market niche? Our goal in this paper is to address this question through exploring the relative advantage, if it exists, of small and simple banks compared to large and complex banks as sources of small business credit. In particular, we posit that smaller, more simply structured banks may be better able to both acquire and process private information about small business borrowers than their larger and more complex banking counterparts.

On the one hand, because small business borrowers are unlikely to generate public information, private information is crucial for determining small business credit worthiness for both funding and monitoring. As argued by Nakamura (1994), private information assumes a different role in the larger consolidated entity, giving small banks an advantage in small business lending (SBL). Therefore large banks may experience informational diseconomies of scale in small business loans. This may be particularly so with respect to relationship driven credits, where knowledge of the customer is paramount over financial ratios (Berger et al, 1995; Berger and Udell, 1995).

On the other hand, large more complex banks also have an advantage in the provision of credit to small businesses. These institutions are more diversified, therefore can tolerate greater risk exposure despite inherent information asymmetries in SBL. Additionally, technologies improving the information gathering process have reduced costs, allowing credit scoring models in large banks

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to be a viable means of capturing an increasing share of the SBL market (Mester, 1997).

Previous attempts in the literature to address the issue of small business credit and bank structure focus primarily on size, and to some degree organizational complexity (Berger and Udell, 1995; Berger, et al, 1995, 1998; Peek and Rosengren, 1995, 1998; Strahan and Weston, 1998; Jayaratne and Wolken, 1999). We expand the literature by examining the relative share of small business lending secured by real estate, thus removing the size effects of capital constraints on bank behavior[1]--an analysis not previously undertaken. We build on past research by including a business lending allocation test. We also extend our study of banking structure by incorporating small farm loans. Agricultural lending to small borrowers carry similar arguments as small business lending.

Our analysis proceeds in four additional sections. In section two we provide a conceptual framework suggesting how size, structure and other variables might affect a bank's ability for overcoming the acute private information asymmetries inherent in small business or farm borrowers--i.e., what we term as bank dependent loans (BDL)[2]. In section three we describe the data, its sources and the research methodology employed in the data analysis. In section four we present the empirical results. While we focus primarily on small business lending due to its greater volume, we find similar empirical results for small farm lending as well. Section five contains our conclusion.

2. CONCEPTUAL FRAMEWORK

There are two key, conflicting aspects governing the extent to which a bank may engage in

[1]Regulation mandates that banks cannot extend credit to one borrower which exceeds a portion of the bank's capital, thus limiting small banks' activity in large loans.

[2]Since small businesses generally cannot look to the securities market as a funding source, they typically rely on banks as their primary creditor (Elliehausen and Wolken, 1990).

bank dependent lending. One is the ability of a bank to process private information inherent in BDL. The other is the diversification of the bank improving its risk tolerance, thereby increasing its capacity to participate in BDL. Our empirical work, therefore, seeks to explain BDL both as a function of the attributes that affect a bank's ability to process private information, and its diversification improving its ability to tolerate risk. Our hypothesis is that large banks and those with complex structures will process private information less well but nontheless will have a greater ability to diversify. Small, simple banks may be able to better process private information, but clearly will not have the relative ability to diversify risk.

Empirically, if diversification is more important than private information in BDL, then the coefficients on most variables representing large complex banking structures ought to show more BDL activity. If private information is more important, then we should find that the coefficients on most variables indicate smaller and simpler banking structures show a greater tendency for BDL. Thus if the variables in our regressions successfully capture our ideas, diversity versus private information, then we should see the coefficients are consistent in the results. Our reduced form specification is:

BDL = f (SIZE. HOLDING COMPANY AFFILIATION, EXTENT OF BRANCHING; MARKET, RISK)

The first three sets of variables--size, holding company affiliation and extent of branching--capture larger size and complexity of structure, thereby implying greater diversification; whereas small size and simplicity of structure imply better private information. Market location and risk encompass other attributes that further distinguish these two ideas.

2.1 Dependent Variables

Our tests use three alternative measures of lending activity to illustrate the extent to which

the institutional variables described above alter banks' participation in a market that is presumably bank dependent for credit. Following most of the papers in the literature, we use small business lending as a percentage of total assets (SBL/TA) as our standard dependent variable (Goldberg et al, 1998, 1999; Berger et al, 1995, 1998; Peek & Rosengren, 1998; Strahan & Weston, 1998; Keeton, 1995).

