

Structural change in Wisconsin in the 1970s

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This article examines the relative importance of de novo entry, population migration, and multibank holding company activity in explaining concentration changes in Wisconsin during the 1970s. Perhaps better than any other state in the Seventh District, Wisconsin offers a glimpse of future structural developments in banking. First, the state has a mature bank holding company movement dating back to the turn of the century and is more likely to exhibit the long-run effects of that movement than a state like Michigan, which has permitted multibank holding companies only since 1971. With legislative proposals to permit multibank holding companies being introduced each year in Illinois and Indiana, this experience could be extremely useful in judging the effects of those proposals. Second, because Wisconsin has allowed limited branching since 1968 (after prohibiting the establishment of new branches between 1947 and 1968), its banking structure should also reflect the effects of branching on concentration.

A multibank holding company is a corporation controlling two or more banks. As of June 30, 1970, 15 multibank holding companies controlled 40.3 percent of the total deposits held by all of Wisconsin's 606 commercial banks. By midyear 1979 the same number of multibank holding companies controlled 44.8 percent of total commercial bank deposits in Wisconsin. This apparent trend towards an increase in the concentration of banking resources in the state might suggest that there is less competition in Wisconsin banking today than in the early 1970s. Because the state is not the relevant geographic area for purposes of competitive analysis, this

inference is probably incorrect.¹ To the extent that competition is influenced by concentration, it is the level of concentration within an individual (local) banking market that seems to matter.

Urban banking centers

To examine the trends in concentration in urban banking centers in Wisconsin, a study was made of 14 Ranally Metro Areas (RMAs) in the state.² Defined and prepared by Rand McNally and Company, these areas envelop the major urban areas within the state.³ Basically, an RMA consists of the following components: (1) a central city with a population of approximately 50,000 or greater, (2) built-up areas adjacent to the central city, and (3) areas not contiguous to the central city, but whose population is largely supported by commuters to central cities. In general, if eight percent of an area's population or 20 percent of its work force commutes to the central city or its adjacent areas, it is likely to be included in the RMA definition. As another general rule, townships and minor civil divisions are not included in an RMA definition unless they have at least

¹While the issues surrounding the proper definition of a geographic banking market are far from settled, the Supreme Court has concluded that the state is not an appropriate section of the country for analyzing competitive effects under Section 7 of the Clayton Act. See: *U.S. v. Connecticut National Bank*, 418 U.S. 656 (1973).

²The term "banking market" has precise legal and economic meaning. While some "banking markets" are approximated by RMAs, not all RMAs are banking markets. To avoid confusion, the RMAs analyzed in this study will be referred to as "urban banking centers."

³The boundaries used in this study have been taken from the 1980 *Commercial Atlas and Marketing Guide*, 111th ed. (Rand McNally and Co.), pp. 564-65.

60 persons per square mile or are rapidly growing areas.

The RMAs were chosen as the geographic area of study because they are often utilized by the Federal Reserve Board (the Board) as approximations of banking markets. For example, the Board has recently considered the Madison RMA to be a reasonable approximation of the Madison banking market.⁴ Moreover, the criteria used to define an RMA—a compact area of relatively high population density linked by commuting and retail and wholesale trade—coincide in large measure with those deemed important in defining banking markets. A further advantage of RMAs as approximations of banking markets is that they are constructed from data on townships and are therefore more highly refined than SMSAs, which generally consist of whole counties.

At present, 18 RMAs have been defined to lie wholly or in part within Wisconsin. The focus of this article, however, is upon the 14 RMAs whose central cities are located within Wisconsin. Each of the four other RMAs—Chicago, Dubuque, Duluth-Superior, and Minneapolis-St. Paul—has its central city located outside of Wisconsin. The approximate geographic boundaries of the 14 RMAs analyzed in this study are depicted on the accompanying map.

