Performance of banks acquired on an interstate basis

Kenneth Spong and John D. Shoenhair

Kenneth Spong and John D. Shoenhair are economists in the Policy and Special Projects Department of the Division of Bank Supervision and Structure.

A supplement to this article is available from the authors. This supplement describes the interstate acquisitions in greater detail and examines the pre-acquisition characteristics of these banks in comparison to the acquiring organizations and to banks in the same states that were not acquired on an interstate basis.

The last decade brought many changes to banking. Of these changes, one of the most dramatic was the spread of interstate banking. At the beginning of the 1980s, banking organizations could not legally expand into another state through a bank acquisition. All but a few states now allow interstate entry and most states permit entry on a nationwide basis. This new legal environment has helped foster a rapid pace of interstate expansion in recent years — an expansion that has brought a notable portion of U.S. banking assets under the control of interstate organizations.

Because of these significant changes, much attention is now being focused on how interstate acquisitions are performing and what the effects of interstate banking will be on the overall banking system. This attention ranges from those who believe interstate banking will create more efficient and stable banks to those that believe the expansion will result in a concentrated industry with a diminished commitment to local customers. These interstate performance issues are also drawing strong interest from Congress with the continued debate over whether to pass federal legislation allowing interstate branching.

One indication of how these views and questions may be resolved is the performance of banks that are already owned on an interstate basis. This performance, for instance, may suggest whether banks acquired interstate have significant competitive advantages or, instead, operate in much the same manner as other banks. Similarly, the performance and success of interstate acquisitions will determine which organizations will have the resources to expand in the future and what the pace and extent of interstate expansion will be.

This article examines the performance of a selected group of interstate acquisitions — banks that were acquired on an interstate basis between 1985 and 1987. Because many interstate acquisitions occurred during this period, the subsequent performance of these banks provides a good perspective of the experience with interstate banking.

Characteristics of the interstate acquisitions

The interstate acquisitions in this study were all full service banks conducting a normal range of banking operations. In addition, these banks met several other conditions, which allowed their performance to be measured in a meaningful manner. For example, the banks must not have had serious problems or been failing at the time of their interstate acquisition. The acquired banks also must not have had a structure that was significantly changed by later acquisitions and mergers. A more detailed listing of the selection criteria for these banks is included in Box 1.

This study traces the performance of the acquired banks by placing each bank into one of three acquisition groups based on the year in which the interstate acquisition was completed. Each acquisition group's performance is then examined separately in order to check for common trends, as well as any differences across the groups. An additional reason for the three separate acquisition groups is that

Box 1: Banks Selected for this Study

The banks in this article are those whose performance could be traced in a meaningful manner from the year before their interstate acquisition until the end of 1989, which is the endpoint of the analysis. As a result, these banks had to satisfy the following criteria:

- Each bank must have been a full service bank in operation for at least three years prior to its acquisition by an interstate organization.
- The banks must have remained under interstate ownership from the time of acquisition until year-end 1989.
- A bank could not be acquired as a failed or failing bank with FDIC assistance, a serious problem bank, a thrift conversion or any other type of nonbank conversion, or through any other means that would prevent a meaningful comparison of pre-acquisition and post-acquisition performance.
- For banks constructed through mergers of various interstate acquisitions, the entities to be merged must meet the above criteria and at least 85 percent of the combined assets must have been acquired within one year of the initial acquisition.

Note: Banks merged into a single surviving bank are treated as one combined entity throughout the study, and their balance sheet and income figures are aggregated together in the years prior to merging. Approximately one-fifth of the banks in this study represent the surviving banks in a merger or series of mergers with other banks acquired on an interstate basis.

more years of post-acquisition history are available for banks acquired earlier in the period.

The three acquisition groups have many similar characteristics. A number of differences, though, exist among the three groups, which could affect their performance after interstate acquisition. In this regard, the banks acquired in 1985 had average asset holdings of over $2 billion during the post-acquisition period. This group consists of ten banks in operation at year-end 1989. It includes several large banks in the Southeast formed from a series of interstate acquisitions and mergers, as well as several other large bank acquisitions in the Southeast and in the New England area.

In contrast, the 1986 and 1987 acquisition groups consist of 74 and 95 banks, respectively, which were in operation at year-end 1989. With the rapid spread of interstate entry laws in 1986 and 1987, these two groups are composed of acquisitions from a wider range of states, including many smaller acquisitions in the Midwest and other parts of the country. As a consequence, the banks in the 1986 and 1987 acquisition groups had an average asset size in the $500 to $600 million range during the post-acquisition period.

Measures of performance

Although the performance of the acquired banks could be measured in several different ways, the following results reflect two basic approaches:

- A comparison of post-acquisition to pre-acquisition performance of the acquired banks to see if any changes occurred after acquisition
- A comparison of the performance of the interstate acquisitions to that of similar banks under in-state ownership to check for relative performance differences

The first approach is of importance when analyzing whether the acquired banks were successful in maintaining or reaching an overall earnings and performance level that justifies the cost and risk of acquisition. Interstate banking organizations can be expected to focus much of their expansion efforts on acquiring banks that have good profit potential and are located in attractive, growing markets. To the extent these expectations are realized and the acquisitions are successful, the acquired banks should show an ability to maintain or improve on their pre-acquisition performance levels.

The second approach — a comparison with similar banks not under interstate ownership — indicates whether banks owned interstate have any competitive or operational advantages over other banks. In general, there are no clear-cut reasons for expecting interstate acquisitions to do substantially better or worse than other banks. However, organizations are likely to have certain objectives in their interstate expansion and may desire to change an acquired bank's policies and operations. Another rationale for this performance comparison is to provide an adjustment for economic fluctuations, market factors, and banking practices that change over time and affect the performance of all banks.

