The Quantity and Character of Out-of-Market Small Business Lending*

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Most small business lending from banks originates with institutions that have a local branch, but "out-of-market" lending does not. Supporting the view that proximity is conducive to lending, I find that only about 10 percent of small business lending is from banks with no branch in the local market. About half of this appears to be from banks with a branch in the same state, further supporting the role of proximity, while, at the same time, supporting the current regulatory practice of considering out-of-market loans when assessing local competitive conditions. I also find that out-of-market and in-market loans are of similar average size and are about equally likely to be secured by commercial real estate.

1. Introduction

Small businesses play an important role in the U.S. economy, accounting for roughly half of all private employment and more than half of output.[1] These small businesses need financing in order to operate and grow, and bank lending is an important source of this financing.[2] A key issue is whether geographic proximity of banks to small business borrowers is important for the establishment of credit relationships. In other words, how significant is a bank's physical presence in a local market to the provision of credit to small businesses in that market?

This paper discusses the quantity and type of small business loans in an area that are made by banks that do not have a physical presence in that area and the implications of those characteristics for defining small business loan markets. In addition to assessing the role of out-of-market lenders, the analysis explores the appropriate geographic scope and measurement of the level of competition among banks in providing small business financing. The latter is important to public policy since competition in banking can affect the quantity and price of banking services, including credit services to small businesses.

The paper is structured as follows. Section 2 discusses related literature. Section 3 provides background related to small business lending markets. Section 4 discusses the data used in this analysis, and Section 5 outlines the results of the analysis. Section 6 concludes.

2. Related Literature

Broadly speaking, this paper fits into the existing literature regarding the relationship between bank small business lend-

*I would like to thank Jin Oh and Armando Franco for valuable research assistance. Opinions expressed do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco or the Board of Governors of the Federal Reserve System.

1. According to the U.S. Small Business Administration, nonfarm businesses with fewer than 500 employees employ about half of all nonfarm private-sector workers, create more than half of nonfarm private-sector gross domestic product, and have generated 60 to 80 percent of net new nonfarm jobs annually over the last decade. See http://app1.sba.gov/faqs/faqIndexAll.cfm?areaid=24 for related data.

2. About 46 percent of the nonfarm businesses with fewer than 500 employees that participated in The Federal Reserve Board's 2003 Survey of Small Business Finances stated that they had a credit line, loan, or capital lease from a commercial bank, savings and loan, or savings bank in 2003. In comparison, about 22 percent said they had used a finance or factoring company for at least one of these types of credit, 6 percent had used family or individuals, 4 percent had used a leasing company, 4 percent had used a credit union, and 2 percent had used an insurance or mortgage company in 2003. None of these figures include financing through credit card borrowing or borrowing from the owner of the firm, even if, for example, a commercial bank issued the credit card. About 47 percent of the small businesses surveyed had used a personal credit card in 2003, and about 48 percent had used a business credit card. Of the small businesses that could have received loans from owners (those organized as corporations or partnerships), about 30 percent had obtained such a loan. Finally, about 60 percent of the small businesses used trade credit in 2003. (Mach and Wolken 2006)

ing and the proximity of lenders and business borrowers. This literature has generated several widely accepted findings. First, historically there has been a strong negative relationship between small business lending and distance. For example, examining the distance between the center of the census tract in which a borrower is located and the nearest office of the lender, Brevoort and Hannan (2006) find that distance operates as a statistically and economically significant deterrent to lending within local markets. In addition, Wolken and Rohde (2002) show that, in 1998, the median distance between a small business's headquarters and the financial institution making the loan was only ten miles.

Second, both the mean and the median distance between small business borrowers and their lenders have been increasing. For example, using data on small business borrower-lender relationships that existed in 1993, Petersen and Rajan (2002) find that the median borrower-lender distance increased from two miles for relationships that began in the 1970s to five miles for relationships that began in the 1990s.

