

Banking Performance In the Tenth District States

By William R. Keeton and Julia Reigel

The overall performance of commercial banks in Tenth District states stabilized in 1987. The number of banks declined and growth at the remaining banks continued to slow. Average profitability edged upward, however, after five straight years of decline.

Not all district banks shared in the stabilization of performance. While many banks did better in 1987, others continued to do poorly. Improvement in performance was most dramatic at agricultural banks. Their loan losses fell sharply in 1987, boosting their earnings above those of nonagricultural banks for the first time in several years. Banks in Oklahoma and Wyoming—two states heavily dependent on energy production—also showed great improvement. However, these banks still had much ground to make up, thanks to the collapse in oil prices the previous year.

This article examines district banking perfor-

mance in 1987, focusing on both the stabilization in overall performance and the differences in performance among banks. The article first reviews two key aspects of performance, growth and profitability. Next, the article discusses the impact of net interest income and loan losses on profitability. The article then turns to another aspect of performance, the adequacy of banks' capital. The article concludes with a brief analysis of performance in each of the Tenth District states—Colorado, Kansas, Missouri, Nebraska, New Mexico, Oklahoma, and Wyoming (Figure 1).

Growth

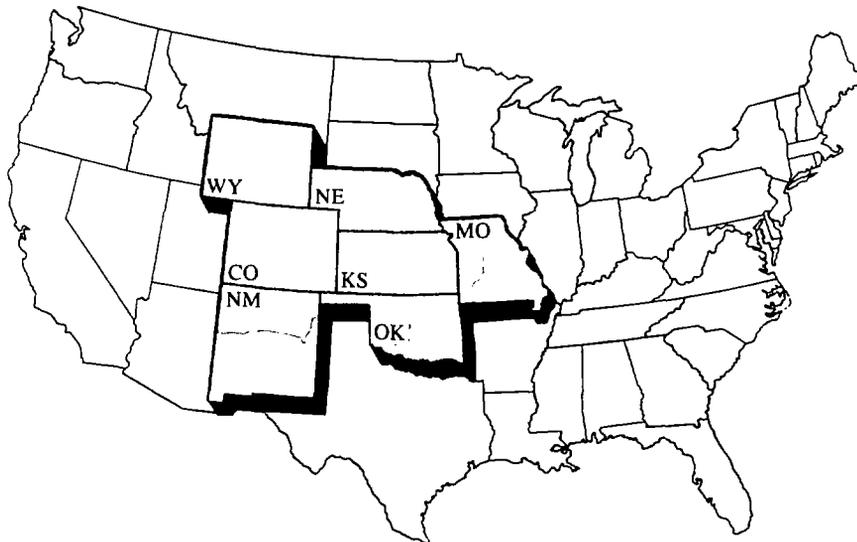
One aspect of performance is growth, the increase in the amount of resources banks use and the amount of services they provide. The banking industry can expand or contract in two ways—through changes in the number of banks and changes in the size of banks.

Changes in number

In 1987, the rate of bank failures remained high

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FIGURE 1
Tenth District states



Shaded area is Tenth District

by historical standards and the rate of new bank formation continued to slow. As a result, the total number of commercial banks in Tenth District states declined for the third year in a row. Table 1 shows that only 11 banks were started during the year, down from 18 the year before. Also, 71 banks either failed or closed voluntarily, slightly more than in 1986. Of the banks that failed, only four were succeeded by new banks formed to take over their deposits. The rest were either merged with existing banks or liquidated altogether. Finally, 51 open banks disappeared in 1987 through mergers with other banks. The net effect of the above changes was a reduction of 107 commercial banks in the district, a slightly smaller decline than in 1986 but a much greater decline than in 1985.

Changes in size

At those banks that remained in business,

overall growth in loans and assets continued to slow in 1987 (Table 2). Assets fell 1.2 percent after increasing 3.8 percent in 1986. Also, loans rose only 1.2 percent, down from a sluggish 2.1 percent in 1986.