Performance of interstate acquisitions

Interstate banking expansion has raised a wide variety of performance questions — not only in regard to bank profitability, but also in such areas as cost control, service to local customers, and level of risk exposure. The following discussion consequently reviews several different measures of interstate banking performance, including acquired bank earnings levels, expenses, portfolio distribution, equity capital, risk and asset quality, and growth in assets. The tables in the text provide summary statistics for each of these areas, focusing on median performance measures or the values achieved by the typical interstate acquisition. Additional tables with a wider variety of performance measures and both median and average values are included in the Appendix.[1]

The comparisons between interstate acquisitions and peer banks relate the performance of each bank acquired interstate to that of banks under in-state ownership with similar size characteristics and location. The construction of these peer bank groups and their performance measures is described in Box 2. The tables in the text present the median performance differences between banks in each interstate acquisition group and the appropriate peer banks.

Earnings measures. The earnings record of interstate acquisitions is a key summary measure of how they have performed and whether they have any competitive advantages over other banks. The typical interstate acquisition in this study was generally able to maintain and, in some cases, increase its return on average assets after acquisition (Table 1). Both the 1985 and 1987 acquisition groups demonstrated an improvement in median earnings across much of the post-acquisition period. Although the median return on assets for the 1986 acquisition group fell below the pre-acquisition level, this decline was very slight and the returns still remained above that for the year of acquisition.[2]

In the peer bank comparisons, the median earnings differences indicate that the typical interstate acquisition did not experience any great earnings improvement or deterioration relative to banks remaining under in-state ownership (Table 1). All three acquisition groups displayed an earnings advantage over peer banks in the year before acquisition. This advantage declined or disappeared during the year of acquisition, possibly reflecting initial takeover costs and efforts to clean up the loan portfolio at some of the acquired banks. Then, for most of the period after acquisition, the median bank in each acquisition

[1] *In most cases, these median and average values give a similar picture of interstate performance. Overall, the median measures may be more likely to give a clearer picture of the typical interstate acquisition compared to the averages or means, which may be influenced by exceptionally good or poor performance on the part of a few banks.*

[2] *In the year of acquisition, some banks may have been acquired near the beginning of the year and consequently would have been under interstate ownership throughout most of this year. Other banks may have been acquired near the end of the year, thus having little experience with interstate ownership. For these reasons, the year of acquisition should be viewed more as a transition year rather than an indication of interstate changes.*

Box 2: Construction of the Peer Groups

In order to compare the banks acquired interstate with similar banks remaining under in-state ownership, this study takes the full service banks that are not under the control of interstate banking organizations and places them into one of fifteen separate categories, based on their size and location. These categories reflect three bank size groups based on a bank's total asset holdings — $25-100 million, $100-500 million, and $500 million - $10 billion. In addition, these categories are further partitioned by placing banks into one of five geographic and economic regions — northeast states, southeast states, central states, western states, and southwest and other energy states.

The peer analysis then calculates weighted average performance measures across all the banks in each of the fifteen different peer categories and for each year in the study. This analysis next compares the performance measures for each bank acquired on an interstate basis to the measures calculated for peer banks of similar size and location. The resulting performance differences provide the basis for constructing median and average differences across the banks in each interstate acquisition group and their respective peers.

group was able to come close to and often exceed the earnings advantage it held prior to acquisition. As a result, the typical interstate acquisition neither experienced notable earnings problems nor gained any new competitive advantages.[3]

Other income measures present much the same picture (Appendix). Returns on equity generally were maintained or increased during the post-acquisition period, both for the median bank in each acquisition group and in relation to peer banks. Although the net interest margin fell within the 1985 acquisition group, it remained about the same after acquisition for the 1986 and 1987 groups. Also, the median banks in the 1985 and 1986 acquisition groups were able to increase their noninterest income, but this appeared to be a general trend in banking as shown by the peer group comparisons.

Expense items. Interstate acquisitions may present some opportunities to lower costs through the consolidation of certain operations and the centralized development of products to be offered within an interstate system. At the same time, though, newly acquired banks may incur a number of expenses related to their acquisition. With their out-of-state ownership, they may also encounter some new operating and management costs.

With regard to expenses, the 1985 interstate acquisition group was able to lower substantially the median level of overhead costs as a percent of average assets (Table 2). This group lowered median overhead from 3.99 percent of average assets in the year before acquisition to 3.30 percent in the fourth year after acquisition. Among the banks in this group were a number of larger institutions formed by the merger of many small-to-medium size banks. These mergers may have allowed the larger surviving banks to lower their cost structures by changing their business focus or by taking advantage of possible merger economies. In contrast, the 1986 acquisition group achieved a much smaller decline in overhead, while the 1987 group experienced a slight increase.

The 1985 and 1986 acquisition groups also showed an improvement in overhead expenses in relation to peer banks. Before acquisition, both of these groups had overhead that exceeded peer levels, but this difference was reduced or eliminated in the post-acquisition years.

[3] *The average earnings measures reported in the Appendix show somewhat greater difficulty on the part of the three acquisition groups in maintaining their income. This result, however, can be traced to the poor performance of a few banks acquired in the New England area and in Arizona. In fact, a separate quartile and decile analysis not reported here indicated this earnings difficulty was confined to a very small number of banks, and all but the bottom decile of banks showed an ability to maintain or improve the earnings position they held in relation to peer banks.*

Table 1

Return on average assets for banks acquired interstate*
(Median returns are presented for each acquisition group)

Banks Acquired Interstate	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
1985 Acquisition Group	.89%	.91%	.88%	.95%	1.12%	.98%
1986 Acquisition Group	1.03%	.90%	.97%	.99%	.99%	
1987 Acquisition Group	.95%	.94%	1.06%	1.01%		
Difference Between Acquisition Groups and Peer Banks ** (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	.21	.05	.02	.28	.25	.38
1986 Acquisition Group/Peer Comparison	.07	-.06	.07	.00	-.01	
1987 Acquisition Group/Peer Comparison	.04	.01	.08	.01		

* This table is based on each bank's income over a given year as a percentage of its average total assets. In this table, the first year after acquisition would be 1986 for the 1985 group, 1987 for the 1986 group, and 1988 for the 1987 group.