Examination of the population characteristics of the 14 Wisconsin RMAs under study yields several interesting facts (see table 1). First, over half of the total population of the state of Wisconsin resides within these 14 RMAs. In population terms the largest RMA is Milwaukee with a total population of 1.38 million (based on January 1, 1980, population estimates), or almost 30 percent of the state's total population. Second, between 1970 and 1980 five RMAs—Eau Claire, Green Bay, Janesville, La Crosse, and Wausau—experienced population growth in excess of 10 percent. While some RMAs showed minimal growth

⁴See Board Order approving Marshall & Ilsley Corporation's acquisition of Affiliated Bank Corporation, Madison, Wisconsin (66 *Federal Reserve Bulletin* 978 (1980)).

over the ten years, only one—Oshkosh—had a net population decline, which amounted to just under 3 percent.

Major shifts in population

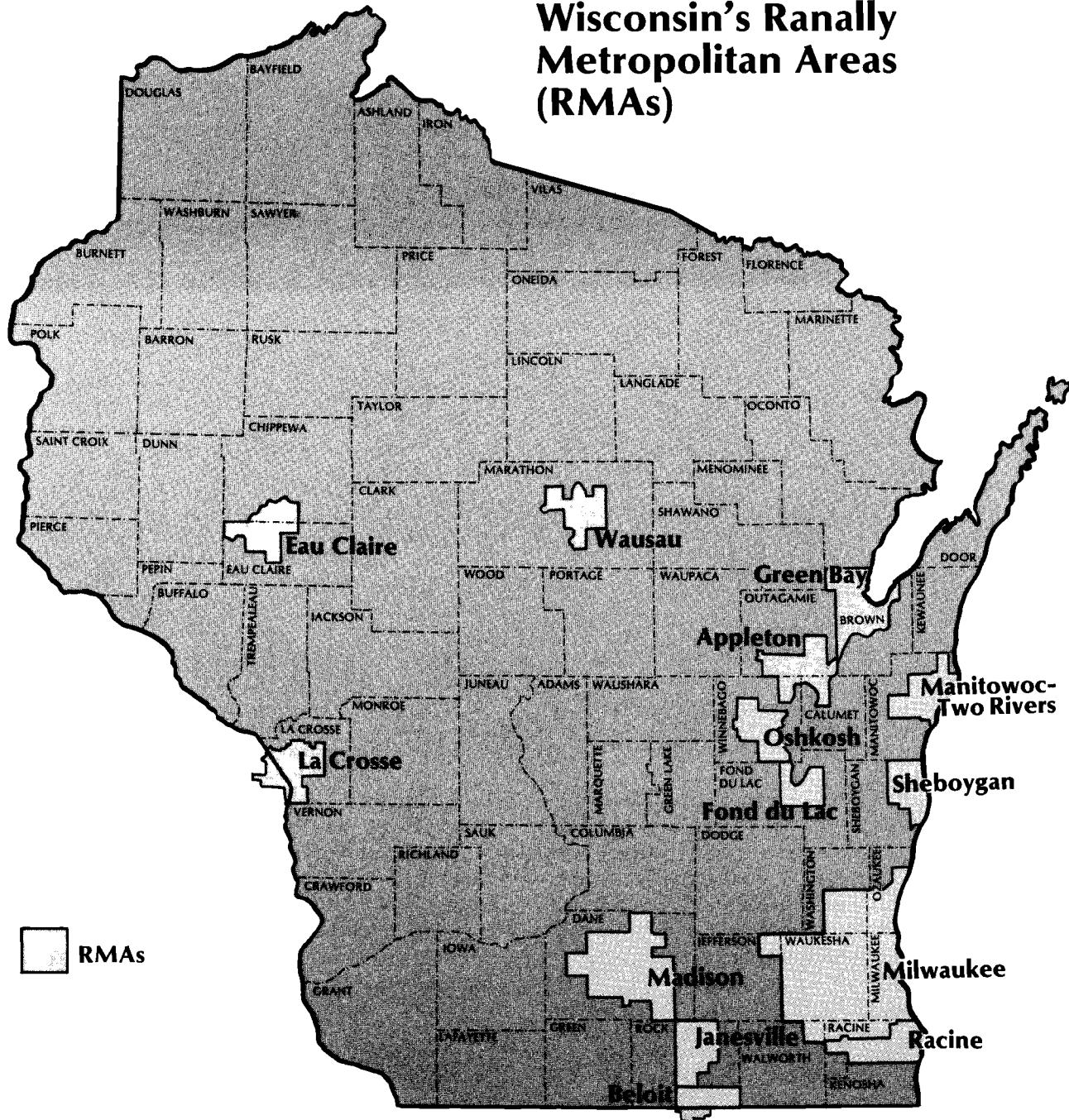
An analysis of population trends in the central city and suburban areas of the 14 RMAs reveals that many of the state's central cities were affected by the "flight to the suburbs." Eight of the metropolitan areas' central cities declined in population during the 1970s, with Milwaukee suffering the worst—14.1 percent. In contrast, all of the suburban areas within the 14 RMAs showed an increase in population, ranging from a low of 5.7 percent in Fond du Lac to a high of 44.4 percent in La Crosse. As will be discussed later, this population migration is believed to have had an important impact upon the structure of banking in certain of Wisconsin's RMAs.

