Federal Reserve Bank of Cleveland June 14, 1982

Economic Commentary

ISSN 0428-1276

Performance of Ohio's Independent Banks

by Gary Whalen

Economic, regulatory, and technological developments have brought commercial banking organizations under increased pressure in recent years. Recession and persistently high and volatile interest rates have increased both interest-rate and credit risk for banks. Inter-industry and intra-industry competition also are increasing. Asymmetric bank/nonbank regulations, along with technological developments and financial innovations, have stimulated the growth of a variety of powerful nonbank financial competitors. The Depository Institutions Deregulation and Monetary Control Act of 1980 has increased the powers of thrift institutions and deregulated deposit rates, resulting in more intense rivalry in the markets for retail financial services. Finally, several states have eased regulatory restrictions on bank expansion by acquisition or merger and/or *de novo* branching. All of these forces are making it more difficult for the banks to perform as well as they have in the past.

Because independent banks do not have access to the resources afforded by affiliation with larger holding companies, they are the class of depository institutions (aside from thrift institutions) most likely to be adversely affected by the economic forces described above. Some observers have voiced concerns about the continued viability of independent banks in this environment, particularly smaller institutions. Examination of the recent performance of Ohio's independent banks, the subject of this *Economic Commentary*, provides insight on the ability of similar institutions in other states to survive in the current financial marketplace, particularly amidst multibank holding company expansion and the liberalization of geographic branching restrictions.[1] Ohio's independent banks are facing stiff competition from multibank holding companies, which have been permitted to acquire banks statewide for many years. Since Ohio's branching law liberalization in 1979, all banks are allowed to branch *de novo* into counties contiguous to their home office county and statewide through merger, resulting in a significant amount of bank expansion activity, particularly by holding companies.

Performance Determinants[2]

Bank performance is the result of the complex interaction of many factors—the size of the institution; the number, size distribution, and types of actual and potential competitors present in local markets; competitors' conduct; and the economic/demographic characteristics of banking markets. Banking regulations affect both market structure and permissible competitive conduct.

Bank costs are thought to be systematically related to bank size. Generally, larger banks are presumed to be able to realize various forms of real and pecuniary econ-

1. For example, performance of independent banks in Ohio might suggest the potential impacts of the recent authorization of multibank holding companies in Pennsylvania, Illinois, and West Virginia.

2. Bank performance is a multidimensional phenomenon. Dimensions of bank performance that traditionally have had important implications for public policy are liquidity, asset allocation, capital adequacy, pricing policies, operating efficiency, and profitability.

Gary Whalen is an economist with the Federal Reserve Bank of Cleveland.

The views stated herein are those of the author and not of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.

omies, and hence enjoy lower average costs than their smaller counterparts. For example, opportunities to take advantage of specialization and division of labor and efficiently employ expensive, indivisible pieces of capital equipment may increase with size. Larger organizations may also be able to purchase materials and/or funds more cheaply than smaller banks.

According to economic theory, bank performance should depend on the number and size distribution of competitors present in local markets.[3] Performance should also depend on the number of potential competitors—banks currently outside but capable of entering the market if opportunities to generate profitable business become apparent. The greater the number of competitors operating in or on the fringes of any market, the more intense will be competition, and the more difficult will be superior performance. Competitive intensity and the extent to which market deposits are concentrated in the hands of a few dominant banking organizations are thought to be inversely related. Tacit collusion among competitors is more difficult and hence less likely among a larger number of competing institutions, especially ones that are more equal in size.

Bank performance also may depend on the type(s) of competitors faced. Specifically, competition may be more intense in markets where there are a large number of holding companies and/or thrift institutions. Holding company affiliates, for example, have access to the combined resources of the parent company and coaffiliates. The Monetary Control Act permits thrift institutions to offer all of the retail services provided by commercial banks. Both holding companies and thrifts operate extensively in Ohio.[4]

Banking regulations critically affect market structure and conduct and hence bank performance. Each state has the power to influence the geographic extent of operations of holding companies, independent banks, and thrift institutions, thereby affecting the number, type, and conduct of actual and potential competitors in local banking markets. Ohio's geographic restrictions on bank branching, both *de novo* and through merger, were liberalized in 1979. The resulting branching and acquisition activity intensified rivalry, especially in urban markets. Holding companies accounted for much of this activity. From January 1979 through December 1980, 180 *de novo* bank branches were established in Ohio, 110 by bank holding company affiliates. Holding companies obtained 116 additional offices in the state through 35 acquisitions/mergers. Seventy-eight percent of all *de novo* branches were established in SMSA counties.