** This comparison is the median difference in performance. This difference is calculated by subtracting the appropriate peer bank performance measures from those of the banks in each acquisition group and then taking the median difference across the banks in each group. A positive value in this table means that the typical acquired bank's earnings exceeded peer bank earnings by the reported amount.

Table 2

Overhead costs to average assets for banks acquired interstate*
(Median overhead costs are presented for each acquisition group)

Banks Acquired Interstate	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
1985 Acquisition Group	3.99%	3.85%	3.72%	3.35%	3.38%	3.30%
1986 Acquisition Group	3.43%	3.29%	3.28%	3.38%	3.25%	
1987 Acquisition Group	3.01%	3.00%	3.16%	3.14%		
Differences Between Acquisition Groups and Peer Banks (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	.31	.03	.14	-.21	-.21	.12
1986 Acquisition Group/Peer Comparison	.25	.13	.02	.13	.20	
1987 Acquisition Group/Peer Comparison	-.07	.03	.09	.11		

* This table presents overhead costs as a percentage of a bank's average total assets over the given year. See the footnotes to Table 1 for an explanation of the peer bank comparisons.

Table 3

Total loans to total assets at banks acquired interstate*
(Median loan-to-asset ratios are presented for each acquisition group)

	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
Banks Acquired Interstate						
1985 Acquisition Group	56.53%	60.69%	59.47%	64.32%	64.23%	61.40%
1986 Acquisition Group	57.56%	59.31%	64.14%	66.70%	66.86%	
1987 Acquisition Group	55.91%	60.17%	63.37%	63.96%		
Differences Between Acquisition Groups and Peer Banks (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	1.99	4.55	4.77	4.95	4.71	.48
1986 Acquisition Group/Peer Comparison	3.99	4.67	7.71	8.93	9.08	
1987 Acquisition Group/Peer Comparison	2.15	4.70	7.42	6.43		

* This table reports total loans as a percentage of a bank's total asset holdings. See the footnotes to Table 1 for an explanation of the peer bank comparisons.

Other measures of banking expense and operating efficiency—personnel expense to average assets and average assets per employee—showed improvement in almost all cases during the post-acquisition years (Appendix). This improvement held for the acquisitions on both an individual level and in relation to the peer banks.

These results thus suggest that interstate organizations have had some success in controlling overhead and personnel costs. This conclusion, though, should be treated with caution since the parent holding companies could be using some of their own personnel and equipment to provide services formerly handled within the banks.

Portfolio distribution. One question that has received much attention in the interstate banking debate is what balance sheet changes banking organizations will make after they acquire banks in new markets. In other words, will the lending focus of the acquired banks change or will any other aspects of their operations and dealings with local customers be different?

The interstate acquisition groups in this study experienced a number of similar balance sheet changes after acquisition. The most noteworthy of these was a substantial increase in the loan-to-asset ratio (Table 3). The median banks in the three acquisition groups all had loan-to-asset ratios of below 58 percent before their acquisition. However, after interstate acquisition, these median ratios increased and reached peaks of approximately 64 percent for the 1985 and 1987 groups and nearly 67 percent for the 1986 group. This increase in lending suggests a strong interest on the part of interstate organizations to enter new markets and find new sources of business.

A number of other portfolio shifts also occurred within the interstate acquisition groups. These shifts included a sizeable increase in real estate loans as a percent of all loans, relative declines in business and consumer lending, an increase in state and local securities, and a decrease in cash and due from other banks (Appendix).[4]

Several of these portfolio shifts were unique to the acquired banks, while other changes mirrored those of the peer banks. Much of the increase in the loan-to-assets ratios of interstate acquisitions,

4 Some caution should be used in interpreting these movements and their magnitudes, because different banks within an acquisition group may represent the median bank on different performance measures. Hence, the median measures do not necessarily track the same bank. Thus, while the portfolio shifts should give a good indication of interstate banking trends, they may not always give a consistent picture of the "typical" interstate acquisition.

for instance, represented an increase relative to peer bank ratios. The increased real estate lending by banks acquired interstate, though, appeared to follow a similar shift by the entire banking industry and, in some cases, even lagged behind peer bank increases. Likewise, peer banks and banks under interstate ownership made many of the same efforts to conserve on cash items and to increase holdings of state and local securities.

Table 4

Equity capital to total assets for banks acquired interstate*
(Median equity capital-to-total assets ratios are presented for each acquisition group)

	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
Banks Acquired Interstate						
1985 Acquisition Group	6.07%	5.66%	5.81%	6.34%	6.72%	6.36%
1986 Acquisition Group	7.15%	6.99%	7.75%	7.36%	7.32%	
1987 Acquisition Group	6.99%	7.21%	7.03%	7.27%		
Differences Between Acquisition Groups and Peer Banks (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	-.05	-.37	-.25	.03	-.01	-.14
1986 Acquisition Group/Peer Comparison	-.21	-.43	.05	-.37	-.37	
1987 Acquisition Group/Peer Comparison	-.47	-.50	-.59	-.63		

* This table presents total equity capital as a percentage of a bank's total asset holdings. See the footnotes to Table 1 for an explanation of the peer bank comparisons.

Equity capital. Interstate acquisition could influence a bank's level of equity capital in several ways. As part of a larger, more geographically diversified organization, a bank might be better able to count on its parent for capital support in the event of a local economic downturn or individual banking problems. This same diversification and parent company support might also allow the banks in an interstate organization to operate with lower levels of capital compared to banks in organizations that are more closely tied to local or regional economic fluctuations.

For the three acquisition groups, median equity capital ratios generally increased after interstate acquisition (Table 4). This increase, though, was part of a general trend in banking, and relative to peer banks, the interstate acquisition groups actually experienced moderate declines in median equity capital, particularly during the year of acquisition. These declines during the year of acquisition may indicate initial acquisition strains or the need to clean up previous problems. In subsequent years, the 1985 and 1986 acquisition groups were able to make up some of this relative decline in capital. By the end of the study period, all three acquisition groups still were below peer bank capital levels, but the diversification benefits associated with interstate banking may make up for some of this difference.

