# Crosscurrents in 1986 bank performance

*George Gregorash, Eileen Maloney, and Don Wilson*

U.S. banking registered lower profitability in 1986, as the industry withstood another year of heavy loan losses. Problem loans, meanwhile, halted their recent relative decline.

This somewhat disappointing news comes despite a fifth consecutive year of U.S. economic expansion and it fuels the arguments of those who suggest a long-term decline in U.S. banking. A closer look at the variety of performance across the industry, however, reveals a more complex picture.

## Many faces: Banking across the nation

Overall U.S. bank profitability (as measured by aggregate return on assets, or ROA[1]) dropped in 1986, resuming the decline it began in 1980 and briefly interrupted in 1985 (See Figure 1). The decline was driven principally by higher provisions for loan losses, which rose from 0.67 percent of assets in 1985 to 0.76 percent in 1986. Other revenue and expense components were either stable relative to 1985 (as in net interest margins, where less volatile interest rates prevailed) or continued their inexorable upward creep (as in fee revenue and overhead costs).

Strong regional disparities were in evidence (See Table 1). ROA declined relative to 1985 in three Federal Reserve Districts, most noticeably in the Dallas and Kansas City Districts, as banks serving the energy and agricultural economies demonstrated continuing stress. While there was modest improvement in profitability over 1985 in the other Districts, 1986 ROA's still compare unfavorably with performance measures of prior years for areas other than the eastern seaboard. The west and southwest continued to report the weakest overall earnings performance, while small midwestern banks continued to earn at rates far below their previous norms.

The decline in ROA's included many banks, as the frequency distribution illustrates (See Figure 2). Although the predominant value of ROA in 1986 remained 1.0 percent, roughly 150 fewer banks fell in this category. The number of banks losing money in 1986 rose to 2,741 or approximately 20 percent of banks. Only four percent of banks experienced losses in 1979. That number rose to eight percent in 1982 and to 17 percent in 1985.

The dramatic increase in the number of unprofitable banks, and, for that matter, the record number of bank failures, which reached a post depression high of 138 in 1986, highlights the particular degree of stress on smaller banks.

Profitability declines were indeed most prominent in the smaller bank size groups in 1986 and they have been the steepest over the last five years.[2] The aggregate ROA of banks with assets under $100 million dropped 13 basis points, from 0.65 percent in 1985 to 0.52 percent in 1986. Over 81 percent of U.S. commercial banks (11,298 banks) are at or below $100 million in assets. Similarly, banks with assets between $100 million and $1 billion saw their profitability diminish as their 1986 return on assets dropped to 0.70 percent from 0.82 percent in 1985.

Together these two groups comprise 97 percent of U.S. commercial banks and they hold one third of the U.S. commercial banking system's $3 trillion in assets. The remaining 317 banks manage the other $2 trillion in assets. These larger banks registered a much more modest profitability decline, although the fundamental nature of their business lines and earnings sources is in rapid transition.[3] Aggregate 1986 return on assets for this group equalled 0.64 percent, a mere 2 basis points below that of 1985.

Regardless of size, many banks enjoyed one burgeoning income source in 1986. Gains from securities portfolio sales were used extensively, helping to bolster provision-battered bank revenues. Absent the portfolio gains, the trend of bank profitability is decidedly less robust (See Table 2).

In 1985, such bond gains were most common among small agricultural banks, coinciding with pressured core earnings of these banks. The bond gains were even more sizable

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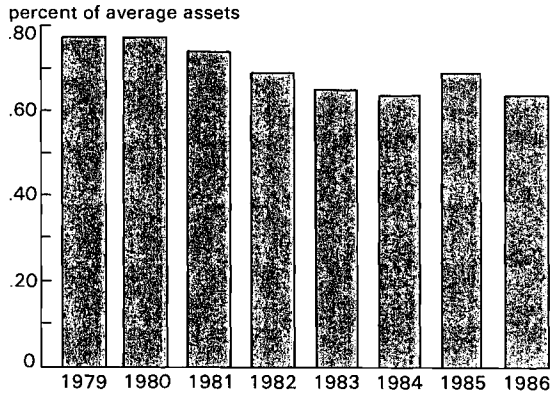
Figure 1
Return on assets—all U.S. commercial banks




and widespread in 1986. Because this is the second consecutive year in which gains from investment portfolios have figured prominently in aggregate year-to-year income variances, the future availability of these gains comes into question (See box on securities sales).

As the earnings variances indicate, asset quality considerations continued to dominate relative bank performance. The enlarged loan-loss provisions taken out of bank earnings in 1986 reflected continuing credit quality weakness. Aggregate 1986 loan charge offs totalled $16 billion or 0.92 percent of yearend loans versus $13 billion or 0.81 percent in 1985, thus continuing the consecutive annual escalations begun in 1981.

Though loan charge offs abounded in 1986, prospective asset quality measures remained flat relative to yearend 1985. The

**Table 1**
**Return on assets**
*(weighted U.S. averages)*

| | 1979 | 1982 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|
| All U.S. | .77 | .69 | .64 | .69 | .64 |
| Federal Reserve Districts | | | | | |
| Boston 1 | .69 | .72 | .85 | .84 | .90 |
| New York 2 | .53 | .58 | .61 | .69 | .69 |
| Philadelphia 3 | .74 | .75 | .92 | 1.03 | 1.03 |
| Cleveland 4 | .96 | .75 | .83 | .94 | .94 |
| Richmond 5 | .91 | .85 | .92 | .97 | .99 |
| Atlanta 6 | 1.00 | .93 | .92 | .92 | .83 |
| Chicago 7 | .77 | .57 | .29 | .70 | .76 |
| St. Louis 8 | .99 | .87 | .84 | .85 | .90 |
| Minneapolis 9 | .98 | .88 | .88 | .82 | .81 |
| Kansas City 10 | 1.11 | 1.00 | .62 | .40 | .27 |
| Dallas 11 | 1.01 | 1.03 | .66 | .52 | (.36) |
| San Francisco 12 | .71 | .42 | .39 | .32 | .36 |

