The Impact of Geographic Deregulation on Small Banks

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New, long-awaited federal legislation makes it permissible for banks to branch across state lines (effective June 1, 1997). Will nationwide interstate branching lead to the decline of small banks and ultimately reduce the availability of credit to small businesses and local communities? Recent trends affecting small banks suggest such a possibility. The number of banking organizations smaller than $1 billion in assets has been declining, a contraction that has been particularly pronounced in some states. These trends are worrisome because banking institutions in this size category originate a disproportionately large share of small business credit.

Legislative moves to grant interstate branching powers to banks have prompted such concerns because geographic deregulation has been a major impetus to industry consolidation. During the 1980s, many states relaxed in-state branching restrictions, and almost all states authorized out-of-state holding companies to acquire in-state bank subsidiaries, prompting numerous mergers and acquisitions. Prohibitions against acquisition or establishment of in-state branches by out-of-state banks were retained, however. Those favoring such restraints feared that their removal would prompt further contraction of the small bank sector and that this would harm small businesses and local communities.

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This article examines consolidation in the banking industry as it has affected small banks. Trends in the asset shares of small banking companies are investigated on a state-by-state basis, and the relationship of these trends to geographic deregulation is discussed. From these findings, inferences are drawn regarding the future of small banks when interstate branching becomes a reality.

A principal finding is that where in-state branching restrictions have been relaxed, the small bank sector generally has contracted. Relaxation of interstate restrictions thus far, however, has not had a significant impact on the small bank sector. These findings suggest that loosening interstate branching restrictions will not lead to further substantial contraction of the small bank sector. Removal of in-state branching restrictions had such an impact on small banks only because such restrictions had precluded many of these banks from achieving efficient size. Since most banks are now pretty close to efficient size or can choose among many potential merger partners or acquirers to achieve scale efficiencies, removal of interstate branching restrictions is unlikely to have a major impact in this regard. Rather, interstate branching activity will probably be driven by motives other than realizing scale efficiencies. If so, then allowing banks to branch interstate should not substantially affect the status of small banks.

CONCERNS REGARDING COMMUNITY BANKS AND INTERSTATE BRANCHING

Historically, the federal government and the states have regulated geographic expansion by banking organizations in the United States.[1] As recently as 1985, 22 states imposed substantial limitations on in-state bank branching. Table 1 lists these states and the nature of their branching restrictions (moderate or severe) as of January 1985. Seventeen of these states had repealed or significantly eased their branching restrictions by January 1991.[2] Table 1 also indicates any such changes in state branching laws during this period.

Since 1956, the Douglas Amendment to the Bank Holding Company Act has prohibited the interstate acquisition of any bank by a bank holding company, except where authorized by the acquired bank's home state. Until the 1980s, states did not provide such authorization, so that the Douglas Amendment precluded the formation of multistate bank holding companies.[3] During the 1980s, however, most states adopted legislation opening their borders to entry by out-of-state bank holding companies.[4] Almost all of this legislative activity occurred during 1985 through 1989. By January 30, 1991, all but four states (Hawaii, Kansas, North Dakota, and Montana) had adopted laws allowing entry by an out-of-state holding company.[5] Thirty-three of these states authorized entry on a nationwide basis, with the stipulation (in most cases) that the entering bank's home state have a reciprocal law; 13

[1]My primary source of information on state laws governing in-state branching and interstate banking is Amel (1993).

[2]Since January 1991, Illinois and New Mexico have eliminated branching restrictions; Colorado has authorized consolidation of holding company subsidiaries; and there has been further relaxation of branching restrictions in Arkansas.

[3]The Bank Holding Company Act provided "grandfathered" rights to 19 multistate holding companies that predated its passage, allowing them to maintain their interstate status. Over time, the number of grandfathered multistate holding companies decreased to seven. See Savage (1993) for additional discussion.

[4]The first state to open its borders to entry by out-of-state holding companies was Maine in 1978, followed by New York and Alaska in 1982.

[5]Kansas, Montana, and North Dakota have since adopted interstate banking laws.

TABLE 1

State Branching Restrictions

1985 and 1991

State	Restrictions: January 1985[a]	Status: January 1991
Arkansas	moderate	relaxed[b]
Colorado	severe	no significant change
Illinois	severe	relaxed[b]
Indiana	moderate	eliminated[c]
Iowa	moderate	no significant change
Kansas	severe	eliminated[c]
Kentucky	moderate	eliminated[c]
Louisiana	moderate	eliminated[c]
Minnesota	severe	no significant change
Mississippi	moderate	eliminated[c]
Missouri	moderate	eliminated[c]
Montana	severe	relaxed[b]
Nebraska	severe	relaxed[b]
New Mexico	moderate	no significant change
North Dakota	severe	no significant change
Ohio	moderate	eliminated[c]
Oklahoma	severe	eliminated[c]
Tennessee	moderate	eliminated[c]
Texas	severe	eliminated[c]
West Virginia	moderate	eliminated[c]
Wisconsin	moderate	eliminated[c]
Wyoming	severe	eliminated[c]

[a]A state's branching restrictions are classified as severe if more than five branches or "full service facilities" are prohibited. Absent such severe numerical limitations, a state's branching restrictions are classified as moderate if branching is restricted to city or town limits or to within a county or county plus contiguous counties.