Risk and asset quality measures. Another question surrounding interstate acquisitions is whether out-of-state organizations can enter new markets and effectively judge the local customers and any unique lending risks they present. For the interstate acquisition groups, these risk and asset quality concerns did not appear to be realized to any great extent. The 1986 and 1987 groups succeeded in keeping net charge-offs as a percent of total loans near or below the pre-acquisition rates (Table 5). The 1985 acquisition group experienced increased charge-offs, but the median rate never rose to a level that would draw serious attention.

Under the peer group comparisons, the three acquisition groups began with median charge-off rates below their peers. Although the interstate groups lost part of this advantage after acquisition, they still kept their loss rates below that of their peers. Moreover, most of the advantage lost occurred during the year of acquisition or in the next year, which would be consistent with the acquired banks trying to clean up previously unrecognized loan problems.

Median noncurrent assets demonstrated much the same pattern (Appendix). For the 1985 acquisition group, though, noncurrent assets rose to a higher level in the fourth year after acquisition, implying a moderate increase in risk exposure.

Growth rates. Most interstate activity can be expected to center on faster growing areas as organizations try to enter markets that are the most attractive and have the most profit potential.[5] The growth rates of the acquired banks provide some support for this view (Table 6). In the year before interstate acquisition, for example, the typical bank experienced fairly rapid asset growth. The 1985 group, which was mainly composed of banks in New England and the Southeast, also had high median growth rates in the year of acquisition and in several of the years after acquisition. Although the asset growth rates for all three groups slowed near the end of the study, this was also a time of slower economic and monetary growth.

The comparison with peer banks does not demonstrate a clear-cut trend in asset growth for the interstate acquisitions. Although the median bank's growth trails that of peer banks in most years, the average growth rates show greater growth by the interstate acquisitions in many of the years (Appendix). This result indicates that the interstate acquisitions have continued to experience good asset growth in many instances.[6]

Conclusions

The typical interstate acquisition in this study was able to maintain its earnings both in relation to pre-acquisition levels and in comparison to banks not under interstate ownership. A number of the interstate acquisitions demonstrated some success in controlling and reducing overhead and personnel costs — a success that was not entirely matched by other banks during this period. The acquired banks also became more active lenders once they were under interstate ownership. Although measures of bank asset quality declined in a few cases after acquisition, most of the acquired banks continued to have fewer noncurrent assets and loan charge-offs than other banks. Overall, this performance suggests that the banks acquired on an interstate basis experienced a few changes, but generally maintained their operations in much the same fashion as before acquisition.

These results thus indicate that interstate acquisition activity is not likely to deviate significantly from the current trends. While a few interstate acquisitions have not done well because of regional downturns, most others have successfully handled the initial adjustments inherent in any acquisition and maintained a competitive position in local markets. This interstate expansion and competition, though, need not be of concern to other banking organizations. As shown in this study, banks acquired on an interstate basis have typically performed in a manner comparable to other banks and have not shown any substantial competitive advantages. Consequently, the success of interstate acquisitions will continue to depend on many of the same principles as other acquisitions — thorough planning, careful oversight of operations, control of asset quality, and attention to customer needs.

[5] For a study which generally confirms this hypothesis on a state-by-state basis, see John D. Shoenhair and Kenneth Spong, "Interstate Bank Expansion: A Comparison Across Individual States," ***Banking Studies*** *(Federal Reserve Bank of Kansas City), 1990 Annual, pp. 1-23.*

[6] The peer bank growth comparisons contain one bias that favors the peer groups. Throughout the study, the acquired bank numbers combine all the banks that were eventually merged into one entity, and the growth rate of the interstate acquisitions consequently measures only the internal growth of the combined banks in a merger. On the other hand, because of the way the peer banks were constructed, their growth figures incorporate not only internal growth, but also external growth, such as might occur when a peer bank acquires another bank through merger.

Table 5

Net charge-offs to total loans for banks acquired interstate*
(Median net charge-off-to-total loan ratios are presented for each acquisition group)

Banks Acquired Interstate	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
1985 Acquisition Group	.27%	.34%	.47%	.51%	.33%	.40%
1986 Acquisition Group	.37%	.52%	.31%	.33%	.42%	
1987 Acquisition Group	.40%	.32%	.27%	.32%		
Differences Between Acquisition Groups and Peer Banks (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	-.20	-.19	-.09	-.11	-.13	-.05
1986 Acquisition Group/Peer Comparison	-.40	-.31	-.28	-.16	-.06	
1987 Acquisition Group/Peer Comparison	-.49	-.28	-.16	-.29		

* This table presents net charge-offs as a percentage of a bank's total loans. See the footnotes to Table 1 for an explanation of the peer bank comparisons.

Table 6

Asset growth of banks acquired interstate*
(Median annual asset growth rates are presented for each acquisition group)

Banks Acquired Interstate	Year before acquisition	Year of acquisition	After acquisition 1st year	2nd year	3rd year	4th year
1985 Acquisition Group	15.34%	13.87%	19.12%	1.37%	10.59%	4.93%
1986 Acquisition Group	12.15%	10.58%	3.41%	6.95%	4.41%	
1987 Acquisition Group	8.50%	3.89%	8.23%	4.67%		
Differences Between Acquisition Groups and Peer Banks (Median decimal point difference in performance)						
1985 Acquisition Group/Peer Comparison	-.16	-2.03	4.27	-4.06	-1.27	-3.79
1986 Acquisition Group/Peer Comparison	2.31	.77	-2.42	-1.35	-3.88	
1987 Acquisition Group/Peer Comparison	-1.85	-2.17	-1.27	-3.97		

* This table presents bank asset growth as a percentage growth rate over the year. See the footnotes to Table 1 for an explanation of the peer bank comparisons.

Table A

Median performance measures - banks acquired interstate in 1985*

(Average performance measures are presented below in parentheses. The 1985 acquisition group includes ten banks in operation at year-end 1989.)