Third, banks began adopting a new lending technology, small business credit scoring, in the early 1990s. In credit scoring, banks assess borrowers' creditworthiness using computer-generated models based mainly on information about the owner's credit quality from consumer credit bureaus and information about the small business's credit quality from commercial credit bureaus. Scoring models in essence automate the credit underwriting process. Credit scoring has the potential to reduce the cost of small business lending, at least for certain types of small business loans, and therefore has the potential to increase the distance over which loans are made. Small business credit scoring likely entails a relatively sizable fixed cost, which would give large banks a comparative advantage over small banks in using this technology.

Some papers have further explored the relationship between small business credit scoring and small business lending. Petersen and Rajan (2002) attribute at least part of the increase in median borrower-lender distance to the adoption of credit scoring by some banks. Frame, Srinivasan, and Woosley (2001) find a positive relationship between credit scoring and small business lending for a sample of large banks. Frame, Padhi, and Woosley (2004) find that banks that use credit scoring have a higher ratio of loans outside their local markets to total loans than do banks that do not use credit scoring. DeYoung, Glennon, and Nigro (2006) find that credit scoring is a relatively more efficient lending technology for more distant borrowers and lenders.

Two other papers also discuss the quantity of out-of-market small business loans. Krainer and Beauchamp (1999) find that, in 1997, for California, most of the small business loans in terms of number were from outside the local market. In small markets, most of the out-of-market lenders were either large banks that were relatively near the market or national credit card banks. For the San Francisco Bay Area, Laderman (2006) finds that, in 2005, after excluding credit card banks, the out-of-market share of small business lending by dollar volume was very minimal.

3. Background

For urban areas, the Federal Reserve currently defines small business lending markets to be about the size of metropolitan statistical areas (MSAs).[3] The Federal Reserve includes in these markets the small business loans of all banks that make small business loans in the MSA. Many of the banks that make loans in the MSA also have physical branches within the MSA, but some do not. In this paper, I refer to the banks that make loans in the market but do not have branches in the market as "out-of-market" banks and their loans in the market as "out-of-market" loans. In contrast, "in-market" loans are made by banks with a physical presence in the MSA.

The very existence of out-of-market small business loans raises the natural question of whether the size of small business lending markets is too small and whether, despite previous evidence suggesting that small business lending markets are very local, the geographic boundaries of these market definitions ought to be expanded, or whether a geographically based market definition even makes sense at all. These questions are especially compelling given the increase over time in the distance between borrowers and lenders.

I begin to address these issues by examining the share of small business lending within MSAs that is coming from out-of-market lenders. Intuitively, if out-of-market shares for MSAs overall are substantial, then MSA-based small business loan markets may be too small. But, even if out-of-market shares are small, if a great majority of those out-of-market loans are from lenders with a physical presence near the MSA, then MSA-based small business loan markets still may be too small.

I proxy the degree to which out-of-market small business loans are coming from near the market with the difference between the out-of-market share for MSA-based markets and the out-of-market share for state-based "markets."[4] I find that the out-of-market shares for both types of markets are quite small and that out-of-market lending from outside the

3. For simplicity, throughout this paper, I refer to "MSA markets" or "MSA-based markets," even though actual Federal Reserve urban banking markets differ somewhat from MSAs. For a discussion of the differences between the two and a conclusion that, for research, MSAs are reasonable approximations of urban Federal Reserve banking markets, see Laderman and Pilloff (2007).

4. I refer to state-based "markets," rather than, say, "areas," for simplicity. However, as explained above, actual Federal Reserve banking markets are comparable to MSAs, not states.

MSA but within the state accounts for about half of the out-of-market lending for MSA-based markets.