Deposit concentration in urban banking centers

Data presented in table 2 reveal some significant features about the levels and trends of concentration within the 14 RMAs. First, in only four RMAs were there increases in the Herfindahl index of concentration.⁵ The most significant increases occurred in Sheboygan and Janesville,⁶ with less significant increases in Appleton and Beloit. Ten RMAs showed

⁵It should be noted that the measures of concentration in this study are calculated on the basis of holding company and not individual bank control of deposits. For example, if one holding company controls three banks in the same RMA, the deposits are aggregated to represent one organization.

⁶The increase in concentration in Janesville may be more apparent than real due to the fact that during the period of analysis two pairs of previously affiliated banks formed multibank holding companies. Had they been viewed as two organizations rather than as four organizations in 1970, deposit concentration in the Janesville RMA, as measured by the Herfindahl index, would have declined from .259 to .256 over the period of analysis. Throughout this study no attempt has been made to adjust for this type of prior affiliation; however, it is evident that such affiliations cause the conventional ratios to underestimate effective concentration.



SOURCE: 1980 Commercial Atlas and Marketing Guide, 111 ed. (Rand McNally and Co.).

Table 1
Population characteristics of Wisconsin urban centers

Urban banking center	RMA		Central city		Suburban areas	
	Population (1-1-80 est.)	Change (1970-80) (percent)	Population (1-1-80 est.)	Change (1970-80) (percent)	Population (1-1-80 est.)	Change (1970-80) (percent)
Appleton	167,900	9.0	62,300	10.5	105,600	8.2
Beloit	60,500	0.3	33,200	- 7.0	27,300	11.0
Eau Claire	88,400	13.2	50,300	12.8	38,100	13.7
Fond du Lac	51,300	3.6	36,500	2.8	14,800	5.7
Green Bay	166,400	15.1	91,900	4.7	74,500	31.2
Janesville	72,700	10.5	50,900	9.7	21,800	12.4
La Crosse	89,200	14.1	48,900	- 2.8	40,300	44.4
Madison	278,900	7.4	169,500	- 1.3	109,400	24.6
Manitowoc	62,400	2.1	46,300	- 1.7	16,100	15.0
Milwaukee	1,382,700	0.5	616,300	-14.1	766,400	16.5
Oshkosh	69,300	- 2.8	49,400	- 7.0	19,900	9.3
Racine	147,900	2.8	92,600	- 2.7	55,300	13.6
Sheboygan	76,200	3.7	49,200	1.4	27,000	8.0
Wausau	70,200	11.4	32,600	- 0.6	37,600	24.5

SOURCE: 1980 Commercial Atlas and Marketing Guide, 111 ed. (Rand McNally and Co.).

decreases in overall concentration levels between 1970 and 1979. The most significant instance of deconcentration occurred in the Racine RMA where the Herfindahl index declined by over 35 percent. If we accept the proposition that a reduction in deposit concentration is indicative of increased competition—and there exists a large body of evidence to support this premise⁷—then we can conclude that the public should have benefited in ten of Wisconsin's RMAs by receiving

⁷See Stephen A. Rhoades, *Structure-Performance Studies in Banking: A Summary and Evaluation*, Staff Economic Studies 92 (Board of Governors of the Federal Reserve System, 1977).

better banking services and/or lower prices due to the deconcentration.