**Table 2**
**Return on assets—**
**net of security gains (losses)**
*(weighted U.S. averages)*

| | 1979 | 1982 | 1984 | 1985 | 1986 |
|---|---|---|---|---|---|
| All U.S. | .77 | .69 | .64 | .63 | .50 |
| Federal Reserve Districts | | | | | |
| Boston 1 | .69 | .72 | .84 | .79 | .79 |
| New York 2 | .53 | .58 | .60 | .63 | .56 |
| Philadelphia 3 | .74 | .75 | .94 | 1.03 | .97 |
| Cleveland 4 | .96 | .75 | .84 | .85 | .78 |
| Richmond 5 | .91 | .85 | .94 | .91 | .84 |
| Atlanta 6 | 1.00 | .93 | .95 | .89 | .72 |
| Chicago 7 | .77 | .57 | .32 | .65 | .65 |
| St. Louis 8 | .99 | .87 | .85 | .81 | .80 |
| Minneapolis 9 | .98 | .88 | .89 | .79 | .32 |
| Kansas City 10 | 1.11 | 1.00 | .62 | .30 | .08 |
| Dallas 11 | 1.01 | 1.03 | .65 | .41 | (.56) |
| San Francisco 12 | .71 | .42 | .40 | .27 | .28 |

percentage of loans classified as nonperforming in 1986 totalled 2.8 percent, unchanged from 1985, halting the improvement in this measure that began in 1983.

Again, although the aggregate percentage of nonperforming loans remained stable in 1986, trends varied radically among the regions. Not surprisingly, nonperforming measures in the Federal Reserve Districts dominated by energy and agriculture remained weakest (See Table 3). Problem loan levels in the agricultural regions showed some signs of improvement, while the energy-influenced southwest regions registered continued escalations in nonperforming loans.

The year also marked the advent of significant tax reform legislation. It has been

Figure 2
Return on assets—by number of banks

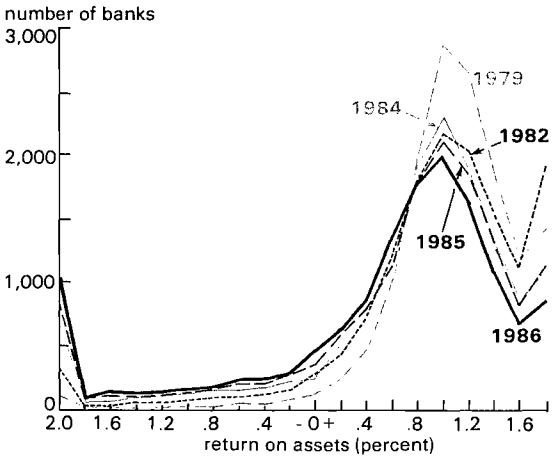


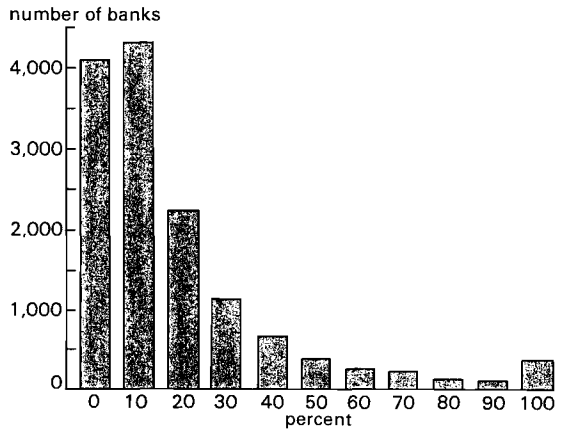
**Table 3**
**Nonperforming assets/total loans**

| | 1982 | 1984 | 1985 | 1986 |
|---|---|---|---|---|
| All U.S. | 3.4 | 3.0 | 2.8 | 2.8 |
| Federal Reserve Districts | | | | |
| Boston 1 | 2.8 | 2.1 | 1.9 | 1.4 |
| New York 2 | 2.5 | 3.4 | 2.9 | 2.9 |
| Philadelphia 3 | 3.8 | 1.8 | 1.6 | 1.5 |
| Cleveland 4 | 3.3 | 2.4 | 2.2 | 2.0 |
| Richmond 5 | 2.2 | 1.4 | 1.2 | 1.1 |
| Atlanta 6 | 2.6 | 2.1 | 2.0 | 2.0 |
| Chicago 7 | 4.3 | 2.8 | 2.7 | 2.1 |
| St. Louis 8 | 2.9 | 2.5 | 2.5 | 2.2 |
| Minneapolis 9 | 3.3 | 3.2 | 3.9 | 3.5 |
| Kansas City 10 | 2.9 | 3.7 | 4.4 | 4.4 |
| Dallas 11 | 3.2 | 3.1 | 3.7 | 5.3 |
| San Francisco 12 | 4.9 | 4.3 | 3.6 | 3.5 |

suggested that the implications of higher effective taxation on banks in 1987 may have given banks incentives to accelerate loan write-offs and move more questionable credits into nonperforming status. This would exaggerate the apparent weakening of credit quality measures. Although empirical support of this contention is elusive, there is evidence that tax reform affected demand for business loans late in the year (See box on the tax reform spike).

One positive note in 1986 bank performance was the continued increase in bank loan loss reserves. Analysts view reserve building positively because it indicates that reported earnings discount prospective loan loss expectations. Whether financial capital increases through reserves or equity growth, though, the fundamental issue of solvency remains. Given

Figure 3
Nonperforming assets/primary capital—1986
(all U.S. banks)




the stress reflected in bank earnings and asset quality, it is not surprising that a sizable number of banks continue to demonstrate impaired capitalization (See Figure 3). Aggregate capitalization of U.S. commercial banks actually increased in 1986, however. This was largely a result of modest asset growth and continued external capital financings at the larger banks.

Separating cyclical variation from structural change is a difficult business. The unprecedented economic volatility of the last five years adds to the difficulty when considering bank performance. This early survey of 1986 banking results points to no clear evidence of long term industry-wide decline. The data do certainly expose sectoral imbalances that place great stress on some banks and in that sense they clearly reflect the impact of a lengthy but lopsided economic expansion.

**A middle view: Midwestern banking**

Bank performance in the Seventh District mirrored that of the banking industry as a whole. Profits were pressured by above normal loan loss provisions. Problem loan levels, while moderating, remained stubbornly high by historical standards. Sizable gains on the sales of investment securities were used to offset high provision levels.