Analysis of Independent Bank Performance: 1979-81

Examination of selected mean performance ratios for Ohio's independent banks shows that independent banks, particularly smaller institutions, have performed well over the past two years (see table 1).[5] While all size classes showed an average return on assets above 1 percent, banks in the two smallest size classes exhibited higher ratios than their larger counterparts. Indeed, while the larger banks generally maintained their profitability since 1978, the smaller banks (total deposits of less than $25 million) significantly improved their profitability over the same period (see variable 2). Assuming that differences in efficiency are related to differences in profitability, these findings suggest that size-related cost disadvantages are not severe for smaller institutions.

The net interest margin measures (the net interest income, taxable equivalent

3. Following standard practice, rural banking markets are assumed to be approximated by counties, urban markets by the entire SMSA area.

4. Approximately 350 thrift institutions, holding 40 percent of combined commercial bank and thrift deposits, operated in Ohio at the close of 1981.

5. As of June 30, 1981, 301 commercial banking organizations—29 holding companies and 272 independent banks—were operating in Ohio. The holding company groups controlled 122 subsidiary banks and about 74 percent of state commercial bank deposits.

Table 1 Mean Performance Ratios
Numbers are in percent

Performance variables	<$10 million total deposits	$10–24.99 million	$25–49.99 million	$50–99.99 million	≥$100 million
	Size class				
1. Average return on assets[a]	1.59	1.34	1.06	1.07	1.00
2. Change in 1[b]	0.42	0.21	-0.06	-0.07	-0.04
3. Average net interest margin[a]	6.12	5.21	5.03	5.09	5.01
4. Change in 3[b]	1.08	0.35	-0.01	0.02	0.06
5. Net non-interest margin[c]	-3.38	-2.57	-2.81	-2.82	-2.93
6. Core deposit ratio[c]	59.40	51.80	50.50	52.70	54.70
7. Change in 6[b]	-8.95	-10.90	-11.81	-9.74	-11.53
8. Money market certificates to total deposits[c]	23.72	29.94	30.46	29.72	27.78
9. Loan to deposit ratio[c]	62.76	62.56	61.82	65.04	65.91
10. Change in 9[b]	2.25	-3.60	-4.37	-3.46	-1.21
11. Capital to assets[c]	11.60	9.89	8.94	9.10	8.20
12. Change in 11[b]	1.80	0.82	0.43	0.29	0.35
13. Change in market share	0.07	-0.01	0.08	0.51	0.41
Percent of total independent banks	16.0	35.0	24.0	15.0	10.0

a. Average of year-end 1980 figure and annualized figure on June 30, 1981.
b. Change relative to figure on December 31, 1978.
c. Figure as of June 30, 1981.

basis, divided by average earning assets) exhibit a similar pattern. This is not surprising, since a bank's net interest margin is the crucial determinant of its overall profitability. Average margins for all size classes are above 5 percent, but, like profitability, they generally decline as bank size increases. Again, while the margins of the three largest size classes have remained essentially constant since 1978, those of the two smaller size classes of banks have improved significantly. These figures are quite remarkable in view of the changes in liability composition at independent banks since 1978.

The core deposit ratio data (the sum of demand, NOW, ATS, and savings deposits divided by total deposits) indicate considerable erosion of low-cost core deposits at independent banks in recent years. Approximately 50 percent of all funds of independent banks now bear market-determined rates of interest, an increase of approximately 10 percentage points since 1978. The growth of money market certificates explains much of this increase (see variable 8).[6] While core deposit ratios have fallen at all independent banks, the decline has been less precipitous at the smallest institutions. Core deposit ratios remain higher at these institutions than at their larger counterparts. This may partially explain their superior net interest margin and profitability performance, despite higher net non-interest margins (non-interest income minus non-interest expenses divided by average-earning assets). Evidently most independent banks have been able to pass on increases in their cost of funds to borrowers. It appears that independents have been able to avoid the mismatch between rate-sensitive assets and liabilities that has devastated thrifts.