As shown in table 2, only in three RMAs (Beloit, Janesville,⁸ and Sheboygan) was the largest banking organization able to increase its share of RMA deposits between 1970 and 1979. In the remaining 11 RMAs, the largest banking organization was unable to maintain the share of RMA deposits it held in 1970. The deposit decline ranged from a minimal loss of slightly less than a percentage point in the

⁸As discussed previously, if consideration is given to affiliate bank relationships, the largest banking organization in the Janesville urban area increased its market share by one-tenth of a percentage point.

Table 2
Changes in concentration in Wisconsin urban banking centers, 1970-79

Urban banking center (RMA)	Herfindahl index			Share held by				Change in share held by 2nd & 3rd largest organizations (1970-79) (percentage points)
	Level of index (6-30-79)	Absolute change (1970-79)	Relative change (1970-79) (percent)	Largest organization 6/70 (percent)	6/79 (percent)	Three largest organizations 6/70 (percent)	6/79 (percent)	
Appleton	.159	+.011	+ 7.4	26.9	26.0	59.0	61.6	+ 3.5
Beloit	.449	+.015	+ 3.5	53.4	54.0	95.7	100.0	+ 3.7
Eau Claire	.244	-.037	-13.2	37.1	35.7	82.8	77.0	- 4.4
Fond du Lac	.409	-.054	-11.7	56.6	47.3	99.7	99.3	+ 8.9
Green Bay	.179	-.025	-12.4	36.6	29.2	68.3	68.1	+ 7.2
Janesville	.256	+.050	+24.3	29.9	38.0	75.4	83.6	+ 0.1
La Crosse	.208	-.016	- 7.1	36.8	33.3	74.3	73.2	+ 2.4
Madison	.133	-.025	-15.8	33.1	25.7	58.6	56.8	+ 5.6
Manitowoc	.199	-.015	- 7.0	36.6	30.9	67.9	68.2	+ 6.0
Milwaukee	.135	-.026	-16.1	33.5	28.5	62.7	58.1	+ 0.4
Oshkosh	.259	-.043	-14.2	47.2	41.1	82.5	75.5	- 0.9
Racine	.121	-.067	-35.6	34.5	22.7	63.6	48.7	- 2.8
Sheboygan	.395	+.037	+10.3	43.2	47.1	89.9	92.0	- 1.8
Wausau	.296	-.082	-21.7	58.7	50.5	80.0	72.7	+ 0.9

NOTE: Concentration data in this table have been calculated on the basis of deposits held by banking organizations within the RMAs, and not on the basis of individual commercial banks. Deposit data are from FDIC *Summary of Deposits*, June 30, 1970, and June 30, 1979.

case of the largest organization in the Appleton RMA to a loss of almost 12 percentage points in the case of the largest competitor in the Racine RMA.

The last column in table 2 indicates that the second and third largest banking organizations captured some of the market share lost by the largest organization in the 11 RMAs where the leading organization experienced a decline in market share (as measured by deposits). In eight of these 11 RMAs, the combined share held by the second and third largest banking organizations increased between 1970 and 1979. Only in the Eau Claire, Oshkosh, and Racine RMAs did both the largest organization and the second and third largest organizations (combined) lose market share during this same time period.

Reasons for deconcentration

There are several possible explanations for the observed deconcentration in Wisconsin's urban banking centers. These explanations include:

- de novo (new) bank formations,
- deposit migration from central city banks to suburban banks, and
- multibank holding company entry into the urban center de novo or via the acquisition of a small-sized bank.