The slowdown in growth was far from uniform across banks. Table 2 compares the growth in assets and loans at banks in three size categories. Each of the three size categories holds a third of total bank assets in the district. In 1987, small banks had assets of less than \$62 million, medium-size banks had assets between \$62 million and \$378 million, and large banks had assets of more than \$378 million.¹ Table 2 also

¹ Because inflation and economic growth tend to increase the assets of all banks, the two size thresholds have risen over time. In defining size groups, many studies of bank performance use the same dollar thresholds in early years as in later years. That approach can produce distortions over long periods, because the tendency for all banks to grow in dollar terms causes the small size group to shrink relative to the larger groups.

TABLE 1**Changes in number of insured commercial banks, Tenth District states***

	<u>1985</u>	<u>1986</u>	<u>1987</u>
Banks established de novo	38	18	11
- Failed banks†	63	69	71
+ Banks established to succeed failed banks	22	11	4
- Open banks merged with other banks	56	76	51
= Net change in number of banks	-59	-116	-107

*Excludes the change due to banks switching from uninsured to insured status. Seventeen banks made this switch in 1985, five in 1986, and six in 1987.

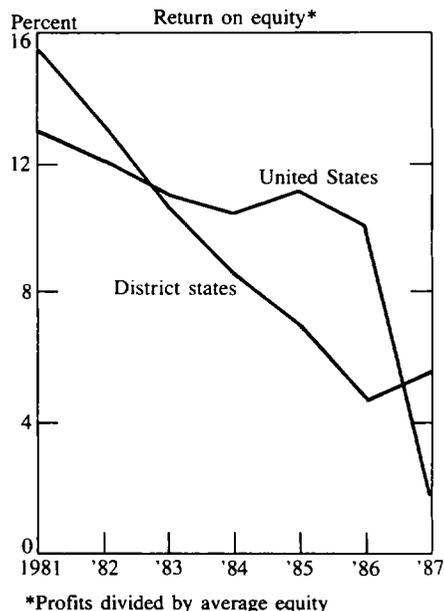
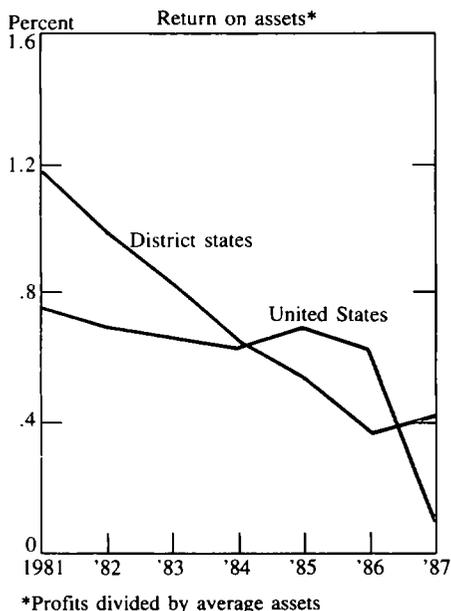
†Includes one bank that closed voluntarily in 1985, five banks that closed voluntarily and three banks that converted to savings banks in 1986, and five banks that closed voluntarily in 1987.

TABLE 2**Growth in total assets and loans, commercial banks in Tenth District states* (percent)**

	<u>Number of banks, 1987</u>	<u>Growth in assets</u>		<u>Growth in loans</u>	
		<u>1986</u>	<u>1987</u>	<u>1986</u>	<u>1987</u>
All banks	2,727	3.8	-1.2	2.1	1.2
Small banks	2,227	4.6	1.8	-0.5	3.2
Agricultural	1,099	3.6	1.6	-5.3	3.2
Nonagricultural	1,128	5.4	1.9	2.9	3.2
Medium banks	459	4.5	-1.0	0.5	1.5
Agricultural	74	3.2	0.7	-5.1	1.6
Nonagricultural	385	4.7	-1.3	1.2	1.5
Large banks	41	2.4	-4.2	6.2	-0.7

*Growth from beginning to end of year at banks in operation the entire year

CHART 1
Profitability of commercial banks



shows how growth within the two smaller size groups differed between agricultural banks and nonagricultural banks. Agricultural banks are defined as those with at least 25 percent of their loan portfolios in farm real estate or farm operating loans. More than 90 percent of these banks were small in 1987 and the rest were medium-size.