Twelve states not listed in Table 1 imposed milder restrictions on bank branching as of January 1985. These include Alabama, Connecticut, Florida, Georgia, Massachusetts, and Virginia, each of which authorized branching statewide by merger or acquisition but restricted de novo branching (the establishment of a new branch); Pennsylvania, which permitted branching within a county plus contiguous and bicontiguous counties; Michigan, which allowed branching by merger or acquisition within a 25-mile radius of a bank's home office (effectively permitting branching into contiguous and bicontiguous counties); New York and Oregon, which prohibited branching into any town with population less than 50,000 in which the principal office of another bank is located; New Hampshire, which prohibited branching into any town with population less than 2500 where another bank is located; and Hawaii, which imposed liberal numerical ceilings on branching within Honolulu.

[b]Branching restrictions are characterized as having been relaxed in Arkansas, where county-wide branching replaced branching within city or town limits; in Illinois, where numerical limits were increased significantly; in Montana, which instituted statewide branching by merger subject to a proviso that grandfathered out-of-state bank holding companies could merge their existing subsidiaries but could not otherwise establish branches; and in Nebraska, which instituted statewide branching by merger subject to a proviso that no bank could operate more than five branches within its home city.

[c]Branching limitations are characterized as having been eliminated if either full statewide branching or statewide branching by merger or acquisition was introduced.

states plus the District of Columbia authorized entry on a regional reciprocal basis. The majority of states permitted the acquisition of existing banks but prohibited the establishment of de novo bank subsidiaries by out-of-state holding companies.

The passage of state laws authorizing interstate expansion by bank holding companies did not affect federal prohibitions against branching by banks across state lines. The McFadden Act, a federal law dating from 1927, ruled out interstate branching by national banks (banks that are chartered by the federal government as opposed to a state government). The Federal Reserve Act applied this constraint to state-chartered banks that are members of the Federal Reserve System.[6] Thus, into the 1990s, interstate branching restriction remained an important legal constraint on geographic expansion by banking organizations.

In each of the past three years, proposals to permit nationwide interstate branching have been floated in the U.S. Congress. Although these proposals have been controversial, a bill authorizing nationwide interstate branching finally was passed by the Congress in September 1994 (see *The Nation's New Interstate Banking Law*). President Clinton signed this bill into law on September 29.

Opponents of interstate branching had argued that geographic deregulation leads to fewer and larger banks and that this has an adverse impact on small business borrowers and local communities; see, for instance, various testimony in U.S. House of Representatives (1991, 1993). In support of this view, they point to declining numbers of small banks nationwide and cite evidence that larger banking organizations may be less willing to lend to small businesses and local communities.[7] One study commonly cited in this regard is Deborah Markley's examination of the availability of credit to small businesses in rural New England, reprinted in U.S. House of Representatives (1993).

Indeed, the number of U.S. banking companies smaller than $1 billion in assets (measured in 1992 dollars), including both independent banks in this size category and bank holding companies with total assets under $1 billion, decreased from 10,316 to 8550 between December 1986 and December 1992, according to a recent study released by the U.S. General Accounting Office (GAO). This consolidation was primarily the result of mergers and takeovers, not bank failures.[8] Opponents of interstate branching feared that it would hasten the pace of this consolidation.

Consolidation of the small bank sector is a matter of concern because smaller banks evidently focus more heavily on serving small

[6]Further, all but seven states generally prohibit the operation of in-state branches by out-of-state banks. The seven exceptions are Alaska, Massachusetts, Nevada, New York, North Carolina, Oregon, and Rhode Island. Nevada permits branching only into counties with population less than 100,000; the other six states require reciprocity. In effect, these laws authorize entry by state-chartered banks that are not members of the Federal Reserve System.

[7]Of course, this is not the only argument proffered by opponents of interstate branching. For example, they argue that larger banks pose greater risk to the deposit insurance system because they tend to be involved in riskier activities, that larger banks are more apt to be poorly managed or inefficient, and that banking is becoming less competitive as a result of the industry's consolidation. Consideration of these other issues is outside the scope of this article.

[8]See U.S. General Accounting Office (1993). According to Atkinson (1994), the number of banks with assets under $1 billion continued to decline through 1993. The numbers cited in Atkinson's article do not distinguish between independent small banks and small banks that are subsidiaries of larger holding companies.