Not unlike the overall U.S. picture, the financial performance of banks in the Chicago Federal Reserve District was one of "haves" and "have-nots" as the earnings of industrial banks rose while agricultural banks remained well below previous norms. Industrial banks account for slightly more than one-half the banks in the Seventh District, so aggregate District trends, based on weighted averages, have shown modest but steady improvement in the last five years.

With over 2,500 commercial banks, the Chicago District, (which consists of portions of Illinois, Indiana, Michigan, Wisconsin, and all of Iowa) has the largest number of banks in the country, making up over 18 percent of U.S. banks. This is largely a result of state legislation which has until recently, severely restricted branch banking in District states. At yearend 1986, Seventh District banks held 12 percent of U.S. banking assets.

The rate of return on Seventh District assets in 1986 continued an improving trend as gains on sales of investment securities boosted

## Fewer securities rabbits left in portfolio hats

The declining interest rate environment the United States has experienced in the last three years has resulted in significant appreciation in the value of bank securities holdings. Portfolio appreciation can act as a form of hidden reserves, providing a cushion against potential future declines in operating profitability. Banks can use this market appreciation to bolster their short-term profitability. The decision to book profits now by selling the securities, or to continue to enjoy the higher yield over the remaining life of the bond usually depends on the alternative investments currently available to the bank and how much pressure the firm is under to meet specific performance measures.

During 1986, U.S. banks relied upon income from the sales of investment account securities for more than a fifth of their reported return on assets. For agricultural banks as a group, more than 75 percent of their reported ROA came from this source, as opposed to 1985, when only about a third came from this source (See Table A). In analyzing the likely future performance of banks, the amount of securities gains already taken must be viewed in the context of appreciation remaining in the portfolio. In other words, how likely is it that banks will be able to continue to pull income "rabbits" out of their portfolio "hats?"

**Table A**
**Comparative performance measures**
*(weighted averages)*
*(all figures in percentages)*

| Data for | Return on assets (ROA) | | Security gains | | Net ROA (net of security gains) | | Nonperforming loans/Total loans | |
|---|---|---|---|---|---|---|---|---|
| | 1986 | 1985 | 1986 | 1985 | 1986 | 1985 | 1986 | 1985 |
| All U.S. commercial banks | .63 | .68 | .14 | .06 | .50 | .63 | 2.8 | 2.8 |
| Federal Reserve District: | | | | | | | | |
| Boston | .90 | .84 | .11 | .05 | .79 | .79 | 1.4 | 1.9 |
| New York | .70 | .69 | .13 | .06 | .56 | .63 | 2.9 | 2.9 |
| Philadelphia | 1.06 | 1.04 | .06 | .00 | 1.00 | 1.04 | 1.5 | 1.5 |
| Cleveland | .94 | .94 | .16 | .08 | .78 | .85 | 2.0 | 2.2 |
| Richmond | .99 | .97 | .15 | .06 | .84 | .91 | 1.1 | 1.2 |
| Atlanta | .83 | .89 | .11 | .03 | .72 | .86 | 2.0 | 2.2 |
| Chicago | .76 | .70 | .11 | .05 | .65 | .65 | 2.1 | 2.7 |
| St. Louis | .90 | .84 | .10 | .04 | .80 | .80 | 2.2 | 2.5 |
| Minneapolis | .81 | .81 | .48 | .03 | .32 | .79 | 3.5 | 3.9 |
| Kansas City | .22 | .40 | .18 | .10 | .04 | .30 | 4.5 | 4.4 |
| Dallas | −.37 | .51 | .20 | .11 | −.57 | .40 | 5.4 | 3.7 |
| San Francisco | .36 | .32 | .08 | .05 | .28 | .27 | 3.5 | 3.6 |
| Sector: | | | | | | | | |
| Midwest-agricultural* | .29 | .33 | .22 | .13 | .07 | .20 | 5.1 | 5.5 |
| Non-agricultural | .72 | .71 | .17 | .05 | .55 | .66 | 2.6 | 3.0 |

*Includes those areas served by the Chicago, St. Louis, Minneapolis, and Kansas City Federal Reserve Banks.

NOTE: All percentages are based on year-end assets or loans. Columns may not add due to rounding.

SOURCE: Year-end 1986 reports of condition and income filed by all U.S. commercial banks.

Schedule B of the Report of Condition presents an approximation of the difference between market and book values of investment securities for a bank. Averaging this remaining appreciation across banks provides a means of estimating the currently available, but as yet unrealized, earnings, which are potentially usable as a buffer against future earnings difficulties. By this calculation, U.S. banks, on an unweighted average, had an available pretax boost to earnings from securities gains of 0.79 percent of assets, as of yearend 1986. The effect on the agricultural banks is even more pronounced, with this sector of the industry still having an unweighted average of 1.08 percent of assets in unrealized security gains.

Since the agricultural sector of the banking industry as a whole has been experiencing financial stress in the last few years, the fact that they have significant remaining earnings hidden in their securities portfolios should be good news. Such a generalization, however, ignores significant differences in basic profitability among banks.

When all banks are divided into deciles according to levels of net ROA (so-called net operating income), a different story emerges. As Table B demonstrates, the banks that are in the lowest 10 percent group of operating performance (decile 1) have only 0.22 percent average appreciation remaining in their portfolios, as compared to 1.66 percent available to the highest 10 percent group (decile 10). We can reasonably infer from these data that poor performing banks have been the most likely to dip into the "hidden reserves" of their securities portfolios in order to raise reported income levels. These banks, therefore, have the least amount of remaining appreciation. No other factor investigated, such as differences in loan-to-asset ratios or portfolio maturity distribution, satisfactorily explains this difference in remaining portfolio appreciation.

**Table B**
**Remaining portfolio appreciation as percentage of average assets**
*(unweighted averages by groups)*

| | 1986 | 1985 | 1984 |
|---|---|---|---|
| All U.S. | .79 | .40 | −.18 |
| Agricultural | 1.08 | .66 | .04 |
| Non-agricultural | .73 | .35 | −.23 |
| By decile of net ROA | | | |
| 1 (lowest 10%) | .22 | .13 | −.24 |
| 2 | .38 | .23 | −.18 |
| 3 | .47 | .30 | −.23 |
| 4 | .59 | .27 | −.22 |
| 5 | .67 | .35 | −.20 |
| 6 | .78 | .36 | −.20 |
| 7 | .88 | .43 | −.17 |
| 8 | .98 | .53 | −.13 |
| 9 | 1.23 | .59 | −.16 |
| 10 (highest 10%) | 1.66 | .80 | −.09 |

This analysis suggests that the weaker banking firms would be particularly sensitive to any increases in market interest rates. If rates were to rise, the cushion of security appreciation would erode. For banks with strong operating performance, sufficient cushion still exists to absorb a large decline in market values of securities with some cushion left over. Absent further interest rate declines, poorer performing banks face a more precarious position, and are more likely to be exposed to the full buffeting of economic forces now that their "hidden reserves" have been at least partially spent.