As Table 2 shows, growth slowed most in 1987 at large banks and least at the two sizes of agricultural banks. Growth in assets declined at banks of all sizes but especially at large banks, where assets fell 4.2 percent after increasing 2.4 percent the year before. Also, growth in loans accelerated in the two smaller size groups but decelerated in the large group, decreasing from 6.2 percent to -0.7 percent. Within the two smaller size groups, Table 2 shows that the growth rates of agricultural banks and nonagri-

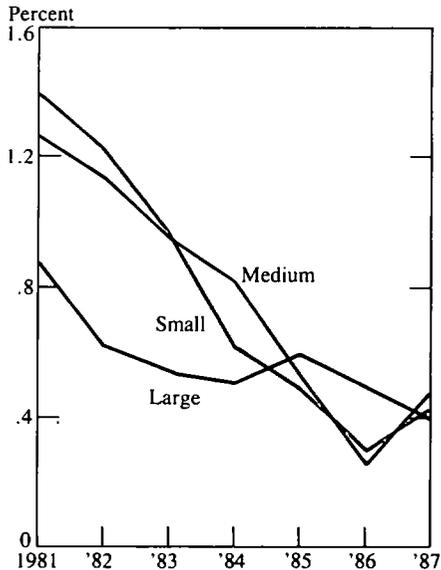
cultural banks converged in 1987. At both types of banks, assets grew slower in 1987 than 1986 and loans faster. However, for agricultural banks the slowdown in asset growth was somewhat smaller and the acceleration in loan growth much more dramatic. After falling more than 5 percent the year before, the loans of small agricultural banks increased 3.2 percent and the loans of medium-size agricultural banks 1.6 percent.

Profitability

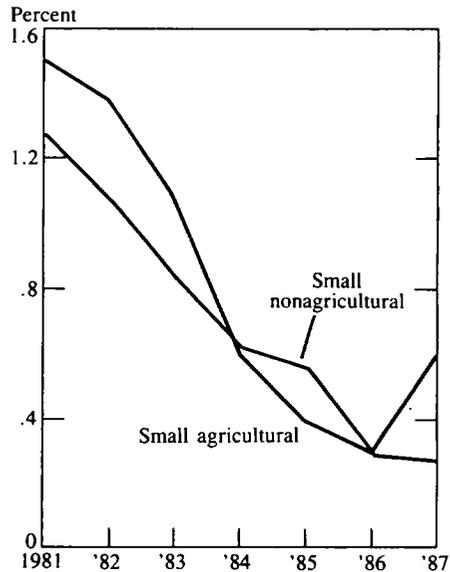
A second dimension of performance is profitability, the ability of banks to generate revenue to cover their costs and pay dividends to their shareholders. To compare profitability across time or across banks, profits must be deflated by some measure of bank size. Return on equity (ROE) deflates a bank's profits by its equity, the amount

CHART 2

Return on assets at banks in Tenth District states*



*Profits divided by average assets



owners have invested in the bank through the purchase of stock or retention of earnings. Return on assets (ROA) deflates profits by total assets, including both financial and physical assets.

Measured by either ROE or ROA, the profitability of commercial banks in Tenth District states edged upward in 1987, bringing to a halt the steep decline that began in 1982 (Chart 1).² The modest improvement in profitability last year left ROA at 0.43 percent, about a third of the 1981 peak. Also, ROE reached 5.7 percent, compared

to a return of 15.6 percent in 1981. As the chart shows, the stabilization in earnings at banks in Tenth District states was in sharp contrast to the performance of banks in the United States as a whole, where large increases in loan loss provisions at money center banks caused both average ROA and average ROE to plummet in 1987.