Performance measures (in percentage terms unless otherwise noted)	Before acquisition 1984		Year of acquisition 1985		After acquisition 1986		1987		1988		1989	
Size of bank:												
Total assets (in millions of dollars)	$1,212	($1,748)	$1,367	($2,001)	$1,566	($2,401)	$1,739	($2,448)	$1,947	($2,669)	$1,959	($2,795)
Income measures:												
Return on average assets	.89	(1.05)	.91	(.87)	.88	(.79)	.95	(1.03)	1.12	(1.22)	.98	(.75)
Return on equity	13.78	(14.00)	12.97	(11.82)	14.62	(12.47)	14.77	(13.45)	15.94	(16.73)	15.09	(8.87)
Net interest margin	4.80	(4.63)	4.43	(4.51)	3.95	(4.13)	4.17	(4.35)	4.14	(4.62)	4.03	(4.51)
Noninterest income to total income	11.41	(11.96)	12.97	(12.80)	13.01	(13.07)	13.23	(12.88)	13.14	(13.07)	12.46	(13.41)
Expense items:												
Overhead to average assets	3.99	(4.05)	3.85	(3.97)	3.72	(3.83)	3.35	(3.35)	3.38	(3.99)	3.30	(3.95)
Personnel expense to average assets	2.07	(2.12)	1.97	(2.08)	1.78	(1.88)	1.55	(1.67)	1.59	(1.51)	1.60	(1.47)
Average assets per employee (in thousands of dollars)	$1,023	($1,037)	$1,157	($1,133)	$1,385	($1,445)	$1,531	($1,713)	$1,761	($2,348)	$1,960	($2,808)
Portfolio distribution:**												
Total loans to total assets	56.53	(56.62)	60.69	(58.67)	59.47	(58.70)	64.32	(62.61)	64.23	(65.07)	61.40	(63.81)
Real estate loans to total loans	35.82	(35.17)	36.98	(38.02)	38.94	(41.46)	41.73	(44.93)	47.24	(46.17)	52.11	(46.81)
Business loans to total loans	30.82	(31.28)	28.68	(30.09)	28.27	(29.00)	24.90	(26.87)	22.72	(23.37)	23.68	(22.37)
Consumer loans to total loans	24.40	(26.98)	25.65	(24.86)	21.55	(20.42)	18.85	(18.69)	18.97	(23.38)	17.47	(22.71)
Agricultural loans to total loans	.01	(.11)	.05	(.17)	.04	(.13)	.03	(.10)	.02	(.08)	.02	(.05)
Net Fed funds sold and securities purchased under resale agreements to total assets	1.58	(-1.18)	-.52	(-.84)	-2.77	(-2.13)	-2.12	(-3.58)	-3.88	(-6.00)	1.43	(-4.88)
Cash and due from other banks to total assets	12.00	(11.02)	9.47	(9.75)	11.59	(11.15)	10.45	(9.28)	7.89	(8.93)	8.58	(8.28)
State and local securities to total assets	1.95	(2.04)	1.53	(1.73)	2.46	(4.54)	7.33	(8.21)	7.05	(6.34)	8.43	(7.61)
Demand deposits to total deposits	27.21	(27.31)	26.63	(25.48)	27.83	(28.25)	23.77	(25.38)	23.78	(24.77)	19.66	(23.36)
Core deposits to total deposits	89.31	(89.81)	87.49	(88.01)	91.89	(91.11)	89.69	(88.41)	86.82	(86.31)	86.56	(86.86)
Equity capital to total assets	6.07	(6.92)	5.66	(7.27)	5.81	(6.87)	6.34	(6.95)	6.72	(6.83)	6.36	(6.52)
Risk and asset quality measures:												
Noncurrent assets to total assets	.95	(1.09)	1.30	(1.21)	.77	(.99)	.99	(1.09)	.92	(1.26)	1.63	(2.71)
Net charge-offs to total loans	.27	(.36)	.34	(.38)	.47	(.46)	.51	(.53)	.33	(.48)	.40	(.66)
Growth measure:												
Percentage growth in total assets	15.34	(16.58)	13.87	(14.88)	19.12	(22.79)	1.37	(4.09)	10.59	(16.46)	4.93	(8.22)

* The balance sheet ratios are as of the end of each year.

** This table does not present information on U.S. Government securities, because a number of banks had large year-end fluctuations in their holdings. Some of these fluctuations may have been due to substantial shifts in public funds with U.S. Treasury security pledging requirements.

Table B

Median performance measures - banks acquired interstate in 1986*

(Average performance measures are presented below in parentheses. The 1986 acquisition group includes 74 banks in operation at year-end 1989.)