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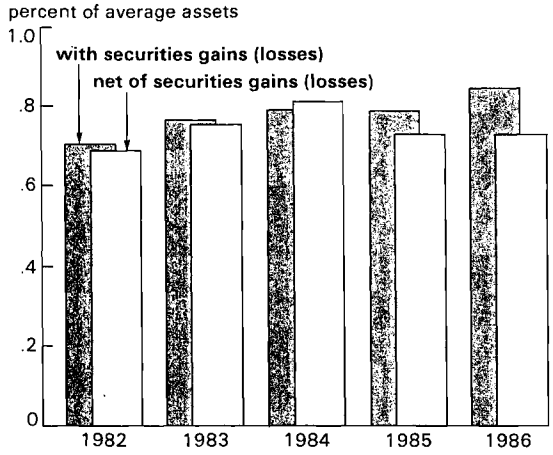
reported earnings. The effect of securities gains or losses on ROA levels in the past has been negligible—one or two basis points of ROA. In 1985, by contrast, securities gains accounted for six basis points of the 0.79 percent District ROA.[4] In 1986, securities gains provided 12 basis points or 14 percent of the 0.85 percent ROA (See Figure 4).

Net of these gains, District return on assets was 0.73 percent in 1986, unchanged from 1985. In fact, for the last two years, return rates, net of gains, have actually declined from previous levels registered in 1983 and 1984.

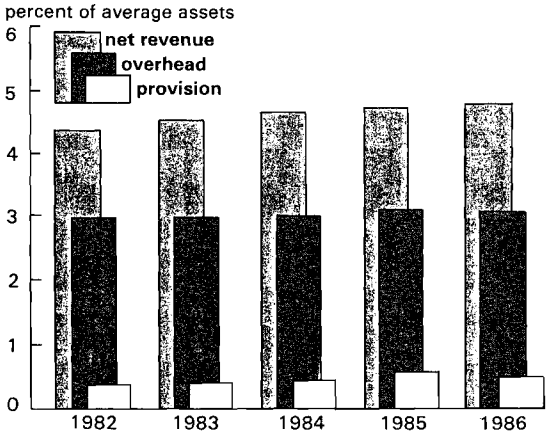
An analysis of earnings components indicates some improvement in 1986 as net revenues (net interest margin plus noninterest

Figure 4
Return on assets—Seventh District




NOTE: See footnote 4.

Figure 5
Earnings analysis—Seventh District




NOTE: See footnote 4.

income) increased and overhead expenses remained stable while provisions for loan losses declined. Net interest margins remained flat at 3.75 percent for 1986, reflecting the fact that loan demand was weak for most of the year. As an offset to margin income, banks have been concentrating their efforts on fee or off-balance sheet income, which has grown swiftly from 0.98 to 1.04 percent of average assets and accounts for the rise in 1986 net revenues (See Figure 5).

Although 1986 overhead levels stabilized, overhead costs have also been trending upwards for the past several years, eating into profits. Compounding the pressure on earnings from rising overhead costs are provision levels required to strengthen loan loss reserves. Provisions rose more sharply in 1985 than in previous years, as a result of continuing sectoral weakness in parts of the District. Although still high, 1986 provisions for loan losses moderated to 0.50 percent.

Based on the changes seen in the components of the income stream, Seventh District ROA, including securities gains, should have been higher for 1986. But, along with securities gains, banks have also been utilizing tax credits to offset current income losses against previous years' profits. The percentage of banks utilizing tax credits has grown since 1983 from 15.8 to 17.6 percent of District banks. However, for banks losing money in consecutive years, the amount of tax loss carry-backs is declining. And, as the number of tax credits are eliminated, the aggregate tax rate will reflect the absence of credits. That is indeed what happened in 1986 and accounts for the smaller than expected rise in ROA despite higher net revenues, stable overhead costs and lower provisions for loan losses. After adjusting for income on a tax equivalent basis to take into account earnings that are not fully taxable, tax rates paid between 1985 and 1986 increased from 0.36 to 0.47 percent of average assets for the District.

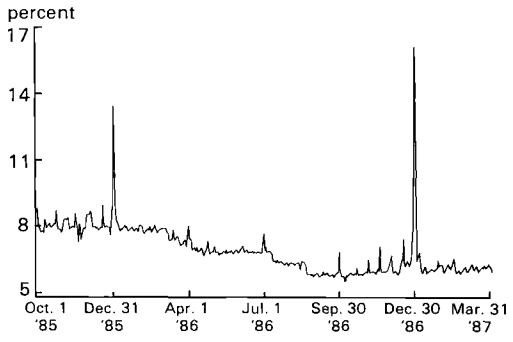
Despite the use of tax credits and gains on the sales of securities, 313 or 12.2 percent of Seventh District banks lost money in 1986.

In the Seventh District, the percent of loans classified as nonperforming declined from a high of 3.06 percent in 1982 to 1.71 percent in 1986 (See Figure 6). On an individual bank basis, these results were mixed but, in general, asset quality trends showed continued improvement. Though nonperforming assets declined by nearly one third in 1986, the change resulted from both fundamental improvement and the recognition of loan losses rather than the effects of debt restructurings under FASB15, which was negligible for the Seventh District as a whole. Net loan losses for the District, high by historical standards, declined from 0.84 percent of loans in 1985 to 0.80 percent in 1986.