As in past years, figures on the average profitability of district banks were influenced by the high failure rate. Some banks that incurred heavy losses and depressed average profitability in 1986 were closed in 1987, removing their influence from the figures. Thus, among banks that remained in business throughout 1986 and 1987, the change in profitability was somewhat less favorable than shown in Chart 1. For example, while the average ROA of all banks in the district increased slightly from 1986 to 1987, the average ROA of banks that remained open both years was unchanged.

² All data in this article were taken from the Reports of Condition and Income filed by insured commercial banks. Balance sheet data for 1981 to 1983 were adjusted for mergers at the Board of Governors of the Federal Reserve System to ensure that the assets and liabilities of merging banks were combined as close as possible to the date they began reporting their income jointly. Data for 1984 to 1987 were adjusted the same way by the authors.

TABLE 3
Income and expense of insured commercial banks in Tenth District states*
 (percent)

	<u>1981</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Net interest income (NIM)†	4.70	4.35	4.12	3.97
+ Net security gains‡	-0.13	0.10	0.16	.05
- Loan loss provisions	0.30	1.05	1.20	.92
- Net noninterest expense	2.24	2.37	2.29	2.27
- Total taxes	0.86	0.49	0.43	.39
= Profits (ROA)	1.18	0.55	0.37	0.43

*All variables are expressed as a percentage of average annual assets net of loan loss reserves. Average annual assets are computed from beginning, middle, and end-of-year figures with weights of one-quarter, one-half, and one-quarter, respectively. Data for each year are for banks in operation the entire year.

†Interest income is calculated on a taxable-equivalent basis. That is, each bank's tax-exempt income from state and local securities is adjusted by its marginal tax rate.

‡Includes net gains on extraordinary items

Profitability by size and type

In 1987, earnings performance continued to vary by size and type of bank. Large banks as a group failed to share in the recovery. And within the two smaller size groups, agricultural banks tended to experience significantly greater improvements in earnings than nonagricultural banks.

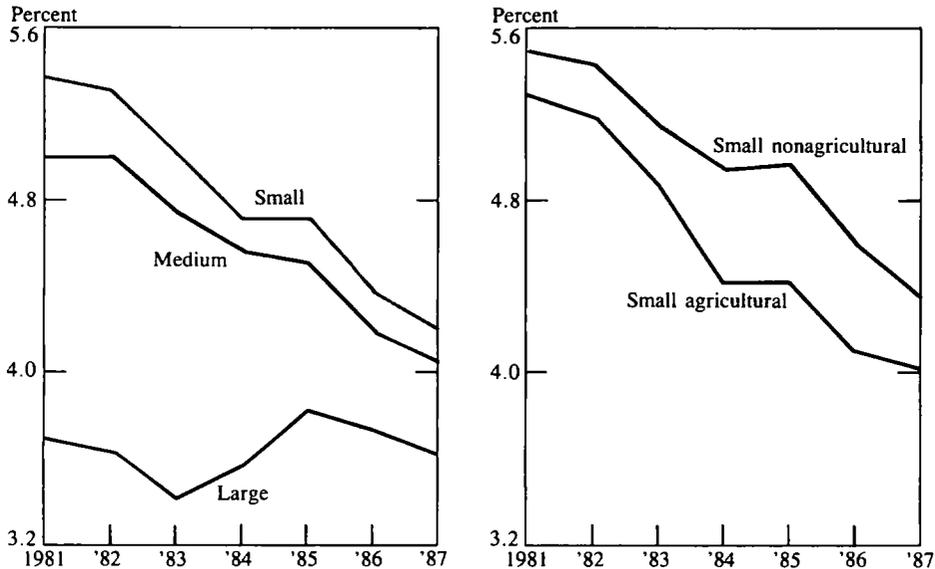
The left panel of Chart 2 shows how profitability has changed at the three size groups as measured by ROA. The ROA of small banks increased in 1987, making up for most of the previous year's decline. At medium-size banks, average ROA rose by an even greater amount, but only because of changes in the composition

of the group.³ The worst performance in 1987 was by large banks. Their profitability fell for the second year in a row, giving them the lowest ROA of the three size groups.