Our second way of measuring the dependent variable is to account for the fact that not all assets are in business lending. Thus part of movement in SBL might also reflect movement in the larger loan counterpart (LBL) because of reallocation of the third asset pool. That is, movements in SBL by itself may be incomplete as a description of what is occurring in the bank portfolio mix, since banks have holdings in other types of lending, bonds, cash, etc.--the third asset pool. The ability to process private information or diversify might affect a bank's choices in this regard. So, by measuring the difference of assets in small business loans and its large loan counterpart ((SBL-LBL)/TA) in tandem with our SBL/TA measurement, we are looking at how a bank chooses to allocate its assets among SBL, LBL and the remaining asset pool.

The third measure of BDL activity is unique in the literature and in our view is the clearest test of the private information versus diversity hypothesis. This measure captures a second component of bank activity by looking just within the SBL category. We differentiate out of SBL its real estate secured component. We thereby put capital constraints aside and consider BDL activity net of any behavior influenced by legal lending limits imposed by regulatory authorities. The SBL/TA ratio is disaggregated into the difference between small commercial and industrial (SCI) loans and small commercial real estate (SCRE) loans as a percentage of total assets [(SCI-SCRE)/TA]. This last distinction is particularly important, as the information content in non real

estate bank dependent lending is especially difficult. Assessing credit risk is more difficult in SCI loans as compared to SCRE. Real estate collateral is generally straightforward to appraise, improves loan liquidity, and allows for easier assessment of risk exposure. Under conditions of stable or rising real estate prices SCRE loans require less monitoring. SCI loans include unsecured loans, or monitor-intensive loans made in some cases solely on the character of the borrower. Hence, they encompass relationship driven credits and are the more information sensitive subset. Thus, the allocation proces of SBL is not influenced by capital constraints. Rather, real estate may be obtained as collateral perhaps to overcome information gaps.

2.2 Small Farm Lending

Following Keeton (1996), Goldberg et al (1999) and Levonian (1996) we also look at farm lending. While a much smaller market than SBL, we consider it bank dependent, having important distinctions regarding diversity versus private information. Again, our main interest is in size and complexity determining such distinctions across our set of tests. Similar to SBL, we examine the small farm loan to total asset ratio (SFL/TA). We also apply our asset allocation test to small and large farm loans ((SFL-LFL)/TA). Small farm lending is comprised of agricultural production loans not secured by farmland (denoted by SFPR and roughly analogous to SCI) versus those loans that are (denoted by SFRE and roughly analogous to SCRE). We therefore apply our real estate secured test to these loans. We will look for a consistency of the farm lending to the small business results.

3. DATA AND EMPIRICAL SPECIFICATION

The unit of observation for our empirical analysis is at the bank level. The new data on small

business and small farm loans[3] are extracted from the June 30, 1994 Bank Call reports. It is combined with branch level data from the FDIC's Summary of Deposits which indicates primarily deposit information and branch location. Bank level holding company names and locations are obtained from Sheshunoff, Inc, a bank research firm. Our empirical analysis is based on the universe of approximately 1000 Texas banks for 1994. This sample provides a large degree of diversity, both among types of locations and types of banking structures. At the same time, by using only Texas banks, we are able to mirror the dichotomous structure of the U.S. banking industry while simplifying the regulatory environment.

There are four categories of loan size data available. Data on small business loans are categorized by number and dollar volume for $100,000 and less; $100,001 through $250,000; between $250,001 through $1,000,000, and over $1 million. Small farm lending categories are similar except they are capped at $500,000. (The average loan size in SFL is smaller than SBL in all categories, and farm lending also has lower dollar and number volume.) We therefore define SBL as loans $250,000 and less, while for small farms we use $100,000 and less.[4] Three regressions, each encompassing the dependent variables previously described, are specified for SBL and SFL respectively. Each regression is a function of the vector of variables described above: SIZE, HOLDING CO., BRANCHING; MARKET LOCATION, RISK.

The SIZE variables consist of total assets (TA), and of a Herfindahl index (Case and Fair,

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[3]The data are reported annually, and originally reported in the 1993 June call report. However, because of errors due to first-time reporting, the 1994 call is used. In order to avoid undue reporting burdens upon the banks, small businesses and farms are defined by the size of their original loan amount, rather than the size of the firm. Size of the business rather than size of the loan is a preferred measure. However, Scanlon (1984) has indicated that original loan size serves as a good proxy for borrower size.

[4]Regression results using $250,000 as the alternate definition for SFL, and both $100,000 and one million dollars for SBL are qualitatively similar to those reported.