Ohio's independent banks do not seem to have sacrificed liquidity and soundness to maintain profitability. Average loan-deposit ratios are below 65 percent and generally have declined in the past two years (see variables 9 and 10). Independent banks in Ohio continue to rank

6. These instruments were authorized in June 1978.

Table 2 Location and Expansion Activity and Performance
Numbers are in percent

Performance measure	Location: Rural	Location: Urban	Expansion status: Branchers[a]	Expansion status: Non-branchers
1. Average return on assets	1.30	1.16	1.03	1.28
2. Change in 1	0.121	0.124	-0.083	0.158
3. Change in total deposits, 6/80–6/68	9.86	8.66	10.91	8.50
4. Change in market share, 6/78–6/80	0.178	0.126	0.610	0.039

a. Independent banks that established at least one branch during the 1979–80 interval (52 banks).

among the most highly capitalized banks in the United States. The average capital-to-assets ratio (equity capital plus subordinated debt divided by total assets) for all size classes exceeds the recent total capital guideline minimums specified by the Federal Reserve Board and the Comptroller of the Currency.[7] Further, despite increasingly difficult operating conditions, all size classes show an increase in their average capital-to-assets ratios since 1978.

Data on the change in market share (variable 13) indicate that, despite expansion by and competition from large holding company organizations over the period, independent banks generally have held their own. The larger size classes managed modest share increases, possibly because of their greater branching activity.

To obtain further insight on the determinants of independent bank performance, averages of several important performance measures are shown in table 2, broken down by home-office location and expansion-activity status. The data in the first two columns reveal that independent banks headquartered in rural counties generally outperformed their urban counterparts. This is not surprising, as a greater number of bank and nonbank competitors—particularly larger ones—operate in urban markets. In addition, urban consumers of financial services are usually more aware of and sensitive to the prices of alternative financial services. The data in the last two columns of the table suggest that geographic expansion has not been a prerequisite for superior performance. While the branching institutions experienced more rapid deposit growth and a larger average gain in market share, the two critical profitability averages are higher for non-branching independents.

The impacts of several other potential determinants of independent bank performance also were explored by correlating variables reflecting the number, size distribution, type, and expansion activity of independent bank competitors with average return on assets, average net interest margin, and change in market share of independent banks (see table 3).

As expected, independent bank profitability and the number of bank competitors operating in the local market were found to be inversely related. However, a significant, positive relationship was discovered between the number of competitors and independent bank net interest margins, counter to *a priori* expectations. The essentially non-price nature of bank competition may be the reason for these two conflicting findings. Specifically, desirable economic/demographic conditions in a market may permit a large number of banks to earn persistently high margins in that market. Given existing regulatory constraints on deposit rate competition, however, non-price competition may lead to an increase in non-interest expenses,

7. Under these guidelines, effective March 1982, banks with less than $1 billion in total assets are considered to be adequately capitalized if their total capital-to-assets ratio exceeds 7 percent. For a complete discussion of these guidelines, see the Board of Governors SR 82-17 ratio guidelines dated March 17, 1982. The average capital ratios in table 1 do not include the reserve for loan losses in the capital totals, although this is permitted under the guidelines.