In 1987, a sharp rebound in earnings left district agricultural banks with a higher profit rate than similar-size nonagricultural banks for the first time in four years. As noted earlier, the vast majority of agricultural banks are small. The right

³ In 1987, many highly unprofitable banks dropped out of the medium size group, some by failing and others by growing slowly and moving down to the small size group. At the same time, some highly profitable banks in the small size group grew fast enough to move up to the medium size group. Both effects tended to increase the average profitability of the medium size group.

CHART 3
Net interest margin at banks in Tenth District states*



*Net interest income divided by average assets

panel of Chart 2 compares the recent earnings performance of small agricultural banks with that of small nonagricultural banks. In 1987, the ROA of small agricultural banks doubled, offsetting the decline of the previous two years. At small nonagricultural banks, by contrast, ROA was virtually unchanged. Within the medium size group, profitability also increased substantially more at agricultural banks than nonagricultural banks. In this case, however, most of the difference was due to shifts in the composition of the two subgroups: adjusted for such shifts, ROA rose slightly at agricultural banks and fell slightly at nonagricultural banks.⁴

⁴ In the agricultural subgroup, a significantly higher proportion of unprofitable banks grew slowly enough to move down to the small size group. As a result, sample shifts had a greater tendency to increase ROA in the agricultural subgroup than in the non-agricultural subgroup.

Although some categories of banks performed significantly better than others, there continued to be important differences within each of the categories. In 1987, 18 percent of agricultural banks had net losses, down from 26 percent in 1986. At the other end of the spectrum, 34 percent of agricultural banks earned more than 1 percent on their assets, up from 28 percent in 1986. Similar differences existed among nonagricultural banks. In 1987, 24 percent of nonagricultural banks had net losses, about the same as the year before. But 27 percent of nonagricultural banks earned more than 1 percent on their assets—fewer than the 34 percent that earned such returns in 1986, but a significant number just the same.

Determinants of profitability

The modest improvement in profitability in 1987 resulted from a sharp decrease in loan loss

TABLE 4

Changes in interest income and expense at banks in Tenth District states

(percentage-point change in ratio to average assets)

	<u>1985-86</u>	<u>1986-87</u>
Change in interest income ratio	-1.11	-.64
Portfolio shifts	-0.10	0
Rate changes	-1.01	-.64
Change in interest expense ratio	-.88	-.49
Portfolio shifts	+.01	+.05
Rate changes	-.88	-.54
Change in NIM	-.23	-.15
Portfolio shifts	-.11	-.05
Rate changes	-.13	-.10
Memo:		
Change in 6-month Treasury bill rate	-1.63	+.02

provisions that slightly outweighed substantial decreases in net interest income and net security gains. Profits can be defined as net interest income and net gains from security sales minus loan loss provisions, net noninterest expense and taxes. Table 3 deflates each of these components by total assets for the years 1981 and 1985-87.

As shown in the table, the major factor depressing profitability in 1987 was a decline in net interest income relative to assets. The net interest margin (NIM) of district banks fell to 3.97 percent of assets in the year, about 70 basis points lower than the peak reached in 1981. Reinforcing the decline in NIM was a decrease in net security gains, as the turnaround in interest rates and the high security sales of the two previous years left district banks with fewer undervalued securities on which capital gains could be realized.

The major factor boosting ROA in 1987 was a decline in loan loss provisions. For district banks as a whole, loss provisions fell to 0.92 per-

cent of assets in 1987, the first decrease since provisions turned sharply upward at the beginning of the decade. Small decreases in net noninterest expense and taxes also helped sustain ROA last year. Thus, despite the fall in NIM and net security gains, the ROA of district banks increased on balance, edging up from 0.37 percent of assets in 1986 to 0.43 percent in 1987.

Net interest margin

The decrease in NIM in 1987 was smaller than the year before but substantial nevertheless (Table 3). After declining 23 basis points in 1986, NIM fell an additional 15 points in 1987, ending up below 4 percent for the first time since the mid-1970s.