1999). We use the natural log of TA [Ln(TA)], since empirically we find declining marginal impact of TA on the share of assets in SBL or SFL. Further, we find size for urban banks has a statistically different impact than for rural banks, so we interact the Ln(TA) with the urban dummy.[5] The Herfindahl index (HHI) variable is included to separate absolute size of the bank from its presence in a market--i.e., concentration.

The HOLDING CO variables consist of three dummy variables to differentiate banks without any holding company affiliation, the omitted category. The simplest holding company structure consists of only one bank (OBNKHC). The next is a multibank holding company domiciled within the state of Texas (INSMBHC). The most complex is a multibank holding company domiciled outside of the state (OSHC).[6]

Similarly to holding company status, the extent of branching is defined by a series of dummy variables. Low branching (LOBRNCH) is defined as a bank with branches confined to the local market area[7]. Moderate branching (MODBRNCH) is defined as all bank branches within a one hundred mile radius, while high branching (HIBRNCH) is defined by a bank's branches extending beyond the one hundred mile limit. Unit banks, or banks without branches is the omitted variable. In addition we use two continuous variables, the number of bank branches (BRNCHNUM), and the share of deposits from outside the main bank's market area (PDOUT).

The final group of variables are the market and risk orientation variables. An urban dummy variable (URBAN) equals one for banks with main offices in urban areas. BANKAGE indicates the

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[5]Neither of these specification changes affect the coefficients of the remaining variables.

[6]In the case of a bank owned by one holding company which in turn is owned by another, the domicile of the highest holding company is used.

[7] For purposes of this research, the local market area is defined to be the MSA if the main bank is located in an urban area, otherwise the county.

age of a bank in years. OCCEXAM is a dummy variable that equals one for banks examined by the Controller of the Currency (all national banks), while STATEXAM equals one for state chartered banks examined by the state department of banking. The omitted category is banks examined by the Federal Reserve.

Definitions of all the above right hand side variables are presented in Table 1, while Table 2 presents the means and standard deviations of the dependent and independent variables. The SFL regressions additionally contain an interaction of OBNKHC with URBAN to account for the statistically significant impact of rural OBNKHCs in small farm loans. In the small farm loan regressions, the 99 banks that have no agricultural lending are dropped. This leaves 997 observations for SBL and 898 for SFL.[8]

4. EMPIRICAL RESULTS

Our results are strongly consistent with private information being more important than diversity. When just looking at the first SBL regression, private information dominates. However, these results are strengthened by our two alternative specifications. In the asset allocation regression, we find that LBL may rise at the expense of SBL and/or other assets. The results are further strengthened by our third regression, where we find that even within the category of SBL, the share in real estate loans dramatically falls with bank size and complexity. Thus our results are generally consistent across all three specifications and across the individual components of the independent variables. We find that private information is much more important as a motivation than diversity.

[8]Tobit regressions including the 99 zeros were qualitatively similar to those reported here, although the individual coefficients are estimated less precisely.

Furthermore, the story is the same in both SBL and SFL. Both reflect private information dominating over diversity. Overall, this is comparable to six separate tests, all reflecting a preponderance of evidence supporting private information.

Table 3 presents our results of bank participation in the SBL sector, using all three specifications of the dependent variable--i.e., SBL/TA , (SBL-LBL)/TA and (SCI-SCRE)/TA. The table reflects the coefficient estimates and the elasticities calculated at the mean of the continuous variables. Where the OLS regression errors are heteroscedastic (as determined by the White test), we report the robust errors as taken from the White heteroscedasticity-consistent variance-covariance matrix, although the outcome has no substantive differences from the original OLS results. Results of the small farm lending sector are presented in Table 4, and pertinent findings are discussed with the SBL results.

4.1. Size Variables

The negative signs on the Ln(TA) coefficients support the information hypothesis. Namely, as banks grow larger they engage less in BDL. Furthermore, the relatively high elasticities on the statistically significant coefficients show the effects are quantitatively important.

Additionally, we find urban and rural banks behave differently regarding SBL as they increase assets. Specifically, in the SBL/TA regression the share of SBL does not fall as rural banks grow larger. Despite that, our results show that even in rural areas, other assets are allocated to LBL as assets increase (SBL-LBL)/TA. That is, while the coefficient estimate is insignificant and quantitatively small in the SBL/TA regression (-.001 with $\varepsilon = -.01$), other assets are allocated to LBL as the bank increases in size (regression two)[9]. However, within SBL, the share in real estate

[9]The coefficient in (SBL-LBL)/TA is -.017 with $\epsilon = -.23$, while the coefficient in the SBL/TA regression is effectively zero. Thus the increase in LBL is a reallocation only from the

secured credits increases (regression three). This says the more information sensitive type of loans have fallen as the rural banks grow, although the total SBL/TA ratio remains unchanged. In the urban areas, banks substitute out of SBL and other assets into LBL as the banks become bigger. Thus LBL grows partially at the expense of SBL, supporting the size effect of private information. However, large urban banks do not allocate a greater share of assets to real estate secured SBL. This could be the effects of credit scoring models lowering costs on the more information sensitive credits. Nontheless, as a whole, the asset size variables in SBL support the private information hypothesis.