[9]Various explanations can be offered for why small institutions are more oriented toward small business lending than larger organizations. For instance, Leonard Nakamura argues that hierarchical management structures at large banks make them inefficient originators of loans to small firms.

that its potential impact on availability of small business credit has been exaggerated. That is, small institutions will continue to occupy profitable niches, in large measure because of their special expertise in serving small businesses and local communities.[12] As Federal Reserve Chairman Alan Greenspan points out, "The basic product lines, as well as those evolving—mutual funds, security brokerage, and even insurance sales—small banks can and do offer. Plus, small banks can add to the product mix what larger banks cannot: personalized service, local market knowledge, and easy access to officers of the bank." Proponents also emphasize that merger and acquisition activity is governed by the Bank Merger Act and federal antitrust laws, which promote competition in banking and protect against concentration of financial resources. Preservation of local market competition helps to ensure access to financial services for consumers and small businesses.

In fact, a study by Donald Savage concludes that, on average, local banking markets have not become more concentrated over the past decade.[13] Moreover, although the total number of small banking companies has been declining nationwide, much of that decline may be tied to consolidation among very small institutions (up to $500 million in assets) seeking to strengthen their competitive standing vis-a-vis larger institutions. When a modest-sized institution is created out of the merger of two smaller institutions, small business lending probably continues unabated. For this reason, the share of banking assets held by small banking companies is a more meaningful indicator of availability of small business credit than the total number of small institutions. By the share measure, industry consolidation thus far has had an ambiguous impact on the status of small banks. At the national level, the share of total banking assets held by companies smaller than $1 billion in assets (measured in 1992 dollars), including both independent banks in this size category and bank holding companies with total assets under $1 billion, has remained constant at 21.5 percent between December 1986 and December 1992, according to the GAO study cited above. The share of assets held by small banking companies declined in some states but increased in others.[14]

For each state in the U.S., Table 2 indicates the share of state banking assets held by small institutions as of December 1986, the share as of December 1992, and the percentage change in share between those dates. The asset share of small banking organizations declined by at least 5 percent in just 18 states; these states are highlighted in Table 2. Thus, a simple extrapolation from current trends does not yield any obvious inferences regarding the likely impact of further geographic deregulation.

In an additional four states, the percentage decline in the share of assets held by small banking organizations was less than 5 percent during this period. It would not be appropriate

[12]See various testimony in U.S. House of Representatives (1991, 1992). For an excellent discussion of the factors favoring small bank viability, see Spong and Watkins (1985).

[13]Of course, the goal of bank merger regulation is not simply to preserve competition on average, but to prevent anticompetitive mergers or acquisitions in any market where such consolidation cannot be justified on the basis of cost-efficiency or other mitigating factors. This requires a case-by-case evaluation.

[14]Note that in positing a correspondence between a decline in the asset share of small banking companies and a decline in the availability of small business credit, one is, in effect, considering a "worst-case" scenario. That is, one is abstracting from the possibility that a small bank acquired by a medium-sized or large bank holding company may be operated as a separate subsidiary with a high degree of independence, so that the credit decisions and customer relationships of the acquired banks may be unaffected. Thus, a decline in the asset share of small banking companies may overstate the impact of consolidation.

TABLE 2

Shares of State Banking Assets Held by Organizations Smaller Than $1 Billion in Assets: 1986 and 1992

State	Share Dec. 1986	Share Dec. 1992	Percent Change	State	Share Dec. 1986	Share Dec. 1992	Percent Change
Alaska	60.6	28.2	-53.4	Montana*	63.3	82.6	30.6
Alabama	30.3	29.4	-3.1	Nebraska*	66.8	56.1	-16.0
Arkansas*	81.0	74.4	-8.0	New Hampshire	47.9	54.2	12.9
Arizona	0.5	11.0	4.5	New Jersey	14.2	13.5	-4.4
California	14.6	18.7	28.7	New Mexico	40.3	48.1	19.3
Colorado	36.3	41.5	14.3	Nevada	19.8	15.8	-20.5
Connecticut	15.6	16.7	6.7	New York	2.7	4.0	47.3
Delaware	3.0	7.7	-36.0	North Carolina	6.8	8.1	19.4
Florida	21.5	23.2	8.3	North Dakota	70.4	86.2	22.6
Georgia	24.9	26.2	5.5	Ohio*	19.5	17.6	-9.8
Hawaii	24.6	13.7	-44.5	Oklahoma*	73.4	75.2	2.4
Iowa	67.8	66.6	-1.8	Oregon	13.6	15.0	10.7
Idaho	24.6	21.8	-11.3	Pennsylvania	17.1	18.0	5.7
Illinois*	37.1	34.0	-8.5	Rhode Island	12.1	5.1	25.1
Indiana*	46.1	35.0	-24.0	South Carolina	23.9	31.2	30.5
Kansas*	86.0	81.0	-5.8	South Dakota	27.8	43.5	56.6
Kentucky*	59.5	53.0	-10.8	Tennessee*	38.2	33.8	-11.4
Louisiana*	54.6	52.0	-4.7	Texas*	33.6	41.8	24.3
Massachusetts	7.5	8.3	10.1	Utah	23.7	39.5	66.6
Maryland	17.4	20.5	17.7	Virginia	17.2	20.2	17.6
Maine	15.7	23.2	47.3	Vermont	79.0	51.2	-35.2
Michigan	16.6	17.0	2.6	Washington	15.7	17.0	8.1
Minnesota	33.3	39.4	18.3	West Virginia*	81.1	62.5	-22.9
Mississippi*	51.7	45.9	-11.3	Wisconsin*	45.4	39.3	-13.4
Missouri*	33.4	35.6	6.5	Wyoming*	80.4	75.4	-6.3