While these possibilities are set forth as independent explanations, it is obvious that the three may be interrelated. For example, we might observe a shift in deposits from central city banks to de novo banks in subur-

ban areas that were formed by multibank holding companies. In this case, all three of the proposed explanations might be responsible for the structural change.

De novo bank formations

One factor which would be likely to lead to market deconcentration is the formation of independently owned de novo banks within the urban banking center, either in the central city or in suburban areas. When a new bank is formed, it usually attracts some of the existing business of incumbent banks, thus promoting deconcentration of banking resources. Obviously, the deconcentration effect will be most noticeable if the new bank's deposits are derived from one or more of the market's three largest competitors.⁹

According to table 3, de novo banks were established in one-half of the urban banking centers under study between 1970 and 1979. In all, a total of 33 de novo banks were formed in seven RMAs during the period under study. As might be expected in light of the population trends cited earlier, almost two-thirds of the new banks formed were situated in the suburban areas of the urban banking centers.

In five of the seven urban banking centers (Eau Claire, Green Bay, Madison, Milwaukee, and Racine) where de novo entry occurred, the Herfindahl index declined, indicating deconcentration. In two urban banking centers (Appleton and Sheboygan), the Herfindahl index rose in spite of de novo formations.

In the five urban centers where deconcentration occurred, banks formed between 1970 and 1979 currently control anywhere from 1.7 percent of deposits (in Eau Claire) to 17.9 percent of the deposits (in Racine). In the case of Green Bay, where both de novo entry

⁹For this explanation to be valid, the new bank must not be owned or controlled by one of the institutions already competing in the urban banking center. If ownership or control by an incumbent bank existed, then the new bank would be in a position to promote an increase rather than a decrease in concentration.

and deconcentration were observed, it cannot be concluded that de novo entry was instrumental in promoting the deconcentration due to the fact that all three of the de novo banks formed during the period of analysis are owned by organizations which were already located within Green Bay. In Racine, however, the significant share of deposits achieved by the de novo banks (17.9 percent) is considered to have been a major factor in bringing about the significant deconcentration that was observed.

The situation in Sheboygan makes clear that new bank formations need not necessarily produce deconcentration. In this case, de novo banks appear to have had no favorable impact on concentration levels.

The following observations may be made regarding de novo entry. First, de novo entry by independent banks can be a powerful force in promoting market deconcentration. Second, to the extent that deconcentration produces more competition, de novo entry should be encouraged by state and federal regulatory authorities as a means of promoting more competitive markets. Third, not all market deconcentration can be attributed to de novo bank formations, since seven of our urban banking centers experienced no de novo entry and five of these experienced decreases in concentration. Thus, we must look elsewhere for possible explanations for the observed deconcentration.

Deposit migration from central cities to suburban areas

As the population migrates from the central city to the suburbs, some people transfer their banking relationships to institutions located close to where they reside, due to the locational convenience.¹⁰ In an attempt to retain or expand their market share, central city banks may desire to establish branch offi-

¹⁰See B. Benson, "Spatial Microeconomics: Implications for the Relationship Between Concentration of Ownership and Bank Performance." In Federal Reserve Bank of Chicago, *Proceedings of a Conference on Bank Structure and Competition* (1980).

Table 3**De novo banks formed in Wisconsin urban banking centers, 1970-79**

Urban banking center (RMA)	Total number of de novo banks (1970-79)	Number of de novo banks located in central city	Number of de novo banks controlled by firms already in RMA	Share of RMA deposits held by de novo banks (June 1979) (percent)
Appleton	1	1	1	0.5
Beloit	0	—	—	n.a.
Eau Claire	1	1	0	1.7
Fond du Lac	0	—	—	n.a.
Green Bay	3	2	3	4.3
Janesville	0	—	—	n.a.
La Crosse	0	—	—	n.a.
Madison	6	1	3	5.1
Manitowoc	0	—	—	n.a.
Milwaukee	18	7	3	4.2
Oshkosh	0	—	—	n.a.
Racine	3	0	1	17.9
Sheboygan	1	0	0	2.2
Wausau	0	—	—	n.a.

n.a. Not applicable.