In farm lending (table 4) we find the results support private information even more consistently. In both rural and urban banks the share of SFL and other assets fall as more assets are devoted to large farm lending (regressions one and two). Also, as both rural and urban banks grow larger, the share of farmland-secured loans increase (regression three), perhaps to mitigate informational diseconomies. In all three regressions for both urban and rural banks the results are statistically significant and quantitatively important (as reflected by the relatively high elasticities).

One possible reason for the rise in the large loan counterpart in both the SBL and SFL sectors is because large banks are not as constrained by the capital limitation on loan size. Therefore our third regression is germane since it removes the effects of capital constraints. Here for SBL, we see private information dominating over diversity in the large rural banks. For SFL we find this in both large rural and urban banks. However, large urban banks do not favor real estate secured SBL, perhaps due to offsetting effects of diversity.

Regarding size in relation to the market (bank concentration), HHI is significantly positive

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third asset category.

with a relatively high elasticity in the (SCI-SCRE)/TA regression (and marginally significant in farm loans). This is consistent with the information hypothesis. The more concentrated the market, the greater the bank's share of private information. Thus the bank is more likely to extend the more informationally intensive non real estate loans.

4.2. Holding Company Variables--Complexity

The holding company variables also support the information hypothesis. The negative statistical significance on the OSHC coefficient in the SBL/TA regression (-.020) has a high absolute value relative to the other holding company dummy variables. Additionally, the coefficient in the (SBL-LBL)/TA regression is quantitatively important (-.025) and marginally significant. This implies that these banks in more complex organizations (while holding size constant) not only hold lower proportions of assets in SBL, but allocate funds from SBL and other assets to LBL. These results reflect the negative impact of complexity on private information. In contrast, the INSMBHC banks reflect a preference for SBL in the business loan portfolio. The coefficient is positive and statistically significant in the (SBL-LBL)/TA regression (.018). While the proportion of total assets in SBL remains unchanged (the SBL/TA coefficient is effectively zero), the business portfolio mix reflects greater allocation to SBL arising from the substitution out of LBL to other assets. This outcome appears to undergird private information. Since in Texas INSMBHC banks are comprised primarily of smaller banks in close proximity, it is unlikely that stringent corporate governance policies are imposed on the member banks. Therefore private information flows relatively unimpeded within the instate holding company organization, but may be hampered in the OSHC banks.

For the OBNKHC variable all three SBL regressions point toward a dominance of private

information. Namely, the positive and statistically significant coefficients imply greater SBL activity in these simplest of holding company structures. This is further supported in all of the SFL regressions (Table 4) where rural OBNKHCs mimic these outcomes. Thus all six tests for complexity in the OBNKHC variable yield the same results. In these more simple structures, management may be more proactive in processing private information giving rise to a higher activity in SBL and SFL, including the more informationally intense component of these bank dependent loans.

4.3. Branching Variables--Complexity

LOBRNCH and MODBRNCH reflect a significantly positive relationship with SBL/TA and the informationally intense (SCI-SCRE)/TA regression (Table 3). In the SFL sector (Table 4) we find similar findings for MODBRNCH. This may be a result of advanced communication technology allowing for effective handling of private information flows in banks that are not overly branched. However, contrary to the information hypothesis, the positive and significant result of the HIBRANCH variable in the (SCI-SCRE)/TA and small versus large farm loan regressions may be more transaction driven business loans, or just the effect of diversity reducing risk in the more informationally intense loans. Finally, within the SFL sector, although the number of branches (BRNCHNUM) variable is positive and significant in all three regressions, the coefficient values are quantitavely unimportant. They are close to zero (.0004, .0005, .0003) and the relative elasticity is very small (.01,.02,.02).