Performance measures (in percentage terms unless otherwise noted)	Before acquisition 1985		Year of acquisition 1986		After acquisition 1987		1988		1989	
Size of bank:										
Total assets (in millions of dollars)	$125	($462)	$368	($515)	$184	($531)	$192	($582)	$195	($611)
Income measures:										
Return on average assets	1.03	(.92)	.90	(.61)	.97	(.76)	.99	(.73)	.99	(.63)
Return on equity	13.82	(11.69)	11.53	(7.66)	13.39	(10.48)	13.13	(8.95)	13.03	(7.59)
Net interest margin	4.28	(4.53)	4.05	(4.19)	4.28	(4.28)	4.25	(4.18)	4.18	(4.71)
Noninterest income to total income	6.41	(7.58)	7.06	(8.00)	8.46	(9.97)	8.04	(9.53)	7.62	(9.15)
Expense items:										
Overhead to average assets	3.43	(3.34)	3.29	(3.30)	3.28	(3.46)	3.38	(3.35)	3.25	(3.39)
Personnel expense to average assets	1.62	(1.73)	1.52	(1.60)	1.47	(1.65)	1.39	(1.54)	1.40	(1.53)
Average assets per employee (in thousands of dollars)	$1,216	($1,290)	$1,388	($1,418)	$1,482	($1,533)	$1,551	($1,654)	$1,708	($1,948)
Portfolio distribution:**										
Total loans to total assets	57.56	(56.44)	59.31	(56.15)	64.14	(62.06)	66.70	(65.24)	66.86	(64.85)
Real estate loans to total loans	37.26	(39.37)	40.76	(41.44)	42.56	(46.09)	46.61	(47.32)	47.32	(49.08)
Business loans to total loans	23.27	(24.75)	22.27	(24.78)	20.60	(22.56)	21.10	(22.15)	21.89	(21.25)
Consumer loans to total loans	25.91	(27.84)	24.73	(26.00)	20.95	(23.69)	22.33	(23.89)	22.33	(22.89)
Agricultural loans to total loans	.42	(2.44)	.30	(2.17)	.21	(1.39)	.17	(1.24)	.19	(1.30)
Net Fed funds sold and securities purchased under resale agreements to total assets	2.00	(2.14)	2.65	(3.59)	.79	(-.46)	-1.02	(-1.81)	1.01	(.61)
Cash and due from other banks to total assets	7.85	(8.50)	8.29	(9.64)	6.90	(8.59)	6.65	(7.87)	6.48	(7.26)
State and local securities to total assets	3.24	(4.77)	2.53	(5.14)	6.42	(7.52)	6.31	(7.39)	8.02	(8.31)
Demand deposits to total deposits	17.44	(19.89)	19.55	(20.49)	18.72	(18.74)	16.78	(17.35)	15.30	(15.95)
Core deposits to total deposits	90.08	(87.90)	91.42	(89.31)	90.54	(88.41)	88.91	(87.04)	88.53	(87.18)
Equity capital to total assets	7.15	(7.55)	6.99	(7.43)	7.75	(7.64)	7.36	(7.39)	7.32	(8.15)
Risk and asset quality measures:										
Noncurrent assets to total assets	.84	(1.17)	.76	(1.13)	.76	(1.21)	.59	(1.19)	.86	(1.60)
Net charge-offs to total loans	.37	(.66)	.52	(.83)	.31	(.58)	.33	(.61)	.42	(.87)
Growth measure:										
Percentage growth in total assets	12.15	(13.82)	10.58	(12.11)	3.41	(10.51)	6.95	(10.39)	4.41	(5.19)

* The balance sheet ratios are as of the end of each year.

** This table does not present information on U.S. Government securities, because a number of banks had large year-end fluctuations in their holdings. Some of these fluctuations may have been due to substantial shifts in public funds with U.S. Treasury security pledging requirements.

Table C

Median performance measures - banks acquired interstate in 1987*

(Average performance measures are presented below in parentheses. The 1987 acquisition group includes 95 banks in operation at year-end 1989.)

Performance measures (in percentage terms unless otherwise noted)	Before acquisition 1986		Year of acquisition 1987		After acquisition 1988		After acquisition 1989	
Size of bank:								
Total assets (in millions of dollars)	$138	($537)	$147	($551)	$150	($577)	$160	($629)
Income measures:								
Return on average assets	.95	(.82)	.94	(.66)	1.06	(.88)	1.01	(.87)
Return on equity	12.69	(9.83)	12.23	(7.63)	13.63	(12.49)	13.91	(11.91)
Net interest margin	4.07	(4.09)	4.08	(4.06)	4.12	(4.18)	4.18	(4.31)
Noninterest income to total income	7.36	(8.03)	7.70	(9.28)	7.11	(8.91)	6.76	(8.37)
Expense items:								
Overhead to average assets	3.01	(3.21)	3.00	(3.33)	3.16	(3.48)	3.14	(3.49)
Personnel expense to average assets	1.49	(1.54)	1.45	(1.60)	1.42	(1.63)	1.40	(1.59)
Average assets per employee (in thousands of dollars)	$1,494	($1,550)	$1,645	($1,655)	$1,673	($1,756)	$1,740	($1,911)
Portfolio distribution:**								
Total loans to total assets	55.91	(55.73)	60.17	(58.56)	63.37	(62.30)	63.96	(62.95)
Real estate loans to total loans	37.76	(37.90)	41.11	(41.71)	42.83	(42.26)	44.88	(43.87)
Business loans to total loans	29.74	(31.14)	28.48	(29.64)	29.11	(28.74)	29.24	(28.47)
Consumer loans to total loans	21.16	(22.68)	18.72	(21.94)	20.21	(22.48)	19.70	(21.94)
Agricultural loans to total loans	.38	(2.51)	.31	(2.06)	.14	(2.16)	.14	(2.07)
Net Fed funds sold and securities purchased under resale agreements to total assets	2.74	(2.90)	1.47	(.21)	-.44	(-2.27)	1.81	(-.22)
Cash and due from other banks to total assets	9.55	(10.82)	8.13	(10.23)	7.57	(9.30)	6.86	(7.71)
State and local securities to total assets	3.23	(4.46)	8.47	(9.97)	8.12	(9.32)	9.85	(10.91)
Demand deposits to total deposits	18.18	(19.43)	16.51	(17.88)	16.63	(17.54)	15.62	(16.59)
Core deposits to total deposits	90.35	(87.95)	89.15	(86.60)	88.08	(84.95)	87.54	(84.45)
Equity capital to total assets	6.99	(7.30)	7.21	(7.97)	7.03	(7.48)	7.27	(7.58)
Risk and asset quality measures:								
Noncurrent assets to total assets	.70	(1.18)	.88	(1.17)	.75	(1.01)	.84	(1.13)
Net charge-offs to total loans	.40	(.71)	.32	(.85)	.27	(.45)	.32	(.63)
Growth measure:								
Percentage growth in total assets	8.50	(12.10)	3.89	(5.21)	8.23	(11.50)	4.67	(7.20)

* The balance sheet ratios are as of the end of each year.

** This table does not present information on U.S. Government securities because a number of banks had large year-end fluctuations in their holdings. Some of these fluctuations may have been due to substantial shifts in public funds with U.S. Treasury security pledging requirements.

Table D

Comparison of banks acquired interstate in 1985 with peer group banks

(The numbers in the table are the median differences between the banks acquired interstate and their respective peer banks.* Average performance differences are in parentheses.)