The relatively greater role of within-state banks compared to out-of-state banks in providing out-of-market small business loans is consistent with other evidence indicating that distance (the proximity of borrower and lender) affects the likelihood of a credit relationship between a bank and a business.[5] And while in-state banks' share of out-of-market lending is not large enough to compel a shift away from markets based on MSAs to markets based on a larger geographic area, it is large enough to suggest that the geographic borders of small business lending markets are not finely demarcated and therefore that it makes sense to consider out-of-market lenders in determining market competition. And it makes a difference: competition as measured by market competition excluding out-of-market lenders is notably weaker than competition including out-of-market lenders.

Who are the out-of-market small business lenders, and what are some characteristics of the lenders and their loans? I find that nearly 1,600 banks do some out-of-market lending. However, the dollar volume of out-of-market lending is quite concentrated in the biggest out-of-market lenders, while the number of out-of-market loans is even more so.

The calculation of small business loan concentration that includes both in-market and out-of-market loans assumes that out-of-market loans are good substitutes for in-market loans. Is this assumption warranted? While I do not provide an in-depth answer to this question, I do provide relative information to begin a comparison between out-of-market and in-market lending along a few basic dimensions: the average sizes of the loans, the sizes of the lenders, the lenders' small business loan-to-asset ratios, the size distribution of the loans, and the share of small business loans that are secured by commercial real estate.

Except for lender size, the differences between out-of-market and in-market characteristics, although almost always statistically significant, are relatively minor. For example, out-of-market loans tend to be a bit smaller than in-market loans, but both average less than $100,000. Out-of-market lenders as a whole tend to be markedly larger than in-market lenders. Consistent with this size difference and prior findings in the literature regarding the relative propensity of large banks and small banks to make small business loans, I find that the ratio of small business loans to assets is smaller for out-of-market lenders than for in-market lenders. However, the difference is minimal, and the ratio for out-of-market lenders is larger than for large banks in general.

I also compare the shares of the number of out-of-market business loans under $1 million that are under $100,000, between $100,000 and $250,000, and between $250,000 and $1 million, to those for in-market business loans. Akhavein, Frame, and White (2005) report survey data indicating that small business credit scoring is most likely to be used for loans under $100,000, less likely to be used for loans between $100,000 and $250,000, and least likely to be used for loans between $250,000 and $1 million. I find that the proportion of out-of-market small business loans that is under $100,000 is modestly higher than the proportion of in-market small business loans that is under $100,000. But the great majority of both in-market and out-of-market small business loans is under $100,000; this remains true whether or not I count the out-of-market loans of the banks that dominated out-of-market lending in the sample year—Wells Fargo Bank Northwest and Wells Fargo Bank.

I also compare the shares of loans of out-of-market lenders that are secured by commercial real estate to the shares of loans of in-market lenders that are secured by commercial real estate. I find a statistically significant but minor difference between out-of-market lenders' and in-market lenders' shares of small business loans that are backed by commercial real estate.

4. Data

I use data on the flow of small business lending in 2004, gathered from reports that roughly 5,000 "banks" (commercial banks, savings banks, and savings and loans) submitted in compliance with the Community Reinvestment Act (CRA). I use CRA reports of loans under $1 million to businesses with revenues under $1 million, thereby focusing on small loans to small businesses.[6]

I define out-of-market small business lending as cases when a bank lends to a borrower in either a state or an MSA, as the case may be, where the bank does not have a physical branch. Banks report loan totals by the census tract of the borrower's headquarters or by the census tract where the majority of the funds are being used. I aggregate from the census tract level to the MSA or state level. Commercial and

5. For any given state, the pool of potential out-of-market lenders from outside the state is far larger than the pool of potential out-of-market lenders from within the state.

6. During 2004, only those banks with assets of at least $250 million and banks that were in a holding company with at least $1 billion in assets were required to complete CRA compliance reports. (The cutoff was changed effective September 2005 to $1 billion in assets, with no holding company criterion.) Therefore, following previous research, for banks that do not meet the CRA reporting requirement criteria, I have estimated small business lending by MSA by using Call Report and Thrift Financial Report data. Specifically, I have allocated total small business lending as reported on the Call Report or Thrift Financial Report to different MSAs in proportion to the bank's share of the bank's total deposits in that MSA.

industrial loans (loans for a business purpose that are not secured by real estate), commercial real estate loans (loans that are secured by commercial real estate), and loans through a business credit card all are considered business loans for CRA reporting purposes.[7] Consistent with prior research, I exclude the loans of credit card banks from my sample.