4.4. Market Location and Risk

As expected, for small business lending the urban effect is positive and significant in the SBL/TA and (SBL-LBL)/TA regressions (Table 3, columns 2 and 4). Additionally, the magnitude

is higher than any other dummy variable, underscoring the strength of the urban location due to demand conditions. The small farm loan regression results for rural markets (Table 4) also bear this out (as indicated by the negative urban coefficients). In support of the information hypothesis, urban banks allocate more total assets to small farm land-secured loans, perhaps to compensate for greater difficulty in obtaining private information for farm lending in an urban setting--i.e., where there are fewer farms and higher population density and flux. (In SBL the negative relationship holds, although it is not significant.)

In our risk variables[10], the significant negative results and the relatively high elasticities for BANKAGE in all three of the SBL regressions (Table 3) appear to support a less risk averse growth mode for young banks as well as a more conservative stance by older banks, consistent with the findings of Goldberg et al (1998, 1999)[11]. And finally, the significant positive result for BANKAGE in the SFL/TA regression (Table 4, columns 2 and 3) has a relatively high elasticity, lending support to the information hypothesis. The expertise and private information required for farm lending is developed over time.

5. CONCLUSION

[10]As a further measure of risk, the percentage of problem loans as a portion of total assets is used as an additional variable in an unreported regression. The results are qualitatively the same. Problem loans include past due, nonaccrual and charged off loans from all types of bank lending. Because this risk variable is potentially endogenous, it is not included in our model.

[11]Since many banks were acquired in the years just prior to our sample period, the acquisition may have had an effect on bank-customer relations in the acquired bank, thereby making the acquisition date important. To test for misspecification of BANKAGE in light of this, the variable was omitted from the regression. The results, however, were qualitatively the same.

Since financial intermediation theory is ambiguous as to the impact of bank structure on total assets invested in bank dependent lending, empirical examination is required. Therefore this paper investigates whether small, simply structured banks are better at bank dependent lending because of possible efficiencies in processing private information; or conversely, whether large banks with more complex structure are better because of diversity allowing greater risk capacity to invest in BDL. We find in our reduced form model that private information dominates over diversity as a determinate of BDL. Our evidence is considerably stronger because we specify the dependent variables in three different ways and across two different types of activity. Since our real estate versus non real estate bank dependent lending removes the effects of capital constraints, it is actually our clearest test. However, in just focusing on SBL (as with our first test), or looking at the distinction in total business lending holding constant the third asset pool (our second test), we get similar results across the set of variables.

Overall our findings indicate that not only small banks, but instate and more particularly one bank holding company banks devote more of their assets to small business and farm loans. Banks owned by out-of-state holding companies do not. Low to moderately branched banks are also active in these markets. Thus the evidence from our reduced form model strongly weighs toward better information flows in more simplistic structures, in contrast to diversity allowing for more risk.

Despite this, there is a limit to the private information argument. Unit banks (no branch banks) and no holding company banks do not have higher BDL activity. This may indicate that some diversity is good for bank dependent lending. Nevertheless, from the results of this research, private information appears to be the more important motivation. Therefore, the unique nature of bank dependent lending coupled with the consolidation process may have implications for bank structure--

namely, a two-tiered banking industry with smaller and simply structured banks having a relative advantage in supplying the market for bank dependent entities.

6. Appendix: Alternative Specification

Total assets in the denominator of the dependent variable causes some econometric measurement error that arises from also having the log of total assets as an independent variable. However, this measurement is frequently used in banking papers, some of which are previously cited in our text. Furthermore, by relinquishing the bank dependent loan to asset ratio as the dependent variable, the concept of specialization in these types of loans as well as the asset allocation test are lost. Nevertheless, to account for the measurement error, the natural log of SBL, the ratios of large business loans to small business loans (LBL/SBL) and small commercial real estate loans to small commercial and industrial loans (SCRE/SCI) are run as the dependent variables in an alternative specification, the results of which are contained in Table A1. The same is done with small farm lending, with results reflected in Table A2.

The results of the small business loan regressions under this alternative specification are similar to the loan to asset specification used in the research[12]. Overall, this suggests that any measurement error that may exist in the loan to asset specification does not cloud the small business lending results. Although the results of the small farm lending in the alternative specification of the log of SFL are similar to the farm loan to asset regression in Table 4, the remaining two regression coefficient estimates are less precise, but do not contradict Table 4. However, since the small business loan to asset specification is supported by the alternative specification, and since SBL has a larger dollar and number volume, and is of greater concern in the literature, then perhaps what specification is best for business loans should be applied to farm loans, as is done in this research.

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[12]The signs switch on the ratio regressions since SBL and SFL are in the denominator. This is done to avoid zero as a divisor for the many banks that report no large business or farm loans.