Table 3 Independent Bank Performance Measures and Potential Determinants

Market characteristic variables	Performance measure: Average return on assets	Average net interest margin	Change in market share
1. Number of banking organizations in market	-0.09*	0.12*	-0.01
2. Three-firm market concentration ratio (banks only)	0.13**	0.06	0.02
3. Holding company share of bank market deposits, 1/79	-0.01	0.25**	-0.01
4. Thrift institution share of combined bank-thrift market deposits	-0.08	0.22**	-0.08
5. Holding company *de novo* branches 1979-80, divided by banking offices, 1/79	-0.11*	0.12*	-0.01
6. Percent of total market deposits acquired by holding companies, 1/79-12/80	-0.09*	-0.10*	-0.03
7. Holding company *de novo* branches and offices acquired 1/79-12/80, divided by banking offices, 1/79	-0.10*	-0.08	-0.03

* Significant at 10 percent level. ** Significant at 5 percent level.

depressing return on assets while leaving net interest margins relatively unchanged.[8]

Change in market share and the number of competitors were indirectly, but insignificantly, related. The analysis reveals that all three performance measures were directly related to market-concentration levels. However, only the relationship between market concentration and profitability was significant. The share of market deposits held by holding companies, proxying the extent of holding company involvement in local markets, was found to be inversely related to independent bank profitability and change in market share. However, these relationships were insignificant statistically. Further, an unexpected significant direct relationship was discovered between holding company market deposit share and independent bank net interest margins. These findings taken together suggest that, in general, a large holding company market presence has only a slight adverse impact on the performance of independent banks.

Independent bank profitability and change in market share were inversely, but insignificantly, related to both thrift share of market deposits and *de novo* branching activity. Both of these market characteristic variables were positively and significantly related to independent bank net interest margins. One explanation for these contrasting findings is that favorable economic/demographic characteristics in a market may explain both high bank net interest margins and a large thrift presence. Inter-bank competition may proceed on largely a non-price basis (e.g., heavy branching activity may result), depressing overall independent bank profitability while making it difficult for independents to gain market share.

Both holding company external expansion (variable 6) and summary holding company expansion (variable 7) were found to be inversely related to all three independent bank performance measures. Both holding company expansion variables were significantly related to independent bank profitability, while only the external expansion variable was significantly related to independent net interest margins.

8. A negative, significant coefficient (-0.16) was obtained when the number of banking organizations in the market was correlated with independent bank net *non-interest* margins, supporting this view.

Conclusion

The available evidence summarized in table 1 indicates that independent banks in Ohio so far have adjusted quite well to the changes occurring in banking markets. The superior performance of the smallest independent banks is particularly noteworthy: it suggests that large size and/or aggressive branching has not yet become necessary for independent bank survival, even in a state where holding companies and branching are permitted.

The correlation analysis of factors potentially influencing independent bank performance produced mixed and contradictory results. The correlation coefficients between independent bank return on assets and all market characteristic variables were in line with *a priori* expectations. In particular, the holding company and thrift market presence variables were found to be inversely related to independent bank profitability. However, unexpected significant positive relationships were discovered between several market characteristic variables and independent bank net interest margins. While these contradictory findings may be due to the non-price nature of inter-bank competition, more extensive research on the determinants of independent bank performance is necessary before this hypothetical explanation can be accepted. Complex interrelationships, ignored in correlation analysis, exist between the market characteristic and independent bank performance variables. These interrelationships make it difficult and/or hazardous to infer causation on the basis of simple two-variable correlations.[9]

Independent bank performance might be adversely affected in the future by several developments. Recession-related loan losses might damage the performance of independents, which are typically less diversified than holding company affiliates. Funding may become progressively more difficult and costly for independents, as core deposits erode and deposit rate deregulation progresses due to lack of direct access to national money markets. Independents may not be able to afford the technology and expertise essential to deliver the increasingly sophisticated products and services demanded by wholesale and retail customers. However, the performance of independent banks in Ohio since 1978 suggests that the demise of independents is neither imminent nor inevitable.

9. For example, variable 6 reflecting holding company external expansion activity and independent bank profitability was found to be negatively related. However, relatively poor economic growth in a local market may explain both poor independent bank performance and holding company expansion by acquisition rather than *de novo* branching.

Federal Reserve Bank of Cleveland
Research Department
P.O. Box 6387
Cleveland, OH 44101

BULK RATE
U.S. Postage Paid
Cleveland, OH
Permit No. 385

Address Correction Requested: Please send corrected mailing label to the Federal Reserve Bank of Cleveland, Research Department, P.O. Box 6387, Cleveland, OH 44101.