The percent of primary capital encumbered by nonperforming assets has declined from the roughly 20 percent level registered in 1983. Between 1985 and 1986, nonperforming

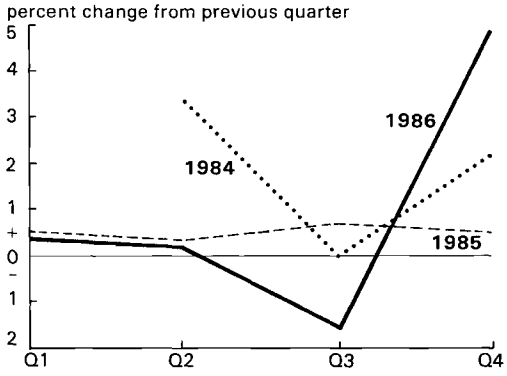
## How tax reform skewed the statistics

After remaining fairly constant throughout the year, the total assets of the banking industry showed a 4.8 percent increase from September 30 to December 31, 1986. This yearend flurry of activity reflects underlying increases in loan demand, as evidenced by the short-term interest rate markets. After spending most of the fourth quarter of 1986 hovering around the six percent mark, the fed funds rate increased on the last two days of the year as much as 250 percent above earlier levels, climbing as high as 16.17 percent on December 30th (Figure A). This advance represented more than the expected seasonal increase in the fed funds rate. For example, the fed funds rate went as high as 13.46 percent on December 31 of 1985, but that was from a base of around 8 percent. The late run-up in rates at the end of 1986 indicated a sudden surge in the demand for bank financing that was exerting pressure on the normal channels of funds supply.



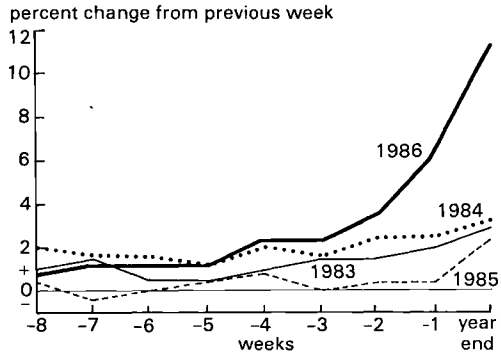

The causes of the surge in loan demand must be inferred from several sources. Anecdotal evidence suggested that business' rush to beat 1987 tax law changes drove up loan demand and, therefore, the short-term interest rates. This was particularly true for money center banks, as many of their large customers rushed to complete major purchases under the old law's more generous depreciation schedules. These customers were unable to issue commercial paper financing quickly enough and turned to their banks for short-term bridge financing. If bank asset growth is broken into its component categories, it is clear that this customer sector accounts for most of the growth. Figure B demonstrates that, indeed, significant growth occurred in the category of loans to commercial and industrial customers. In fact, after posting declining balances through the first three quarters of 1986, C&I loans grew by 4.9 percent in the fourth quarter alone.

Figure B
Quarterly C&I loan growth




The timing of the loan surge indicates a strong desire by corporate customers to complete transactions before yearend, as can be seen through the use of a more discriminating time scale. The Weekly Reports of Assets and Liabilities filed by the nation's largest banks (those over $1.4 billion in assets as of 12/31/82) show that most of the jump in C&I loan demand occurred in the last two to three weeks of the year (See Figure C). Comparison with previous years' statistics shows that this 11 percent increase is not a normal seasonal pattern.

Figure C
**Weekly C&I loan growth, prior to yearend**

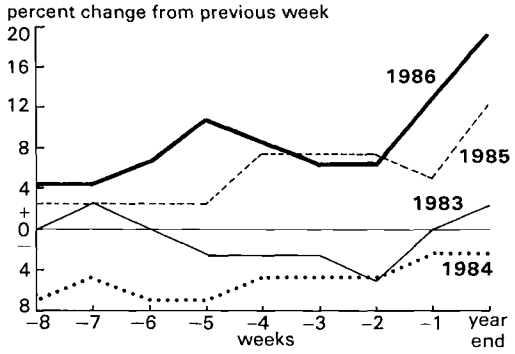



Unfortunately, weekly data is available only for the largest banks. Because smaller banks will often turn to their upstream correspondents to meet funding requirements for short term jumps in loan demand, the level of the large banks' lending to other financial institutions should show an increase if the smaller banks' also experienced tax-driven loan demand. Indeed, as Figure D shows, the week to week increases in large bank loans to financial institutions were extremely large in the last two weeks of the year.

Many measures of performance rely upon combinations of balance sheet and income statement numbers. Balance sheet numbers represent a snapshot of the firm's financial condition at a given time, while the income statement numbers are the aggregation of activity over the length of the period. It is therefore possible that the balance sheet numbers may not be representative of the financial position of the firm during the full earnings cycle. Generally, analysts are forced to assume away this problem, either because of a lack of better information, or because they believe the balance sheet does closely represent reality. Historically, this has provided reasonably good assessments of performance. But, 1986 was an unusual year for performance.

Since the denominators of such performance measures as return on assets and nonperforming loans to total loans are somewhat artificially high for 1986, the measures themselves misstate the true performance of the banking industry. This article has used average assets during the fourth quarter, as reported in Schedule K of the Report of Condition, as the denominator for performance ratios. While this figure helps to mitigate the effect of the loan spike, it does not eliminate all impact.

Figure D
**Weekly growth of loans to financial institutions, prior to yearend**




To estimate the magnitude of this understatement, some simplifying assumptions need to be made. Inasmuch as the level of C&I loans at large banks had been stable at 1 to 2 percent over the June 30 balance, until the last three weeks of the year, the actual assets available for earnings during the quarter would be approximately 2 percent over that 6/30 figure. Using this assumption, the adjusted weighted average ROA for the nation for the full year 1986 would be 3 to 4 basis points higher than indicated if only yearend balances were used.

Of course, the effect of the loan spike on individual bank measures of performance will vary with the magnitude of yearend activity for each bank. Use of simple ratio analysis to determine performance of specific banks may cause misleading conclusions if special factors, such as this loan spike, are not considered.