5. Results

5.1. In- and Out-of-Market Loans and Loan Sizes

Table 1 presents some introductory sample statistics for 362 MSAs and the 50 states plus the District of Columbia. The number of small businesses demarcates the state and MSA size categories. It is apparent even from these aggregations that out-of-market lending accounts for a relatively small share of total small business lending for states and MSAs, as well as for size subcategories within those groups.

However, the quantity and distribution of out-of-market lending still may have a meaningful effect on competition in small business lending. I will discuss this further below. In addition to the quantity and distribution of out-of-market lending, one might want to consider whether out-of-market loans are similar enough to in-market loans. One aspect of this comparison is the size of the loan. Table 1 indicates that the mean of the average loan size, where the average loan size is the ratio of the total dollar volume of loans to the total number of loans for each of the geographic areas within the indicated category, is almost always statistically significantly smaller for out-of-market loans than for the comparable group of in-market loans.[8] The one exception is for small MSAs. However, all average loan size means are less than $100,000 and fall within a relatively narrow range of about $60,000 to about $90,000.

5.2. In-Market Shares

Table 2 shows further that, for MSAs, the great majority of small business loans, whether measured by dollar volume or number of loans, consists of in-market loans. Although a considerable number of lenders are from outside of the market, they appear to be making relatively few loans, and those loans total relatively few dollars. Moreover, within the MSA groups, there is no clear pattern of lower in-market shares for smaller areas. The relatively high in-market shares for MSAs, by themselves, though not conclusive, are consistent with the findings of Brevoort and Hannan (2006) that proximity is conducive to small business lending. The in-market shares also are consistent with the view that a geographically based

Table 1
Small Business Loans, 2004: Sample Means

	In-market			
	$ volume (millions)	# loans	# lenders	Avg. size (thousands)
States (51)	3,103	45,542	128	85***
Large (18)	5,635	65,495	216	92***
Medium (17)	2,847	60,863	125	79***
Small (16)	525	6,817	32	83***
MSAs (362)	338	5,337	26	84***
Large (124)	747	12,616	46	87***
Medium (119)	170	2,074	18	85***
Small (119)	81	1,015	12	81
	Out-of-market			
States (51)	144	2,543	100	70
Large (18)	290	5,249	165	79
Medium (17)	98	1,628	92	71
Small (16)	27	472	36	58
MSAs (362)	28	438	35	73
Large (124)	61	996	62	68
Medium (119)	14	194	25	74
Small (119)	8	101	17	77

Notes: The null hypothesis is that the in-market sample is from a population with the same distribution as the out-of-market sample; *** indicates rejection at a 1-percent level, based on the Wilcoxon rank-sum test. State and MSA size categories are determined by the number of small businesses in each.

Table 2
Average Percent Share of Small Business Lending Provided by In-Market Lenders, 2004

	Average percent share according to		
	$ volume	# loans	# lenders
States	94.8	92.7	51.7
Large	94.3	92.1	55.0
Medium	96.0	94.7	53.7
Small	94.0	91.4	45.8
MSAs	90.4	89.2	41.0
Large	90.7	88.3	39.2
Medium	90.7	89.9	41.4
Small	89.7	89.4	42.4

Note: State and MSA size categories are determined by the number of small businesses in each.

7. Banks report business credit card lines of credit, whether drawn on or not, on the CRA reporting form. In contrast, personal credit card lines of credit, even if used for business purposes (for example, lines through a small business owner's personal credit card), are not reported on the CRA reporting form.