Difference in performance measures (decimal point differences unless otherwise noted)	Before acquisition 1984		Year of acquisition 1985		After acquisition 1986		1987		1988		1989	
Income measures:												
Return on average assets	.21	(.32)	.05	(.01)	.02	(-.08)	.28	(.27)	.25	(.36)	.38	(.03)
Return on equity	3.28	(3.65)	-.01	(-.91)	1.85	(-.23)	4.03	(2.55)	3.11	(4.68)	5.36	(-1.34)
Net interest margin	.77	(.63)	.28	(.51)	.19	(.27)	.28	(.34)	.34	(.65)	.34	(.52)
Noninterest income to total income	1.09	(2.22)	.23	(.96)	-.25	(.41)	-1.47	(-.59)	-.49	(.47)	1.07	(2.66)
Expense items:												
Overhead to average assets	.31	(.51)	.03	(.38)	.14	(.36)	-.21	(-.14)	-.21	(.52)	.12	(.62)
Personnel expense to average assets	.33	(.35)	.28	(.33)	.24	(.21)	-.05	(.00)	-.05	(-.15)	-.15	(-.18)
Average assets per employee (in thousands of dollars)	-$240	(-$237)	-$202	(-$220)	$65	(-$31)	$90	($149)	$92	($693)	$145	($960)
Portfolio distribution:**												
Total loans to total assets	1.99	(1.05)	4.55	(2.96)	4.77	(2.75)	4.95	(3.72)	4.71	(5.67)	.48	(2.96)
Real estate loans to total loans	5.23	(2.61)	6.62	(4.68)	5.06	(5.41)	2.48	(4.79)	3.72	(3.22)	3.98	(1.90)
Business loans to total loans	-3.93	(.84)	-1.28	(.45)	-.66	(-.26)	.92	(-1.34)	-4.11	(-4.07)	-4.89	(-3.98)
Consumer loans to total loans	4.44	(4.54)	1.79	(1.82)	-1.67	(-1.93)	-.61	(-2.88)	-.13	(2.52)	-1.02	(2.51)
Agricultural loans to total loans	-.61	(-2.54)	-.52	(-.89)	-.51	(-.80)	-.35	(-.70)	-.37	(-.73)	-.35	(-.72)
Net Fed funds sold and securities purchased under resale agreements to total assets	.82	(.76)	1.41	(1.16)	1.43	(-.47)	3.20	(.20)	-.15	(-2.09)	6.18	(-.90)
Cash and due from other banks to total assets	-1.70	(-2.16)	-2.63	(-2.43)	-1.71	(-1.49)	-2.98	(-1.93)	-2.20	(-2.05)	-2.86	(-.90)
State and local securities to total assets	-1.89	(-1.50)	-1.60	(-1.28)	-1.95	(-.25)	.30	(1.07)	-.58	(-.80)	.24	(-.67)
Demand deposits to total deposits	4.45	(4.82)	3.14	(2.44)	2.87	(4.56)	3.83	(5.12)	3.70	(5.41)	2.68	(5.36)
Core deposits to total deposits	8.23	(10.22)	7.62	(7.06)	6.43	(8.93)	8.54	(8.97)	5.74	(7.79)	4.98	(8.29)
Equity capital to total assets	-.05	(.43)	-.37	(.91)	-.25	(.43)	.03	(.19)	-.01	(.04)	-.14	(-.22)
Risk and asset quality measures:												
Noncurrent assets to total assets	-.42	(-.37)	-.22	(-.27)	-.27	(-.39)	-.48	(-.38)	-.36	(-.07)	.45	(1.33)
Net charge-offs to total loans	-.20	(-.23)	-.19	(-.14)	-.09	(-.12)	-.11	(-.05)	-.13	(.02)	-.05	(.11)
Growth measure:												
Percentage growth in total assets	-.16	(-.13)	-2.03	(-.70)	4.27	(7.69)	-4.06	(-2.77)	-1.27	(5.17)	-3.79	(.39)

* A positive number in the table means that the banks acquired interstate (on a median or average basis) had a higher value for the performance measure than did the peer banks associated with each of the acquired banks. A negative number means the peer banks had higher values. For example, a figure of .10 for return on average assets would mean that the banks acquired interstate had returns that exceeded that of the appropriate peer banks by this amount on either a median or average basis.

** This table does not present information on U.S. Government securities because a number of banks had large year-end fluctuations in their holdings. Some of these fluctuations may have been due to substantial shifts in public funds with U.S. Treasury security pledging requirements.

Table E

Comparison of banks acquired interstate in 1986 with peer group banks

(The numbers in the table are the median differences between the banks acquired interstate and their respective peer banks.* Average performance differences are in parentheses.)