Source: United States General Accounting Office, except for Delaware figures, which were computed directly from Call Report data. Delaware's limited purpose banks were omitted from the computations because these banks are subject to restrictions on competition with in-state banks. The $1 billion size category is CPI adjusted; i.e., for the purpose of determining bank size in 1986, bank assets in 1986 are measured in 1992 dollars.

*States where branching restrictions were eliminated or relaxed between January 1985 and January 1991.

to interpret these small declines as signalling a trend. For instance, in New Jersey, the asset share of small banking companies declined during 1987 and 1988, but this decline was largely reversed between year-end 1988 and year-end 1992.

IMPACT OF GEOGRAPHIC DEREGULATION: A CLOSER LOOK

Having observed that the share of assets held by small banking organizations declined in some states but not in others, one may wonder how this pattern might be related to geographic deregulation. As we shall see, an analysis of this relationship may provide clues as to the likely impact of interstate branching on the small bank sector.

A joint examination of Tables 1 and 2 yields an important observation: there is a close correspondence between the states that experienced a substantial contraction of the small bank sector between December 1986 and December 1992 and the states that eliminated or substantially relaxed in-state branching restrictions between January 1985 and January 1991 (which are marked with an asterisk in Table 2).[15] In fact, the small bank sector contracted by 5 percent or more in 12 of the 17 states in which branching restrictions were eased (the exceptions were Louisiana, Missouri, Montana, Oklahoma, and Texas), while contracting by 5 percent or more in only six of the remaining 33 states. This comparison, which is summarized in Table 3, indicates a strong correlation between repeal or relaxation of a state's branching laws and a decline in the share of state assets held by small banking organizations.

Although five states did not experience such a contraction of the small bank sector following liberalization of branching laws, four of these exceptional cases are easily explained. In Montana, the reformed branching law directly favored the small bank sector because of a proviso that allowed grandfathered out-of-state holding companies to branch only by merging existing subsidiaries (see footnote b of Table 1). As of year-end 1992, these grandfathered holding companies were the only organizations present in Montana that exceeded $1 billion in assets. In Louisiana, Oklahoma, and Texas during the latter part of the 1980s, the banking industry was beset by problems tied to a weak regional economy.[16] In Texas, several large bank holding companies failed, and these failures were accompanied by a contraction and restructuring of the state banking industry that increased the share of state banking assets held by small banking companies.[17] In Louisiana and Oklahoma, eroding capital positions of the largest banking organizations precluded them from acquiring smaller banks following the elimination of these states' branching restrictions in 1988.[18]

[15]I restricted my attention to changes in state branching laws that occurred between January 1985 and January 1991 to allow for up to a two-year lag between the easing of branching restrictions and the effect on the small bank sector.

[16]For instance, over the three-year period 1987-1989, these three states experienced an extraordinarily high number of bank failures. Their 414 failures of FDIC-insured commercial banks and trust companies during this period accounted for 70 percent of all bank failures in the nation, representing failure rates far greater than in any other state except Alaska.

[17]Various small subsidiaries of large, failed organizations were spun off and merged into small banks. Total assets of FDIC-insured commercial banks and trust companies in Texas declined from $209 billion to $169 billion (unadjusted for inflation) between year-end 1985 and year-end 1990.

[18]The mean ratio of total equity capital to total assets of large banks (over $1 billion in assets) in Louisiana declined from 6.8 percent to 5.3 percent between year-end 1988 and year-end 1990; in Oklahoma over the same period, this ratio fell from 5.8 percent to 4.8 percent. In contrast, nationwide during this period, the mean ratio of total equity capital to total assets among large banks increased from 6.3 percent to 6.5 percent.

TABLE 3

Branching Law Reform and Changing Asset Shares of Small Banking Organizations

	Number of states that eased branching restrictions	Number of states with no change in branching laws	Total
States where asset share of small banking companies declined by more than 5%	12	6	18
States where asset share of small banking companies declined by less than 5% or increased	5	27	32
Total	17	33	

In contrast to relaxation of in-state branching restrictions, geographic deregulation via interstate banking legislation has not been correlated with changes in the status of small banking companies. This can be seen by focusing on the 33 states where there was no legislative activity related to in-state bank branching. As noted above, the small bank sector contracted by more than 5 percent in only six of these states: Alaska, Delaware, Hawaii, Idaho, Nevada, and Vermont. Clearly, interstate banking played no role in Hawaii, which has no interstate banking law. Neither was interstate banking a contributing factor in Vermont. There, the share of state deposits held by out-of-state holding companies was a minuscule 4.4 percent as recently as June 1993, reflecting ownership of a small Vermont bank by a small holding company (Arrow Financial Corporation, which is considerably smaller than $1 billion in assets) based in New York state.