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Table 1: EXPLANATORY VARIABLE DEFINITIONS

RHS VARIABLES	DEFINITION
Size Variables	
LNTA	Size in Relation to Total Bank Deposits the natural log of total assets
LNTAURB	an interaction term of urban location and the natural log of total assets to separately account for the size effect in urban versus rural location
HHI	Size in Relation to the Market--Bank Concentration a Herfindahl index, or the sum of squared market share constructed from the branch level data, measures the concentration of banks within the local market. Higher values indicate more market concentration.
Holding Company Variables	The omitted variable is unaffiliated banks--i.e., banks without any holding company structure, or "No-Holding-Company-Banks"
OSHC	a dummy variable for membership in a multibank holding company domiciled out of Texas
INSMBHC	a dummy variable for membership in a multibank holding company domiciled within the state
OBNKHC	a dummy variable for membership in a bank holding company with that bank being the only bank. In SFL, OBNKHC is interacted with URBAN
Branching Variables	For the dummy variables, unit banks (banks having no branches) is the omitted variable
LOBRNCH	a dummy variable which equals one if the bank is branched only within the bank market, zero otherwise
MODBRNCH	a dummy variable which equals one if the bank is branched within 100 miles of the bank market, zero otherwise
HIBRNCH	a dummy variable which equals one if the bank is branched outside100 miles of the bank market, zero otherwise
BRNCHNUM	the number of branches of a particular bank
PDOUT	the percentage of deposits located outside of the main bank's market area
Market Location, Risk	
URBAN	a dummy variable equaling one for an urban location of the main office of the bank, zero otherwise
BANKAGE	the time in years since the bank was chartered
OCCEXAM	accounts for regulatory differences of national banks. The omitted variable represents banks examined by the Federal Reserve
STATEXAM	accounts for regulatory differences of state chartered banks examined by the Texas Department of Banking

TABLE 2: DESCRIPTIVE STATISTICS

	Small Business Lending			Small Farm Lending		
Dependent Variables	Mean	Banks	Std Dev	Mean	Banks	Std Dev
SBL/TA	0.1133	997	0.0720			
(SBL-LBL)/TA	0.0738	997	0.0979			
(SCI-SCRE)/TA	0.0186	997	0.0504			
SFL/TA				0.0541	898	0.0691
(SFL-LFL)/TA				0.0383	898	0.0788
(SFPR-SFRE)/TA				0.0299	898	0.0534
Explanatory Variables						
Size						
LNTA	10.8988	997	1.0101	10.9134	898	1.0297
LNTAURB	5.7663	997	5.6511	5.2581	898	5.6825
HHI	0.2510	997	0.1872	0.2642	898	0.1915
Holding Company						
OSHC	0.0391	39	0.1940	0.0390	35	0.1936
INSMBHC	0.1374	137	0.3445	0.1403	126	0.3475
ONEBNKHC	0.4142	413	0.4928	0.4298	386	0.4953
OBHCURB	N/A	N/A	N/A	0.1893	170	0.3920
Branching						
LOBRNCH	0.2548	254	0.4359	0.2461	221	0.4310
MODBRNCH	0.1194	119	0.3244	0.1281	115	0.3343
HIBRNCH	0.0271	27	0.1624	0.0278	25	0.1646
BRNCHNUM	1.8355	997	12.8924	1.9410	898	13.5688
PDOUT	0.0452	997	0.1301	0.0491	898	0.1354
Market, Risk						
URBAN	0.5155	514	0.5000	0.4666	419	0.4992
BANKAGE	50.9684	997	34.6334	54.1842	898	34.2623
OCCEXAM	0.4925	491	0.5002	0.4911	441	0.5002
STATEXAM	0.4594	458	0.4986	0.458797	412	0.4986