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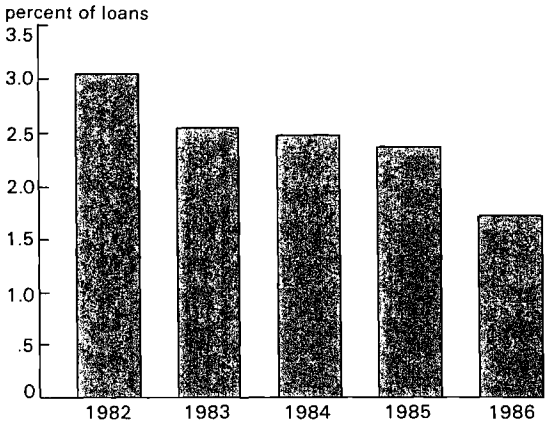
Figure 6
Nonperforming assets/loans—Seventh District

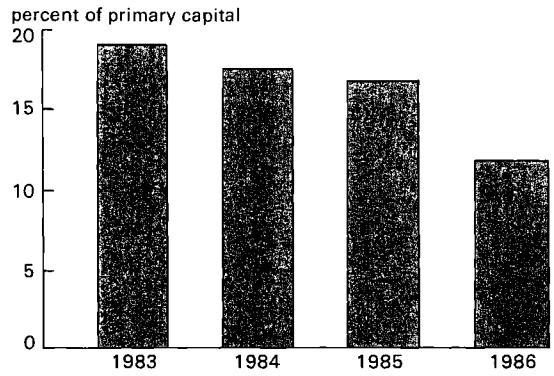



NOTE: See footnote 4.

loans to primary capital moved from 16.8 to 12.0 percent, reflecting both improved asset quality and a stable primary capital base running at approximately 7.6 percent of total assets (See Figure 7). All banks however, are not affected to the same degree by nonperforming assets. At yearend 1986, 27, or 1.1 percent, of banks in the Seventh District had nonperforming assets that exceeded their primary capital. Only 82, or 3.2 percent, of Seventh District banks had over 50 percent of their capital encumbered by nonperforming assets.

As a result of the economic diversity in the region, performance levels differed substantially among Seventh District states. ROA

Figure 7
Nonperforming assets/primary capital—
Seventh District



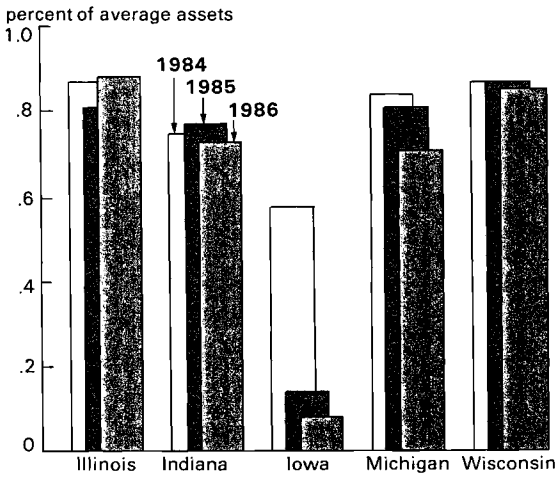

NOTE: See footnote 4.

rates varied strikingly by two factors. The first factor is the degree of dependence on securities gains to augment income. In general, each state's return on assets compared favorably to those reported for 1985. However, as Figure 8 illustrates, return rates net of securities gains have fallen from, or remained at, their 1985 levels. Illinois, as the exception, is more heavily influenced by larger banks which, on average, had stronger increases in noninterest income for 1986.

The second factor to influence overall return rates is the dependence on the state's economic base. The degree of stress in the agricultural sector, for example, is reflected in the state of Iowa, whose Return on Assets, net of securities gains, has declined from 0.97 percent in 1982 to 0.08 percent in 1986.

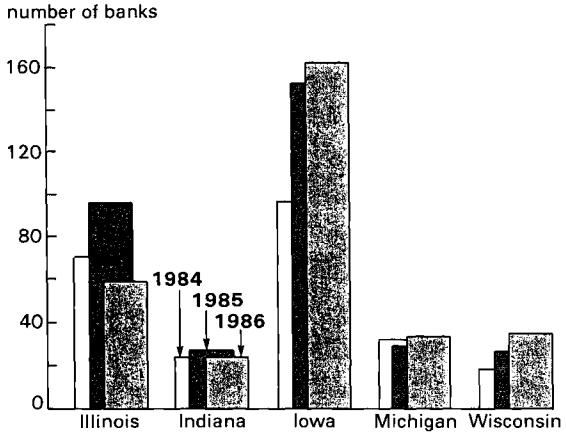
More telling still was the number of banks reporting losses in the District states (See Figure 9). The states influenced by agriculture, Iowa, and to more limited degree, Illinois, have had the greatest number of banks with losses in recent years. However, only 6 percent of Illinois banks lost money in 1986 versus 26.7 percent of Iowa banks. This can be contrasted to 10 and 4 percent of Illinois and Iowa banks, respectively, reporting losses in 1982. Despite the use of securities gains and tax credits, the number of Iowa banks that lost money in 1986 increased. However, the rate of increase in the

Figure 8
Net return on assets—
Seventh District by state




NOTE: See footnote 4.

Figure 9
Banks with net losses—
Seventh District by state



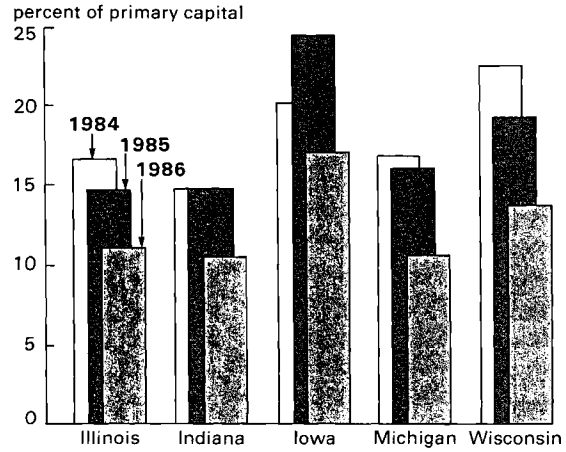

NOTE: See footnote 4.

number of Iowa banks showing losses declined substantially between 1985 and 1986.

On a state-by state basis, asset quality also reflects the dichotomous District trends. During 1985, nonperforming assets to primary capital remained stable or declined for all District states with the exception of Iowa, which continued to suffer as a result of its agricultural loan base (See Figure 10). Improvement was evident in 1986 in all District states as nonperforming assets to primary capital declined. The fact that nonperformings to capital declined in Iowa is particularly impressive, even though the state's primary capital ratio does exceed District averages by approximately one percentage point, because of Iowa's battered economic base and slight recent growth. Further, less than 8 percent of all Iowa banks have over 50 percent of their capital encumbered by nonperforming assets.

Clearly the weakness in the District reflected the continuing problems in agriculturally based areas. Looking beyond the Seventh District, a broader prospective provides a better illustration of the agricultural situation.