The contraction of the small bank sector in Alaska, Delaware, Idaho, and Nevada, while directly related to interstate banking, was a consequence of exceptional circumstances. Banking in these four states, very small in population, is not representative of much of the nation. As of year-end 1986, each had only a few banks and hardly any that were larger than $1 billion in assets or that were subsidiaries of sizable holding companies based in those states. Delaware had three banking companies in that size category; Idaho, Nevada, and Alaska each had one.[19] Subsequently, these states figured into the regional expansion strategies of some very large organizations. Some of these expansion-minded companies then acquired banks smaller than $1 billion in assets because they had few or no alternatives.

[19]The GAO figures somewhat exaggerate the decline in the status of the small bank sector in Nevada, because Citibank Nevada, a credit card bank, was incorporated into the computations. Asset growth at Citibank Nevada was not supported by in-state deposits, and therefore this growth did not disadvantage the state's smaller banks.

Moreover, in Alaska, interstate banking was only a secondary factor contributing to the contraction of the small bank sector between year-end 1986 and year-end 1992. The primary factor was a weakened banking industry, battered by an economic slump brought on by depressed oil prices. One-third of the state's banks had failed or been rescued during 1985 and 1986, and an additional one-third failed during the period 1987 through 1990. Between year-end 1986 and year-end 1992, total banking assets in the state declined by one-quarter (from $6.4 billion to $4.7 billion in 1992 dollars). These woes contributed to the growth in the asset shares of subsidiaries of large out-of-state organizations, which absorbed some of the failing banks. Moreover, Alaska-based First National Bank of Anchorage grew (through absorption of failing banks) beyond the $1 billion threshold during this period, substantially augmenting the measured decline in the asset share of small banks.

In sum, reform of in-state branching restrictions has had a major impact on the status of small banks, triggering consolidation of small banking organizations into larger organizations. Relaxation of interstate restrictions thus far appears to have had only a marginal effect on the status of small banks. That is, in most states other than those that relaxed in-state branching restrictions, the share of assets held by small banking organizations has not declined, despite easing of restrictions on interstate expansion by bank holding companies.

IMPLICATIONS FOR INTERSTATE BRANCHING

What can one extrapolate from this experience, as regards the likely impact of allowing banks to branch interstate? Will nationwide interstate branching be analogous to the lifting of in-state branching restrictions, having a great impact on the status of small banking companies? Or will it primarily involve further consolidation among medium-size and large banks?

The Past: Impact of In-State Branching Restrictions. To attempt to answer these questions, we must first determine why states that relaxed branching restrictions typically experienced substantial declines in the asset shares of small banks. An important motive driving consolidation in these states was the potential for many small banks to be operated more efficiently as branches of other banks rather than as independent organizations. Under in-state branching restrictions, many small banks maintained an independent existence only because they were barred from being acquired and turned into branches. It would have been more efficient or would have better served customer needs for these banks to be branches of a larger bank.

In other words, in states where branching was restricted, banks were too numerous and too small from an efficiency perspective. Thus, when the legal restrictions were lifted, many small banks were sought out for acquisition and converted into branches of larger banks.

Various evidence supports this view. The empirical literature on scale efficiencies in banking, as reviewed and interpreted by David Humphrey, indicates that "branching, far from being an extra cost of customer convenience, actually lowers both bank and customer costs. Branching permits a banking firm to lower costs by producing services in more optimally sized offices rather than producing virtually all of the output at a single office, as occurs in [states with severe limitations on bank branching]."[20] Moreover, recent studies of scale efficiency in banking find that efficiency of banking organizations tends to increase with size (average cost per unit of assets tends to decline) up to at least $75 million in assets. Loretta Mester (1994) observes that studies of small

[20]The convenience value of branching to bank customers is further discussed in Calem (1993).

banks generally find that scale economies are exhausted somewhere between $75 million and $300 million in assets. Beyond this range, most studies find efficiency to be generally unrelated to size.[21] Thus, empirical evidence confirms that there were operating efficiencies to be achieved through the acquisition of small institutions by larger organizations in states where branching restrictions had been lifted.