SOURCE: *Changes among Operating Banks and Branches*, FDIC, various years.

ces in suburban locations. However, in a state like Wisconsin where the state banking law constrains the ability of banks to branch,¹¹ banks are frequently unable to follow their former customers to their new suburban locations. As a result, central city banks, which frequently include the largest banks in the urban banking area, lose deposits and suburban banks gain deposits. This results in market deconcentration.

This migration-deconcentration effect seems to have occurred in several Wisconsin banking centers. In eight of the ten RMAs where deconcentration was observed, central city banks lost a share of their deposits to suburban banks. Of course, some of this shift in market shares results not from actual migra-

tion but simply from differences in population growth rates in the central city and suburbs. But migration is clearly important in some RMAs. The most extensive migration of deposits appears to have occurred in Racine, Milwaukee, and Madison where the central city banks' share of total RMA deposits declined by 18.0, 14.0, and 12.3 percentage points, respectively.

The following observations may be made concerning population migration based on our findings. In those instances where the population is migrating from central cities to outlying suburban areas and branching is limited by state law, then, other things being equal, deconcentration can be expected to occur. This finding has implications with respect to possible limits placed on branch banking.

It should also be recognized that limits placed on branching to achieve benefits in the form of market deconcentration may have an adverse effect on customer conven-

¹¹In Wisconsin banks can branch within the same county where their home office is located or in a contiguous county if not more than 25 miles from the home office. However, there is also a three-mile home office protection clause that greatly restricts possible branch sites, especially in urban areas. See Wisconsin Statutes, Chapter 221.

ience and on the financial soundness of some institutions. Studies have shown that branching results in greater convenience to bank customers, as measured by the number of banking offices. Also, to the extent that geographical diversification results in risk reduction, the limiting of branching may increase risks, potentially reducing bank soundness.¹²

One option which might be considered in an attempt to achieve market deconcentration, while at the same time not sacrificing financial soundness, would be to allow banks to branch, but primarily outside their traditional urban banking area. That is, branching limits could be set in terms of mileage minimums, not maximums as they frequently are set now. For example, state law might allow branching while prohibiting, or severely restricting, branches within the urban banking area or within 15 to 20 miles of the home office. The encouragement of branching into other markets should have beneficial competitive effects on the markets entered, and the resulting geographic dispersion of the branching institution's business should reduce risk.

Deconcentration due to holding company entry

A third possible explanation for the observed deconcentration of banking in many of Wisconsin's urban banking centers might be entry by large multibank holding companies, either *de novo* or by acquisition of a small bank. Proponents of the multibank holding company movement have alleged that the unique combination of financial and managerial resources possessed by such companies enables them to offer a wide range of services and expertise and to compete away market shares from other institutions. If this hypothesis were true, we would expect to observe that *de novo* and small banks acquired by multibank holding companies would exhibit faster growth than other banks in the market and would gain market share at the

¹²Larry R. Mote, "The perennial issue: branch banking," *Business Conditions*, Federal Reserve Bank of Chicago (February 1974).

expense of other (particularly incumbent) banks.

In an effort to substantiate this hypothesis, the ten RMAs that experienced deconcentration were examined to discern the role that the state's three largest multibank holding companies might have played in those areas. This analysis suggests that the three largest multibank holding companies have had an insignificant impact with respect to the deconcentration of the ten urban banking centers. In two of the ten RMAs (La Crosse and Manitowoc), the state's three largest multibank holding companies are not represented; consequently, they could not have promoted deconcentration.