8. The nonparametric statistical tests I conduct in this paper are the Wilcoxon rank-sum test, which tests the hypothesis that two samples are drawn from populations with identical distributions, and the median test, which tests whether two samples are drawn from populations with the same median.

market definition is warranted and that MSAs are an appropriate upper bound on the geographic size of small business lending markets.

Moreover, it appears that roughly half of the dollar volume of out-of-MSA lending may come from within the same state as the MSA. (About 10 percent of lending is from outside the MSA, and about 5 percent is from outside the state, leaving about 5 percent from inside the state.) If lending from within the same state is an important component of out-of-MSA lending, this also would be consistent with the role of proximity in lending. At the same time, the sizable contribution of in-state banks to out-of-market lending suggests that, although MSAs likely are an appropriate, workable upper bound on the geographic size of small business lending markets, the geographic borders of these markets actually are not very finely drawn. On this basis alone, it makes sense to consider out-of-market lenders when measuring small business lending competition in local markets.

5.3. Market Concentration

Below, I present further evidence regarding whether out-of-market small business loans are similar to in-market loans. In this section, I simply treat them as the same for the purpose of measuring their effect on competition.

I measure competition with the Hirschman-Herfindahl Index (HHI) of market concentration. In the classic structure-conduct-performance paradigm of industrial organization theory, when market shares are more concentrated at the top, competition is weaker, and the HHI is a convenient and widely used measure of concentration. The HHI, which is the sum of the squares of the percent market shares of all the firms in a market, increases with the variance of market shares, holding constant the number of firms.[9]

However, while an increase in the number of firms, holding the variance constant, often decreases the HHI, this is not always the case. In fact, whether the inclusion of out-of-market lenders in the calculation of the HHI increases or decreases it depends on several factors, including not only the number of additional lenders but also the change in the variance of market shares due to the inclusion of out-of-market lenders, the change in the number of lenders *times* the variance, the variance of market shares including only in-market lenders, and the number of in-market lenders.[10]

Table 3
MSA Market Concentrations Measured by Hirschman-Herfindahl Index, 2004

	Mean	Median	Standard deviation
Excluding out-of-market loans	2,282***	2,023***	1,163
Including out-of-market loans	1,924	1,695	927

Note: The null hypothesis is that the in-market-only sample is from a population with the same distribution or median as the sample including out-of-market loans; *** indicates rejection at a 1-percent level, based on the Wilcoxon rank-sum or median test.

To investigate the effect of the current method of including out-of-market loans on concentration, I compare the HHI for MSA-based markets without out-of-market loans to that for MSA-based markets with out-of-market loans in Table 3. Even though out-of-market lending constitutes a relatively small proportion of total lending, it does have a statistically significant and meaningful effect on the small business lending HHI for MSAs, decreasing it from 2,282 to 1,924 at the mean. At the median, the HHI including only in-market loans is in the highly concentrated range, whereas the HHI including both in- and out-of-market loans indicates moderate concentration. The apparent effect of out-of-market lending on competition in MSA-based small business lending markets supports the current practice of including out-of-market loans in the calculation of market shares, as opposed to excluding them.

5.4. Out-of-Market Lenders and Out-of-Market Loans

I argue above that the importance of in-state lenders for out-of-market lending supports giving some consideration to out-of-market lending when measuring market concentration. In this section, I present further evidence on the characteristics of out-of-market lenders and loans. This evidence also is relevant to the issue of whether out-of-market loans are good substitutes for in-market loans.

Table 4 shows a considerable amount of concentration in out-of-market small business lending. With nearly 1,600 out-of-market lenders, the top 50 account for almost 60 percent

9. Both the Federal Reserve and the Department of Justice (DOJ) use the HHI as a measure of market concentration when assessing the potential effects of a proposed bank merger on competition, and both use the DOJ's market concentration level definitions and its Horizontal Merger Guidelines. The DOJ defines a market with an HHI below 1,000 as "unconcentrated," one with an HHI between 1,000 and 1,800 as "moderately concentrated," and one with an HHI of at least 1,800 as "highly concentrated." A merger that would increase the HHI by more than 200 to a highly concentrated level would violate the Merger Guidelines. Typically, the Federal Reserve evaluates the potential effect of a proposed transaction on competition in small business lending whenever the transaction violates the Merger Guidelines as calculated on the basis of deposits. The DOJ more routinely performs both types of evaluations.