De novo entry by large organizations into local markets may have been an additional factor affecting the status of small banks in states where branching restrictions had been repealed or relaxed. Large banks may have established de novo branches and successfully competed for market share from small banks, after branching restrictions were lifted.[22]

The Present: Can We Draw an Analogy? In sum, relaxation of in-state branching restrictions tended to bring about declines in the asset shares of small banks because these restrictions stood as an important barrier to entry (via acquisition or de novo) into local banking markets. We cannot extrapolate from this experience, however, to conclude that nationwide interstate branching will also have such an effect. Since major legal barriers to entry have already been relaxed, the remaining obstacle—interstate branching restrictions—is of secondary importance. Interstate branching restrictions are not analogous to in-state branching restrictions because interstate restrictions exist in a context of otherwise unrestricted entry into local banking markets.

Except in states where branching remains restricted, potential acquirers of small banks include multiple larger institutions. Thus, in general, small, independent banks no longer are artificially precluded from achieving scale efficiencies. Rather, as emphasized by Leonard Nakamura (1994), most small banks are rural banks or urban or suburban niche banks that are prospering as independent organizations. Similarly, there exist numerous potential de novo entrants into most local markets. Few small banks remain artificially protected from competition with larger organizations.

Why, then, are there still so many U.S. banks smaller than $100 million in assets (nearly 7800 as of year-end 1993, according to the FDIC), which various banking cost studies suggest are inefficiently small? The explanation is simple: even if the typical bank in this size category operates at a comparatively high cost per-unit-of-assets, this doesn't mean that the bank should be acquired by or merged into a larger bank. The bank's lending policies, management practices, or other aspects of its "organizational culture" may be appropriate for the particular community it serves but may be difficult to reconcile with those of potential acquirers or merger partners.[23] Further, increasing the number of potential acquirers by permitting interstate branching will not necessarily lead to acquisition of these banks.

Evidence from Pennsylvania supports this line of reasoning. Prior to 1982, Pennsylvania restricted bank branching to the county in which a bank's principal office was located and contiguous counties. In March 1982, this con-

[21]For example, Berger and Humphrey (1991) find that scale efficiencies are achieved up to $100 million in assets. A few studies, however, find further economies of scale at the upper end of the size distribution of banks; see Mester (1987) for a survey.

[22]Amel and Liang (1992) demonstrate that relaxation of state branching restrictions increased de novo entry into local markets via bank branching.

[23]Also, antitrust considerations may preclude particular mergers between small banks that are competitors in a concentrated rural market. Of course, much ongoing merger activity involves small banks merging with other small banks. Thus, when the appropriate opportunity arises, small banks do seek to achieve economies of scale through consolidation.

straint was relaxed to allow for branching within bicontiguous counties.[24] This easing of in-state branching restrictions was followed by a decline in the share of state banking assets held by small banks: between year-end 1982 and year-end 1986, the share of assets held by banking companies smaller than $1 billion in assets declined by about 40 percent.[25] In March 1990, Pennsylvania instituted full, statewide branching. This further easing of branching restrictions, however, had no impact on the status of the small bank sector; the share of assets held by small banking companies in Pennsylvania has been stable since year-end 1986. This record suggests that the initial easing of branching restrictions in 1982 enabled small banks to be absorbed into larger institutions in most instances where there were efficiencies that could be achieved through such consolidation. It seems reasonable to expect that, like statewide branching in 1990, nationwide interstate branching will have no more than a marginal impact on the status of the small bank sector in Pennsylvania.

The Future: Likely Patterns of Consolidation Under Interstate Branching. What, then, can we expect with regard to industry consolidation under interstate branching? In many cases, holding companies will simply consolidate existing subsidiaries to create unified branch networks. This would be done to enhance customer convenience and reduce costs, but it would not affect the share of assets held by small banking organizations as defined in this article.

In other cases, small banks may seek to merge with other small banks across state lines in order to achieve scale efficiencies. Only if the merged bank exceeds $1 billion in assets would this affect the asset share of the small bank sector as defined in this article. As noted above, however, most studies indicate that banks achieve scale efficiencies at a size well below $1 billion.

Otherwise, interstate branching activity will be driven by various familiar motives affecting banks of all sizes. Some banks may seek to diversify geographically as a risk-management strategy.[26] Others may seek to build or maintain a dominant share of regional banking assets, for perceived associated benefits such as name recognition.[27] Still others may seek to improve the managerial efficiency of the organization they acquire or to shed excess capacity.[28] Finally, some banks may expand geographically to better serve their customers'

[24]In other words, a bank could branch into counties contiguous to its headquarters' county and also into counties contiguous to these.

[25]The $1 billion threshold is measured in 1992 dollars.

[26]Liang and Rhoades (1988) and Lee (1993) present evidence that geographic diversification has tended to reduce financial risk by reducing earnings variability. Gilbert and Belongia (1988) and Lawrence and Klugman (1991) present evidence that rural bank subsidiaries of geographically diversified holding companies have greater opportunities to diversify risk than independent rural banks.

[27]Cornett and Tehranian (1992), examining mergers of large bank holding companies, found that mergers increased an institution's overall ability to attract deposits and loans. This finding is consistent with a regional-share rationale for expansion.