Figure 10
Nonperforming assets/primary capital—
Seventh District by state




NOTE: See Figure 4.

## Lean years revisited: Ag banks

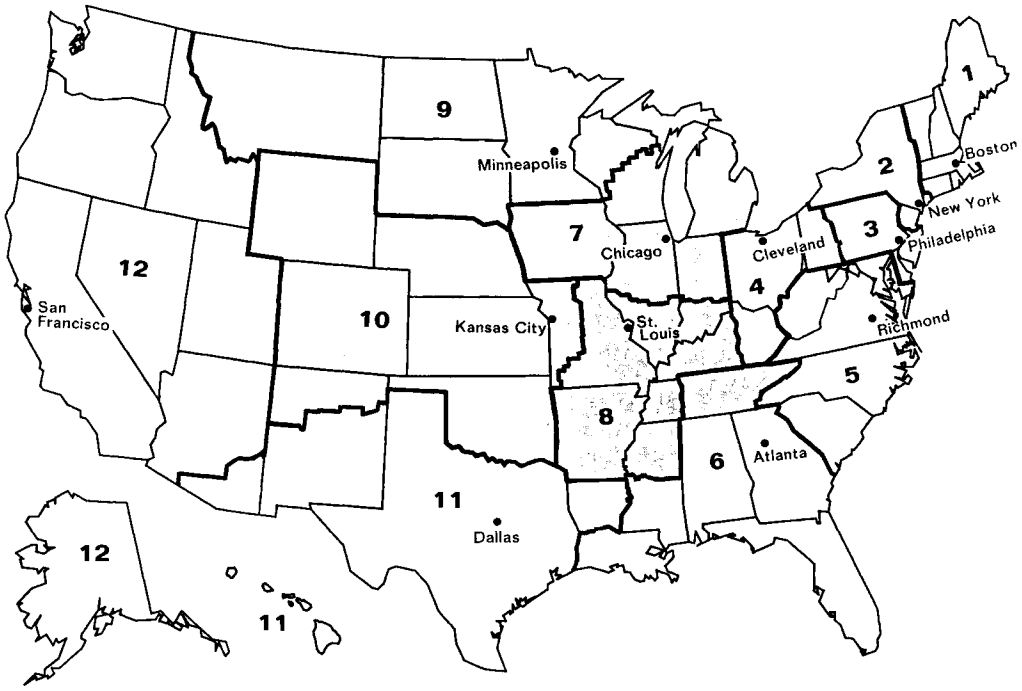
Since 1982, agriculturally oriented banks have experienced increasing levels of loan losses and problems loans, resulting in greatly reduced earnings rates. This represents a significant reversal because, through most of the 1970s, agricultural banks outperformed industry averages with traditionally high earnings, high capitalization, and low levels of problem assets.[5]

The stresses of problem assets and poor earnings continued in 1986, but unlike recent years, hopeful signals could be seen in 1986. The relative levels of loan loss provisions and nonperforming assets declined for the first time in this decade.

The following statistics compare the performance of agricultural and nonagricultural banks in the area bounded by the Chicago, Kansas City, Minneapolis and St. Louis Federal Reserve Districts (Figure 11).[6]

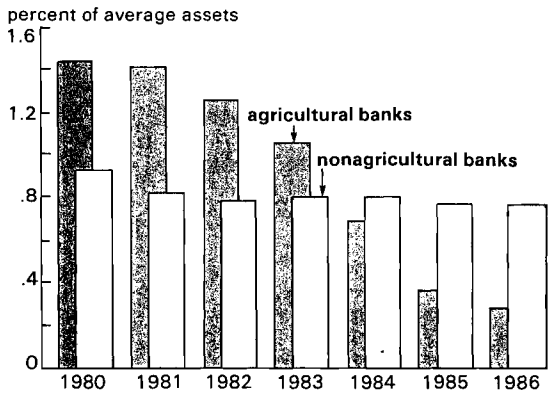
In terms of banking, this four-district area is notable not only for its location at the epicenter of the farm banking problem, but also for its large number of banks. Although the region accounts for less than 25% of the nation's banking assets, it holds over 7,600 or over 50% of the nation's commercial banks. For purposes of this comparison, slightly less than 2,000 of these banks are considered to be agriculturally oriented. In terms of asset size, ag banks in the region are most heavily represented in the less-than-$25 million category. Few ag banks in the area exceed $50 million in assets. Due to their small size, these banks, while representing 14% of the U.S. commercial banks only hold about 2 percent of U.S. banking assets.

Figure 11
The Federal Reserve Districts of the Midwest




The relative concentration of ag banks in the region varies considerably by state, with the largest number of ag banks domiciled in Iowa, Nebraska, Kansas, Minnesota, and Illinois. On a percentage basis, Iowa, Nebraska, and the two Dakotas hold the largest proportions of ag banks, in each case exceeding 65 percent of the states' banks.

Figure 12
Return on assets—all banks
(Districts 7-8-9-10—7,658 banks)




Return on assets rates at midwestern agricultural banks continued their downward spiral in 1986, further distancing their earnings performance from nonagricultural banks in the area (Figure 12). The decline in ag bank ROA

Figure 13
Return on assets—ag banks
(Districts 7-8-9-10)

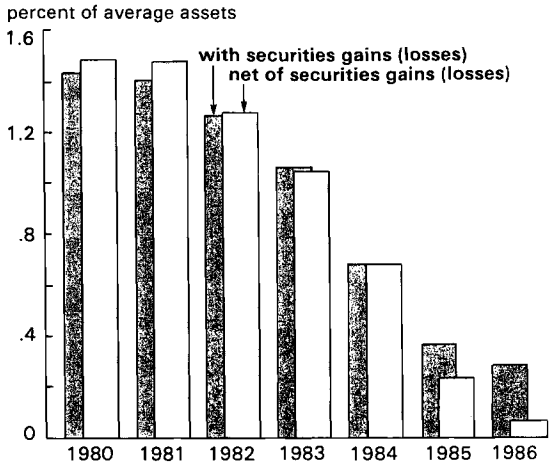


Figure 14
Nonperforming assets/loans
(Districts 7-8-9-10)