In three urban banking centers (Oshkosh, Racine, and Wausau) one or more of the state's three largest multibank holding companies made an initial entry during the period under study. In both Racine and Wausau, one of the banks acquired ranked among the banking centers' three largest organizations and each has experienced a decline in deposit share. While the loss in market share by each of the acquired banks may have been a factor contributing to the deconcentration, it provides no support for the traditional argument that large multibank holding companies can contribute to deconcentration by acquiring small banks and enabling them to increase their market shares. In Oshkosh the acquired bank increased its share of deposits to the point where it has become the third largest organization in the RMA. While the acquired bank has increased its share of deposits, this increase has been less than the loss in combined deposit share of the two largest organizations in the Oshkosh RMA. As a result, overall concentration, as measured by both the Herfindahl index and the three-firm concentration ratio, has declined.

In each of the five remaining RMAs (Eau Claire, Fond du Lac, Green Bay, Madison, and Milwaukee) that experienced declines in concentration, one or more of the state's three largest multibank holding companies were present prior to 1970. No new entry by any of these organizations took place during the

period under study. In three of the five urban banking centers (Eau Claire, Fond du Lac, and Madison) all of the three largest bank holding companies that were present in 1970 lost deposit shares. These losses ranged from a minimal 1.4 percentage points in Eau Claire to 9.8 percentage points in Madison. In the Milwaukee RMA—where all of the state's three largest multibank holding companies were represented in 1970—the two largest multibank holding companies lost a combined 5.7 percentage points, while the third largest multibank holding company gained a slim 1.1 percentage point.

The Green Bay RMA was the only RMA out of the ten experiencing deconcentration in which the market shares of as many as two of the state's three largest multibank holding companies showed increases. These two multibank holding companies controlled the second and third largest banking organizations in the Green Bay RMA and their combined share of deposits increased by only about 2.0 percentage points. During the same period, the banking organization with the largest share of deposits in the Green Bay RMA—which is not one of the state's three largest multibank holding companies—lost 7.3 percentage points. Thus, the deconcentration that was observed is attributable primarily to the decline in the market share of the largest organization.

The findings indicate that multibank holding companies made little or no contribution to the deconcentration of banking in Wisconsin's urban banking centers during the 1970s. Assertions that entry by large multibank holding companies will produce public benefits in the form of market deconcentration and increased competition should be carefully examined.

Conclusions

During the 1970s banking concentration declined in 14 Wisconsin urban banking centers. In 11 of the 14 centers, the largest banking organization lost part of its share of deposits to other firms in the area.

Three possible explanations for the ob-

served deconcentration were examined—de novo entry, deposit migration, and multibank holding company effects. Both de novo entry and deposit migration appeared to be important factors with respect to urban banking center deconcentration. A third factor, entry by multibank holding companies, was not found to be of major significance.

Several policy implications can be drawn from the findings. First, de novo entry by independent banks into an urban banking area can have a significant impact on market deconcentration. Such entry should be encouraged and fostered by state and federal regulatory agencies.¹³

Second, population migration from central cities to suburban areas coupled with limitations on branching can produce deconcentration. However, these limitations on branching can also have adverse effects on customer convenience and on the financial condition of some institutions. In an attempt to minimize these adverse effects, it was suggested that consideration be given to revision of geographical restrictions on branching.

Finally, the effect of large multibank holding companies on concentration in Wisconsin's urban centers appears to have been insignificant. Assertions that large holding companies have promoted market deconcentration should be carefully examined.

The obvious disclaimer to this study is that it has examined only one state, Wisconsin, and a limited number of urban banking centers. No claim is made that the policy conclusions suggested would be applicable in other states with different banking laws and banking structures. To reach conclusions for other states would require structural analyses along the lines undertaken in this study.

¹³A recent Presidential report notes that interstate expansion via the formation of de novo banks, rather than through merger, may produce extensive nationwide competitive advantages. In part, the report calls upon the Congress to enact, over the short term, a phased liberalization of current prohibitions against interstate acquisitions by bank holding companies. See: *Geographic Restrictions on Commercial Banking in the United States: The Report of the President*, Department of the Treasury, January 1981.