Boyd and Graham (1991) argue that the creation of superregionals through consolidation may have been motivated by the perceived benefit of being "too-big-to-fail" and by potential gains in market power from merging with competitors. Consolidation toward such ends can be discouraged by disabusing the industry of the notion that banks can grow "too-big-to-fail" (which the Federal Deposit Insurance Corporation Improvement Act of 1992 may have already accomplished) and by continuing the enforcement of antitrust laws in banking.

[28]In other words, well-managed banks may acquire less well-managed banks and institute improvements that reduce total operating costs. Such cost-savings should not be confused with reductions in average cost that result when two efficiently run banks merge to achieve economies of scale; see Mester (1994) for further discussion.

The extent to which merger and acquisition activity needs. Banks located in multistate metropolitan areas will have a particular incentive to respond in this way. Current patterns of consolidation in the industry suggest that such motives tend to yield combinations of large or medium-size banks with other sizable banks, or consolidations of small banks into banks that may still be categorized as small or modest in size. Hence, there is little reason to expect that under nationwide interstate branching, small banks will commonly be targeted for acquisition by medium-size and large banks.

Of course, we may continue to see frequent acquisitions of small banks by larger institutions in the few states where in-state branching restrictions have recently been lifted and adjustment is not yet complete.[29] These might include Colorado, Illinois, Minnesota, and New Mexico, where restrictions have been lifted only within the past three years, and Louisiana and Oklahoma, where consolidation subsequent to the lifting of branching restrictions may have been delayed due to financial difficulties affecting the regional banking industry. And even in states that have long permitted in-state branching we may see some acquisitions of small institutions by larger organizations trying to fill a gap in the larger institution's banking network or gain a foothold in a new market. Because interstate branching could reduce the cost of acquiring banks on an interstate basis, such "foothold acquisitions" may become marginally more common.

In addition, interstate consolidation may reduce risk by allowing greater diversification of a bank's deposit base and loan portfolio, especially in the case of a small, locally limited bank being acquired by a geographically diversified holding company. Because interstate branching could reduce the cost of acquiring banks on an interstate basis, such acquisitions also may become marginally more common.

There is also the possibility that small banks in some markets may face intensified competition because of benefits accruing to large institutions and their customers through interstate branching. Specifically, multistate holding companies may achieve cost savings by consolidating separate subsidiaries into branch networks, and bank customers may obtain convenience benefits from interstate branching.

Overall, however, the impact of interstate branching on small banks' asset shares can be expected to be minimal. "Foothold acquisitions" of small banks by larger institutions are relatively uncommon. Small banks have alternative means of diversifying risk (such as through asset sales) and appear able to successfully balance the various advantages and disadvantages of being locally limited. Most important, small banks have demonstrated their ability to prosper as independent organizations under competitive conditions by effectively serving market niches. Small banks have demonstrated such ability in California and in other large states where statewide branching has long been permitted.[30]

CONCLUSION

Geographic deregulation of the banking industry spurred industry consolidation during the 1980s, and in some states, consolidation has been accompanied by a decline in the share of assets held by small banking institutions. In

among large and medium-size banks has yielded such performance gains is a topic of current debate among banking researchers. See Rhoades (1993) for a survey.

[29]Since the new federal statute does not preempt states' intrastate branching laws, it should not substantially affect the share of assets held by small banks in states where in-state branching remains substantially restricted, namely, in Arkansas, Iowa, Montana, Nebraska, and North Dakota.

[30]See Calem 1993. Rose (1992), in a study of the effects of interstate acquisitions, finds further evidence of the ability of small local institutions to compete effectively against larger, geographically diversified organizations.

most such cases, the decline in the asset share of small banking companies was tied to a relaxation of in-state branching restrictions. Relaxation of interstate restrictions thus far has had only a marginal effect on the status of small banks. That is, in most states other than those that relaxed in-state branching restrictions, the share of assets held by small banking organizations has not declined, despite easing of restrictions on interstate expansion by bank holding companies.

Congress recently removed the most important remaining legal constraint on geographic expansion by banking organizations: the general prohibition against interstate bank branching. Proposals to allow interstate branching had been controversial because geographic deregulation is perceived to have an adverse impact on the status of small banks. But one cannot extrapolate from the experience in states where in-state branching restrictions were eased to conclude that interstate branching would adversely affect the status of small banks. Removal of in-state branching restrictions had a substantial impact on small banks because such restrictions had precluded many of these banks from achieving efficient size. Since most banks are now close to efficient size or can choose among many potential merger partners or acquirers to achieve economies of scale, removal of interstate branching restrictions is unlikely to have a major impact in this regard.

Rather, interstate branching activity will probably be driven by motives other than realizing economies of scale. If so, allowing banks to branch interstate should not have a major, adverse impact on the status of small banks.

REFERENCES

Amel, Dean F. "State Laws Affecting the Geographic Expansion of Commercial Banks," mimeo, Board of Governors of the Federal Reserve System (September 1993).