10. See Laderman (1995) for a more detailed discussion of the breakdown of the HHI.

Table 4
Percent Shares of National Small Business Loan Volume Held by Top Out-of-Market Lenders, 2004

	by $ volume	by number
Top 5	38.1	75.1
Top 10	42.8	78.1
Top 20	49.2	80.9
Top 50	59.4	84.3

Note: The total number of out-of-market lenders is 1,578.

of out-of-market loans by dollar volume and almost 85 percent of out-of-market loans by number.

Table 5 and Table 6 list the top ten out-of-market lenders by dollar volume and by number of loans, respectively. The top three alone account for more than one-third of the dollar volume and more than two-thirds of the total number of loans. Indeed, roughly 60 percent of lenders outside of the top ten by number of loans made ten or fewer out-of-market loans in 2004.

Several of the names in Table 5 and Table 6 are those of well-known large banks.[11] Indeed, Table 7 confirms that banks that do any out-of-market lending are, as a group, considerably larger than banks that do any in-market lending.[12] This is true both at the mean and at the median. The distinction is even stronger between banks that do any out-of-market lending and banks that do strictly in-market lending.

The small business loan-to-asset ratios in the third column of Table 7 suggest that out-of-market lenders also tend to be somewhat less intensely engaged in small business lending than in-market lenders and in-market only lenders. However, although all the differences are statistically significant, they are relatively small.[13] Moreover, the ratios for out-of-market

Table 5
Top Out-of-Market Lenders by Dollar Volume, 2004

	$ millions	Cum. share of total (%)	# loans	Avg. loan ($ thousands)
Wells Fargo Bank Northwest, N.A.	1,719.7	16.9	56,466	30
Wells Fargo Bank, N.A.	1,272.3	29.4	48,315	26
JPMorgan Chase Bank, N.A.	599.8	35.3	6,243	96
Bank of the West	155.5	36.8	1,078	144
Fleet National Bank	127.8	38.1	6,296	20
Amsouth Bank	114.3	39.2	1,039	110
Umpqua Bank	104.5	40.2	459	228
Comerica Bank	94.3	41.1	278	339
Wachovia Bank, N.A.	89.2	42.0	227	393
Branch Banking & Trust Co.	81.9	42.8	416	197
Remainder (1,568)	5,830.3	57.2	37,664	155

Table 6
Top Out-of-Market Lenders by Number of Loans, 2004

	# loans	Cum. share of total (%)	$ millions	Avg. loan ($ thousands)
Wells Fargo Bank Northwest, N.A.	56,466	35.6	1,719.7	30
Wells Fargo Bank, N.A.	48,315	66.1	1,272.3	26
Fleet National Bank	6,296	70.1	127.8	20
JPMorgan Chase Bank, N.A.	6,243	74.0	599.8	96
First Tennessee Bank N.A., Memphis	1,704	75.1	77.2	45
Washington Mutual Bk.	1,177	75.8	18.7	16
Bank of the West	1,078	76.5	155.6	144
Amsouth Bank	1,039	77.2	114.3	110
Netbank	833	77.7	65.1	78
Farm Bureau Bk., F.S.B.	626	78.1	11.9	19
Remainder (1,568)	34,704	21.9	6,027.2	174

lenders are larger than for big banks in general.[14] Relative to their peers, out-of-market small business lenders do emphasize small business lending.