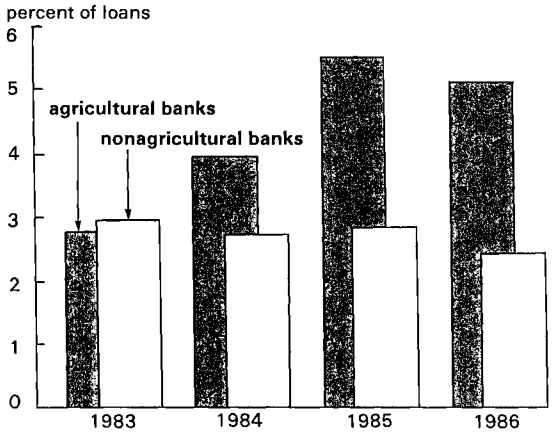
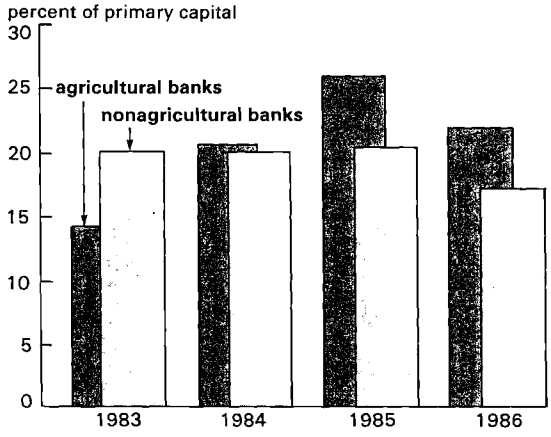


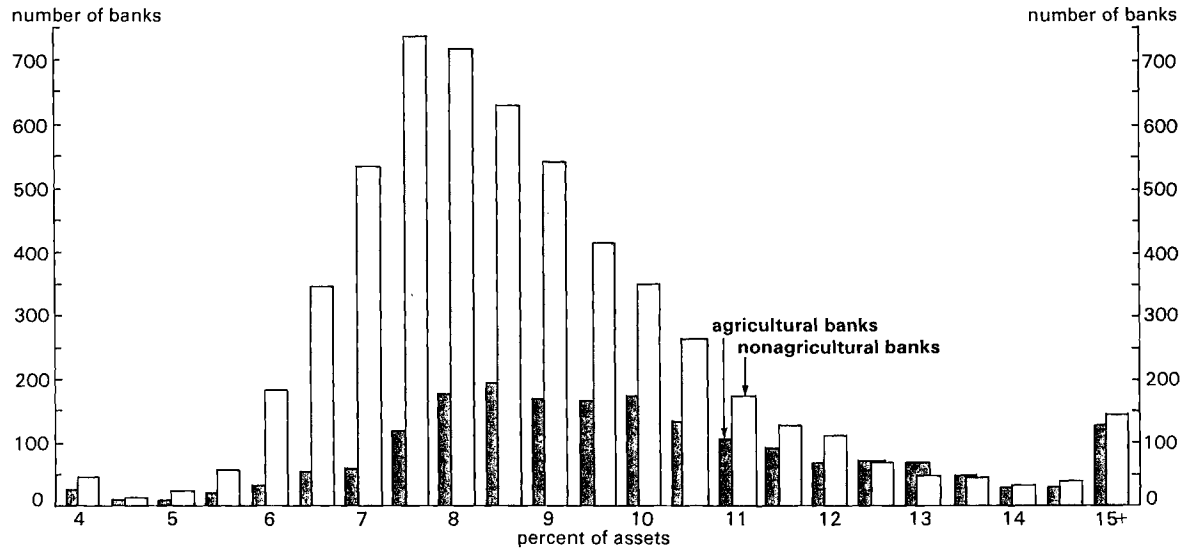

Figure 15
Nonperforming assets/primary capital
(Districts 7-8-9-10)




was less precipitous than in prior years, however, as securities gains bolstered income. Net of these gains, core ag bank earnings continued to drop, reflecting the impact on margins of slack loan demand and the drag of nonperforming assets (Figure 13). Provision levels moderated, however, as nonperforming assets declined relative to both loan outstandings (Figure 14) and primary capital (Figure 15).

The decline in nonperforming loans, along with recent firming in farm land values and farm income offers some evidence that a respite in the long slide in the fortunes of farm banks may be in the offing. The ability of most farm banks to weather the lean years of the early 1980s is testament to the strong capitalization of these firms and stable nature of their deposit base (Figure 16).

Figure 16
Primary capital/assets—1986
(Districts 7-8-9-10)



## Conclusion

Although aggregate U.S. bank profitability resumed its decline in 1986, a large portion of the recent decline can be traced to banks in the energy and agricultural producing areas of the country. The high relative level of aggregate loan losses and problem loans this late in an economic expansion is unusual, however, as is the degree of investment security gains used to augment income.

Whether these abnormalities reflect a fundamental change in banking portfolio characteristics or merely the lagged effect of the volatile economics of the early 1980s remains in debate. Evidence of a long-term industry-wide decline remains inconclusive.

Bank performance in the Midwest strengthened in 1986, as improvements at banks in the industrial portions of the area teamed with moderating stresses at agriculturally based banks. In general, the decline in problem loan levels at agricultural banks offered some prospect of moderation in the stresses these firms have experienced during the disinflationary 1980s.

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[1] All data is derived from the Quarterly Reports of Condition and Income filed by all banks with their Supervisory Agency. Average assets are calculated using memoranda item 9 on Schedule K of the Call Report.

[2] See Profitability of U.S. Commercial Banks, *Federal Reserve Bulletin*, Vol. 72, September, 1986, p. 625 Board of Governors of the Federal Reserve System, Washington, D.C.

[3] For a more detailed study of large bank earnings performance, see "Recent Trends in Bank Profitability," *Staff Study*, 1986, Federal Reserve Bank of New York.

[4] All data for the Seventh District are based on weighted averages. Because Continental Illinois National Bank and Trust Company and First National Bank of Chicago hold 19 percent of Seventh District banking assets, and therefore strongly influence performance measures, their results have been excluded from the data.

[5] For more background on the financial performance of agricultural years see George Gregorash, "Lean Years," *Economic Perspectives*, Vol. 9, November-December, 1985, pp. 17-28, Federal Reserve Bank of Chicago.

[6] Ag banks are defined as those with ag loans equal to or exceeding 30 percent of total bank loans. Ag loans in this study are derived from Call Report data, schedule RC-C, line 3, loans to farmers, and do not include real estate loans secured by farmland.