Amel, Dean F., and J. Nellie Liang. "The Relationship between Entry into Banking Markets and Changes in Legal Restrictions on Entry," *Antitrust Bulletin* 37 (1992), pp. 631-49.

Atkinson, Bill. "1993 Buyouts Thinned the Ranks of Small Banks to a 60-Year Low," *American Banker* (March 21, 1994), p. 1.

Berger, Allen N., and David B. Humphrey. "The Dominance of Inefficiencies over Scale and Product Mix Economies in Banking," *Journal of Monetary Economics* 28 (1991), pp. 117-48.

Bauer, Paul W., and Brian A. Cromwell. "The Effect of Bank Structure and Profitability on Firm Openings," *Economic Review*, Federal Reserve Bank of Cleveland (Fourth Quarter 1989), pp. 29-37.

Boyd, John H., and Stanley L. Graham. "Investigating the Banking Consolidation Trend," *Quarterly Review*, Federal Reserve Bank of Minneapolis (Spring 1991), pp. 3-15.

Calem, Paul S. "The Proconsumer Argument for Interstate Branching," this *Business Review* (May/June 1993), pp. 15-29.

Cornett, Marcia M., and Hassan Tehranian. "Changes in Corporate Performance Associated with Bank Acquisitions," *Journal of Financial Economics* 31 (1992), pp. 211-34.

Gilbert, R. Alton, and Michael T. Belongia. "The Effects of Affiliation with Large Bank Holding Companies on Commercial Bank Lending to Agriculture," *American Journal of Agricultural Economics* (1988), pp. 69-78.

Greenspan, Alan. "Remarks at Dedication Ceremonies for a Chair in Banking and Monetary Economics, Wartburg College, Waverly, Iowa," Board of Governors of the Federal Reserve System (May 6, 1994).

Humphrey, David B. "Why Do Estimates of Bank Scale Economies Differ?" *Economic Review*, Federal Reserve Bank of Richmond (September/October 1990), pp. 38-50.

Lawrence, David B., and Marie R. Klugman. "Interstate Banking in Rural Markets: The Evidence from the Corn Belt," *Journal of Banking and Finance* 15 (1991), pp. 1081-91.

Lee, William. "Bank Diversification: The Value of Risk Reduction to Investors and the Potential for Reducing Required Capital," Research Paper 9312, Federal Reserve Bank of New York (1993).

Liang, Nellie, and Stephen A. Rhoades. "Geographic Diversification and Risk in Banking," *Journal of Economics and Business* 40 (1988), pp. 271-84.

Mester, Loretta J. "How Efficient Are Third District Banks?" this *Business Review* (January/February 1994), pp. 3-18.

Mester, Loretta J. "Efficient Production of Financial Services: Scale and Scope Economies," this *Business Review* (January/February 1987), pp. 15-25.

Nakamura, Leonard I. "Commercial Bank Information: Implications for the Structure of Banking," in Michael Klausner and Lawrence J. White, eds., *Structural Change in Banking.* Homewood, Illinois: Business One/Irwin (1993), pp. 131-60.

Nakamura, Leonard I. "Small Borrowers and the Survival of the Small Bank: Is Mouse Bank Mighty or Mickey?" in this issue of the *Business Review.*

Rhoades, Stephen A. "Efficiency Effects of Horizontal (in-market) Bank Mergers," *Journal of Banking and Finance* 17 (1983), pp. 411-22.

Rose, Peter S. "Interstate Banking: Performance, Market Share, and Market Concentration Issues," *Antitrust Bulletin* 37 (1992), pp. 601-30.

Savage, Donald T. "Interstate Banking: A Status Report," *Federal Reserve Bulletin* 79, Board of Governors of the Federal Reserve System (December 1993), pp. 1075-89.

Spong, Kenneth D., and Thomas Watkins. "Interstate Banking: What Are the Competitive Effects?" *Banking Studies*, Federal Reserve Bank of Kansas City (Summer 1985), pp. 8-19.

U.S. General Accounting Office. *Interstate Banking: Benefits and Risks of Removing Regulatory Restrictions* (1993).

U.S. House of Representatives. "The Effect of Interstate Branching on National, State and Local Economies," Hearing before the Subcommittee on Economic Stabilization, Committee on Banking, Finance, and Urban Affairs (May 15, 1991).

U.S. House of Representatives. "H.R. 4170, Interstate Banking Efficiency Act of 1992," Hearing before the Subcommittee on Financial Institutions Supervision, Regulation, and Deposit Insurance, Committee on Banking, Finance, and Urban Affairs (June 25 and 30, 1992).

U.S. House of Representative. "Interstate Banking and Branching," Hearing before the Subcommittee on Financial Institutions Supervision, Regulation, and Deposit Insurance, Committee on Banking, Finance, and Urban Affairs (July 29, 1993).