Difference in performance measures (decimal point differences unless otherwise noted)	Before acquisition 1985		Year of acquisition 1986		After acquisition 1987		1988		1989	
Income measures:										
Return on average assets	.07	(.00)	-.06	(-.27)	.07	(-.06)	.00	(-.13)	-.01	(-.29)
Return on equity	1.47	(.17)	-.45	(-3.14)	1.60	(1.02)	1.19	(-.68)	1.25	(-3.49)
Net interest margin	.20	(.31)	.04	(.16)	.17	(.21)	.17	(.13)	.17	(.61)
Noninterest income to total income	-1.45	(-.66)	-1.55	(-1.30)	-.98	(.26)	-1.30	(.01)	-.89	(.24)
Expense items:										
Overhead to average assets	.25	(.35)	.13	(.28)	.02	(.43)	.13	(.32)	.20	(.45)
Personnel expense to average assets	.10	(.16)	.00	(.06)	-.10	(.12)	-.12	(.01)	-.11	(-.02)
Average assets per employee (in thousands of dollars)	-$127	(-$102)	-$110	(-$71)	-$73	(-$7)	-$35	($57)	$61	($279)
Portfolio distribution:**										
Total loans to total assets	3.99	(3.36)	4.67	(3.12)	7.71	(6.85)	8.93	(8.64)	9.08	(7.97)
Real estate loans to total loans	.55	(.35)	.89	(.02)	1.53	(1.24)	.47	(.56)	-.68	(.54)
Business loans to total loans	-3.57	(-1.19)	-3.27	(-1.13)	-3.04	(-1.91)	-3.25	(-1.80)	-2.28	(-1.94)
Consumer loans to total loans	2.26	(3.36)	2.47	(3.03)	-.30	(1.80)	.51	(2.52)	1.19	(2.00)
Agricultural loans to total loans	-1.37	(-2.17)	-1.12	(-1.53)	-.88	(-1.91)	-.79	(-1.93)	-.83	(-1.89)
Net Fed funds sold and securities purchased under resale agreements to total assets	-.10	(-.09)	-.63	(1.24)	.04	(-1.38)	-2.55	(-2.48)	-1.11	(-1.16)
Cash and due from other banks to total assets	-.94	(-.04)	-1.41	(.40)	-1.08	(.27)	-1.48	(-.23)	-.83	(-.12)
State and local securities to total assets	-1.59	(.04)	-2.95	(-.94)	-2.30	(-1.49)	-3.59	(-2.61)	-3.38	(-3.00)
Demand deposits to total deposits	-.58	(1.06)	.02	(1.03)	1.09	(1.04)	-.27	(.42)	-.78	(-.13)
Core deposits to total deposits	1.98	(.89)	2.45	(1.64)	3.54	(2.17)	2.30	(1.36)	2.45	(1.72)
Equity capital to total assets	-.21	(-.11)	-.43	(-.09)	.05	(-.14)	-.37	(-.39)	-.37	(.28)
Risk and asset quality measures:										
Noncurrent assets to total assets	-.77	(-.53)	-.75	(-.51)	-.52	(-.34)	-.59	(-.27)	-.32	(.25)
Net charge-offs to total loans	-.40	(-.26)	-.31	(-.09)	-.28	(-.12)	-.16	(-.02)	-.06	(.31)
Growth measure:										
Percentage growth in total assets	2.31	(3.76)	.77	(2.03)	-2.42	(4.39)	-1.35	(1.68)	-3.88	(-3.10)

* A positive number in the table means that the banks acquired interstate (on a median or average basis) had a higher value for the performance measure than did the peer banks associated with each of the acquired banks. A negative number means the peer banks had higher values. For example, a figure of .10 for return on average assets would mean that the banks acquired interstate had returns that exceeded that of the appropriate peer banks by this amount on either a median or average basis.

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Table F

Comparison of banks acquired interstate in 1987 with peer group banks

(The numbers in the table are the median differences between the banks acquired interstate and their respective peer banks.* Average performance differences are in parentheses.)

Difference in performance measures (decimal point differences unless otherwise noted)	Before acquisition 1986		Year of acquisition 1987		After acquisition 1988		After acquisition 1989	
Income measures:								
Return on average assets	.04	(-.06)	.01	(-.22)	.08	(-.08)	.01	(-.13)
Return on equity	.73	(-1.26)	1.75	(-3.22)	1.49	(.83)	1.42	(-.12)
Net interest margin	.04	(-.01)	-.04	(-.10)	.09	(.01)	.09	(-.08)
Noninterest income to total income	-1.77	(-.93)	-1.43	(-.06)	-1.72	(-.21)	-.15	(-.33)
Expense items:								
Overhead to average assets	-.07	(-.02)	.03	(.12)	.09	(.27)	.11	(.30)
Personnel expense to average assets	-.03	(-.03)	.06	(.03)	-.10	(.07)	-.14	(.02)
Average assets per employee (in thousands of dollars)	$2	($62)	$86	($97)	$8	($135)	$17	($203)
Portfolio distribution:**								
Total loans to total assets	2.15	(2.66)	4.70	(3.13)	7.42	(5.68)	6.43	(5.61)
Real estate loans to total loans	-3.01	(-2.83)	-3.60	(-2.31)	-2.90	(-3.82)	-3.88	(-4.40)
Business loans to total loans	1.28	(4.58)	1.67	(4.14)	2.40	(3.88)	3.39	(4.63)
Consumer loans to total loans	-.10	(.48)	-1.66	(.73)	-.84	(1.99)	-.56	(2.10)
Agricultural loans to total loans	-2.34	(-2.15)	-2.33	(-1.88)	-2.23	(-1.83)	-2.44	(-1.92)
Net Fed funds sold and securities purchased under resale agreements to total assets	-1.13	(-.46)	-1.12	(-1.49)	-3.24	(-3.75)	-1.53	(-2.83)
Cash and due from other banks to total assets	-.33	(1.24)	-.50	(1.46)	-.80	(.85)	-.69	(.09)
State and local securities to total assets	-1.45	(-1.14)	.51	(1.46)	-1.60	(-.20)	-.33	(.39)
Demand deposits to total deposits	-1.34	(-.08)	-1.52	(.00)	-1.69	(.33)	-.80	(.23)
Core deposits to total deposits	1.29	(-.20)	2.62	(.23)	1.44	(-.69)	2.12	(-.47)
Equity capital to total assets	-.47	(-.28)	-.50	(.13)	-.59	(-.43)	-.63	(-.40)
Risk and asset quality measures:								
Noncurrent assets to total assets	-.71	(-.42)	-.36	(-.21)	-.37	(-.26)	-.39	(-.17)
Net charge-offs to total loans	-.49	(-.22)	-.28	(.20)	-.16	(-.05)	-.29	(.11)
Growth measure:								
Percentage growth in total assets	-1.85	(1.19)	-2.17	(-1.13)	-1.27	(2.29)	-3.97	(-1.32)

* A positive number in the table means that the banks acquired interstate (on a median or average basis) had a higher value for the performance measure than did the peer banks associated with each of the acquired banks. A negative number means the peer banks had higher values. For example, a figure of .10 for return on average assets would mean that the banks acquired interstate had returns that exceeded that of the appropriate peer banks by this amount on either a median or average basis.

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