Table 8 shows that out-of-market loans have a statistically significantly higher probability of being under $100,000 and a lower probability of being between $100,000 and $250,000 or between $250,000 and $1 million than in-market loans. (Means and medians are across MSAs.) The slightly greater

11. Some of the banks in Table 5 or Table 6, for example Branch Banking & Trust and First Tennessee Bank, were among the top credit card lenders in the country in 2004. However, based on available data, these banks' credit card lending did not constitute a large enough share of their total lending to justify a conclusion that the bulk of their small business lending was through credit cards.

12. Of course, many banks do some in-market lending and some out-of-market lending and are therefore included in both groups.

13. The third column of Table 7 shows the ratio of the total dollar volume outstanding of commercial and industrial and commercial real estate loans under $1 million to total assets as of June 2004. Although the in- and out-of-market designations used for all tables rely on CRA information, the actual data in Tables 7 and 10 are from commercial banks' Reports of Condition and Income (Call Reports) and savings banks' and savings and loans' Thrift Financial Reports. In addition, the loans under $1 million in Tables 7 and 10 may be to businesses of any size. In contrast, as stated above, the small business loan data presented up to this point, from the CRA reports, have been for loans under $1 million to businesses with revenues under $1 million.

14. As of June 2004, the mean small business loan-to-asset ratio for all banks with over $1 billion in assets was 0.094.

TABLE 7
LENDER SIZES AND LOANS UNDER $1 MILLION, 2004

	Assets ($ millions)	Asset share of loans <$1 mil.
Means		
Out-of-market lenders (1,576)	4,472.2	.162
In-market lenders (5,380)	1,516.7***	.185***
In-market-only lenders (3,986)	295.3***	.193***
Medians		
Out-of-market lenders (1,576)	515.9	.152
In-market lenders (5,380)	158.9***	.170***
In-market-only lenders (3,986)	111.6***	.182***

Note: The null hypothesis is that the in-market-only sample is from a population with the same distribution or median as the sample including out-of-market loans; *** indicates rejection at a 1-percent level, based on the Wilcoxon rank-sum or median test.

TABLE 8
SHARE OF NUMBER OF BUSINESS LOANS UNDER $1 MILLION, 2004

	< $100,000	$100,000 to $250,000	$250,000 to $1 million
Means			
Out-of-market loans	.845	.072	.083
In-market loans	.731***	.145***	.124***
Medians			
Out-of-market loans	.857	.063	.078
In-market loans	.740***	.141***	.119***

Note: The null hypothesis is that the in-market-only sample is from a population with the same distribution or median as the sample including out-of-market loans; *** indicates rejection at a 1-percent level, based on the Wilcoxon rank-sum or median test.

tendency of out-of-market loans to be under $100,000 than in-market loans to be under $100,000 is consistent with the evidence on differences in average loan sizes in Table 1.[15] To the degree that credit-scored loans are likely to be under $100,000, it also is consistent with the relationship seen in Table 7 between large banks and out-of-market lending and the literature's links between large banks, lending at a distance, and credit scoring.

However, as noted, the differences are slight, and both in-market and out-of-market loans fall heavily into the under $100,000 category. But, given the dominance of Wells Fargo Bank Northwest and Wells Fargo Bank in out-of-market lending, it may be important to investigate how these two banks influence this finding. Note that these two banks'

15. The data in Tables 8 and 9 are from the CRA report and therefore pertain to the flow of loans in 2004, but they include loans under $1 million to businesses of any size.