TABLE 3: SMALL BUSINESS LENDING REGRESSION RESULTS

N=997	SBL/TA		(SBL-LBL)/ TA		(SCI-SCRE)/TA	
VAR. NAME	COEFF. EST. *ROBUST ERR*	Elas-ticity	COEFF. EST. *ROBUST ERR*	Elas-ticity	COEFF. EST. *STANDARD ERR*	Elas-ticity
INTERCEPT	0.149*** 0.043		0.269*** 0.052		0.094*** 0.034	
LNTA[13]	-0.001 0.004	-0.01	-0.017*** 0.005	-0.23	-0.007** 0.003	-0.37
LNTAURB[14]	-0.021*** 0.004	-0.19	-0.052*** 0.005	-0.70	-0.002 0.009	-0.11
HHI	-0.002 0.014	0.00	-0.007 0.015	-0.02	0.041*** 0.011	0.54
OSHC	-0.020** 0.010		-0.025 0.018		0.001 0.009	
INSMBHC	0.004 0.007		0.018** 0.008		-0.005 0.005	
OBNKHC	0.009** 0.005		0.020*** 0.006		0.006* 0.004	
LOWBRNCH	0.011** 0.006		0.005 0.008		0.007* 0.004	
MODBRNCH	0.018* 0.011		0.012 0.014		0.017* 0.008	
HIBRNCH	-0.001 0.019		-0.019 0.029		0.036** 0.015	
BRNCHNUM x 10^2	-0.010 .016	0.00	0.027 .0275	0.01	-0.013 .016	-0.01
PDOUT	0.048 0.038	0.02	0.083* 0.047	0.05	-0.031 0.024	-0.07
URBAN	0.235*** 0.056		0.379*** 0.074		-0.056 0.042	
BANKAGE x 10^2	-0.060*** .006	-0.27	-0.031*** .008	-0.22	-0.021*** .005	-0.56
OCCEXAM	-0.006 0.012		0.001 0.016		-0.006 0.008	
STATEXAM	-0.017 0.012		-0.008 0.016		-0.010 0.008	

***Significant at the 1% level; **5% level; *10% level. Elasticity (ε) is calculated for the continuous variables.

[13]Because this variable has been interacted with URBAN, the coefficient estimate represents rural banks.

[14]This variable is the interaction of LNTA and urban. The reported coefficient results are urban banks. It is the sum of the coefficients on LNTA and LNTAURB. LNTAURB errors have been adjusted to equal (Variance $_{LNTA}$ − Variance $_{LNTAURB}$ + 2*Covariance)$^{1/2}$

TABLE 4: SMALL FARM LENDING REGRESSION RESULTS

N=898	SFL/TA		(SFL-LFL)/TA		(SFPR-SFRE)/TA	
VAR. NAME	COEFF. EST. *ROBUST ERROR*	ε Elas-ticity	COEFF. EST. *ROBUST ERROR*	ε Elas-ticity	COEFF. EST. *ROBUST ERROR*	Elas-ticity ε
INTERCEPT	0.374*** 0.052		0.449*** 0.059		0.259*** 0.043	
LNTA[15]	-0.030*** 0.005	-0.56	-0.037*** 0.005	-0.97	-0.022*** 0.004	-0.73
LNTAURB[16]	-0.015*** 0.002	-0.28	-0.019*** 0.007	-0.50	-0.010* 0.006	-0.33
HHI	0.023 0.015	0.11	-0.018 0.020	-0.13	0.020 0.012	0.18
OSHC	-0.002 0.005		-0.004 0.009		0.001 0.004	
INSMBHC	0.005 0.006		0.007 0.007		0.002 0.004	
OBNKHC	0.032*** 0.007		0.022*** 0.009		0.022*** 0.006	
OBHCURB	0.001 0.004		0.002 0.004		0.000 0.003	
LOWBRNCH	-0.001 0.004		0.003 0.005		0.002 0.004	
MODBRNCH	0.024*** 0.009		0.025** 0.011		0.017* 0.007	
HIBRANCH	0.022 0.014		0.038** 0.018		0.015 0.011	
BRNCHNUM x 10^2	0.038*** .009	0.01	0.047*** .108	0.02	0.023*** .006	0.02
PDOUT	-0.035 0.028	-0.03	-0.039 0.037	-0.01	-0.015 0.021	-0.03
URBAN	-0.187*** 0.055		-0.221*** .006		-0.138*** 0.045	
BANKAGE x 10^2	0.016*** .006	0.16	0.009 .007	0.13	0.008 .005	0.14
OCCEXAM	-0.002 0.010		-0.010 0.011		-0.006 0.009	
STATEXAM	-0.008 0.010		-0.014 0.011		-0.009 0.009	

***Significant at the 1% level;**5% level; *10% level.Elasticity (ε) is calculated for the continuous variables only.

[15]Because this variable has been interacted with URBAN, the coefficient estimate represents rural banks. This also applies to OBNKHC.

[16]This variable is the interaction of LNTA and urban. The reported coefficient results are urban banks. It is the sum of the coefficients on LNTA and LNTAURB. LNTAURB errors have been adjusted to equal (Variance $_{LNTA}$ + Variance $_{LNTAURB}$ − 2*Covariance)$^{1/2}$ This also applies to OBNKHC and OBHCURB.

Table A1: Alternative Specification, Small Business Lending

N=996,994	LNSBL N=994	LBL/SBL N=996	SCRE/SCI N=994
VAR. NAME	COEFF. EST. *T STAT* (OLS)	COEFF. EST. *T STAT*-Adj for Robust Errors	COEFF. EST. *T STAT* (OLS)
INTERCEPT	-2.759 -5.899	-1.944*** -3.583	-1.655 -1.188
LNTA[17]	1.044*** 23.997	0.235*** 4.144	0.288** 2.224
LNTAURB	0.850*** 23.395	0.537*** 6.787	-0.026 -0.240
HHI	0.022 0.146	0.032 0.283	-0.918** -2.049
OSHC	-0.264** -2.097	0.574 1.390	-0.332 -.891
INSMBHC	0.027 0.394	0.025 0.143	-0.063 -0.202
OBNKHC	0.114** 2.355	-0.080* -1.856	-0.298** -2.084
LOBRNCH	0.148*** 2.639	-0.220*** -2.569	-0.112 -.677
MODBRNCH	0.264** 2.336	-0.332** -2.138	-0.594* -1.773
HIBRNCH	0.035 0.170	-0.129 -.370	-0.891 -1.468
BRNCHNUM	-0.009*** -3.957	0.060*** 5.099	-0.002 -0.352
PDOUT	0.132 0.414	-0.223 -.549	1.924** 2.044
URBAN	2.307*** 4.022	-3.002*** -3.158	3.183* 1.863
BANKAGE	-0.005*** -8.241	-0.002** -1.939	-0.001 -0.316
OCCEXAM	0.020 0.194	-0.140 -.655	0.057 0.190
STATEXAM	-0.070 -0.688	-0.188 -.900	0.281 0.938

***Significant at the 1% level; **Significant at the 5% level; *Significant at the 10% level
OLS is used where no heteroscedasticity is found in the regression errors.

[17]Because this variable has been interacted with URBAN in the LNTAURB variable, the coefficient estimate represents rural banks, whereas LNTAURB represents urban banks. LNTAURB errors have been adjusted to equal (Variance $_{LNTA}$ + Variance $_{LNTAURB}$ +,- 2*Covariance)$^{1/2}$

Table A2: Alternative Specification, Small Farm Lending

N=879,791	LNSFL N=879	LFL/SFL N=879	SFRE/SFPR N=791
VAR. NAME	COEFF. EST. *T STAT* (Adjusted for Robust Errors)	COEFF. EST. *T STAT* (OLS)	COEFF. EST. *T STAT* (OLS)
INTERCEPT	0.706 0.762	-5.968 -.818	0.888 .287
LNTA[18]	0.537*** 6.344	0.481 .708	0.160 .555
LNTAURB	0.213** 2.234	3.969*** 6.399	0.764** 2.668
HHI	0.418* 1.699	1.648 .699	-0.896 -0.902
OSHC	0.008 0.032	-3.393 -1.609	-0.135 -0.136
INSMBHC	-0.055 -0.327	-0.139 -0.124	-0.217 -.442
OBNKHC	0.408*** 3.479	-0.089 -0.088	0.101 0.236
OBNKHCURB	0.182 1.044	1.908* 1.665	-0.132 -.247
LOBRNCH	-0.209 -1.503	0.522 0.551	-0.233 0.550
MODBRNCH	0.406* 1.683	-1.779 -.968	-0.590 -.742
HIBRNCH	0.289 0.620	-4.581 -1.319	-1.074 -.728
BRNCHNUM	0.005 0.777	-0.052 -1.500	-0.028* -1.898
PDOUT	-0.232 -0.348	.502 .097	.139 0.063
URBAN	2.304* 1.753	-36.598*** -3.944	-5.933 -1.456
BANKAGE	0.013*** 8.294	0.013 1.191	-0.011** -2.279
OCCEXAM	0.017 0.059	0.571 0.335	-0.817 -1.074
STATEXAM	0.047 0.162	-0.092 -0.054	-0.456 -0.601

***Significant at the 1% level; **Significant at the 5% level; *Significant at the 10% level
OLS is used where no heteroscedasticity is found in the regression errors.

[18]Because this variable has been interacted with URBAN in the LNTAURB variable, the coefficient estimate represents rural banks, whereas LNTAURB represents urban banks. LNTAURB errors have been adjusted to equal (Variance $_{LNTA}$ + Variance $_{LNTAURB}$ +,- 2*Covariance)$^{1/2}$ This also applies to ONBKHC and OBNKHCURB.