TABLE 9
LOAN SIZE DISTRIBUTION WITHOUT OUT-OF-MARKET LOANS FROM TOP TWO PROVIDERS, 2004

	Share of number of small business loans		
	< $100,000	$100,000 to $250,000	$250,000 to $1 million
Means			
Out-of-market loans	.736	.117	.147
In-market loans	.731	.145***	.124***
Medians			
Out-of-market loans	.743	.113	.143
In-market loans	.740	.141***	.119***

Note: The null hypothesis is that the in-market-only sample is from a population with the same distribution or median as the sample including out-of-market loans; *** indicates rejection at a 1-percent level, based on the Wilcoxon rank-sum or median test.

average loan sizes are among the smallest for the top out-of-market lenders (Table 5 and Table 6). Indeed, when I do exclude the Wells Fargo banks' out-of-market loans, the proportion of in-market loans that are under $100,000 is virtually identical to the proportion of out-of-market loans that are under $100,000 (Table 9).[16]

In-market lending also appears to be about as likely to be secured by commercial real estate as out-of-market lending (Table 10). Although, based on Call Report and Thrift Financial Report data, out-of-market lenders have a slightly higher commercial real estate loan-to-asset ratio than in-market lenders, out-of-market lenders have a slightly lower share of loans under $1 million that are backed by commercial real estate than do in-market lenders. But, the difference is quite small.

6. Conclusion

The quantity and character of out-of-market small business lending have important policy implications. Too much lending from far outside the market might call into question the

16. Regarding possible differences between the Wells Fargo banks' out-of-market lending and in-market lending, I note anecdotal evidence that Wells Fargo was one of the very first banks to use small business credit scoring and continues to use it extensively. However, credit scoring may mark a distinction without a difference. As argued in Berger and Udell (2006), credit scoring, asset-based lending, factoring, fixed-asset lending (such as lending secured by commercial real estate, discussed below), and leasing all are "transactions technologies" (lending based primarily on "hard" quantitative data) that enable banks to lend to businesses with little or no financial statement data ("opaque" businesses). Therefore, credit scoring may be an effective substitute for "relationship" lending, which is based primarily on "soft" qualitative information and usually directed toward opaque firms, as well as for the other transactions technologies named.

TABLE 10
LOANS SECURED BY COMMERCIAL REAL ESTATE (CRE), 2004

	All CRE loans, share of assets (by $ volume)	CRE loans <$1 mil., share of all loans <$1 mil. (by number)
Means		
Out-of-market lenders	.190	.331
In-market lenders	.165***	.356***
In-market-only lenders	.155***	.366***
Medians		
Out-of-market lenders	.173	.315
In-market lenders	.150***	.326*
In-market-only lenders	.133***	.332***

Note: The null hypothesis is that the in-market-only sample is from a population with the same distribution or median as the sample including out-of-market loans; *** (*) indicates rejection at a 1-percent (10-percent) level, based on the Wilcoxon rank-sum or median test.

geographically focused basis of the Federal Reserve's small business lending markets. Too much lending from nearby the market might argue for the expansion of the geographic boundaries of small business lending markets beyond the MSA. And no matter what the quantity of out-of-market lending, its distribution across banks will affect its contribution to competition, as measured by market concentration. In addition, the characteristics of out-of-market loans compared with in-market loans influence how well out-of-market loans might serve as substitutes for in-market loans.

I find that only about 10 percent of the dollar volume of small business loans is held by banks with no physical presence in the local, MSA-based banking market. This relatively small out-of-market share supports the use of a geographically based small business lending market, with the MSA as a reasonable upper bound on its size. However, given that about half of the dollar volume of out-of-market loans seems to come from banks with a physical presence in the same state as the MSA, that upper bound does appear slightly fuzzy. No matter what other data may say about the characteristics of out-of-market loans versus in-market loans, this point alone argues for some consideration being given to out-of-market loans. When these loans are included, as is current practice, market concentration tends to be appreciably lower than when these loans are excluded.

In any case, along most of the lines examined, out-of-market lenders and loans do appear to be quite similar to in-market lenders and loans, further suggesting that out-of-market lending is a good substitute for in-market lending. As a group, out-of-market lenders are considerably larger than in-market lenders, but, on every other count, differences are relatively modest. Out-of-market loans tend to be only a little smaller and a little more likely to be under $100,000 than in-market loans and only slightly less likely to be secured by commercial real estate, while out-of-market lenders are only a little less intensely engaged in small business lending than in-market lenders.

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