NIM by size and type

In 1987, NIM declined almost as much at large

banks as at small and medium-size banks. As shown in the left panel of Chart 3, this similarity in performance represented a departure from the previous three years. From 1983 to 1986, changes in NIM were much more favorable at large banks than at small and medium-size banks, reducing the gap between them. In 1987, the gap stayed the same, with the NIM of large banks remaining 45 points below that of medium-size banks and 60 points below that of small banks.

NIM fell less at agricultural banks than at nonagricultural banks in 1987, partially explaining the bigger increase in profitability at agricultural banks. As shown in the right panel of Chart 3, NIM fell less than half as much at small agricultural banks as at small nonagricultural banks in 1987, after decreasing by about the same amount at the two types of banks in 1986. Within the medium size group, the story was similar, with NIM remaining unchanged at agricultural banks and decreasing substantially at nonagricultural banks.

Determinants of NIM

Banks' interest income and interest expense can change either through shifts in the composition of their assets and liabilities or through changes in the rates of return on their assets and liabilities. Table 4 shows the contribution of such portfolio shifts and rate changes to the behavior of district banks' NIM since 1985. These estimates were obtained by splitting banks' assets and liabilities into broad categories. The impact of portfolio shifts between categories was estimated by calculating the amount by which interest income, interest expense, and NIM would have changed if the average rate of return earned or paid on each category had remained constant. The rest of the change is the "rate effect," the part due to changes in the average rates of return on different categories.⁵

As shown in Table 4, the NIM of district banks

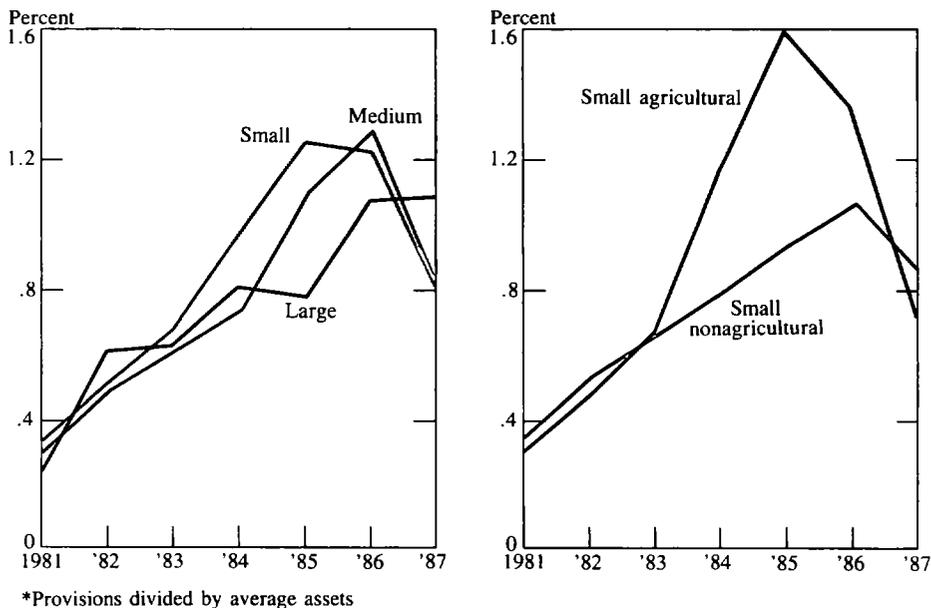
suffered less from adverse portfolio shifts in 1987 than in 1986. Shifts in the composition of assets reduced interest income by 10 basis points in 1986 but had no effect in 1987. During the year, banks experienced a continued shift out of loans and state and local securities into other, lower-yielding securities. However, the negative impact of this shift on interest income was completely offset by a simultaneous shift from cash to other securities. On the liability side, interest expense was boosted by a small shift in the composition of funds from demand deposits to interest-bearing retail deposits. Nevertheless, the total effect of portfolio shifts on NIM was only 5 basis points, half as much as in 1986.

Although portfolio shifts were less important in 1987, district banks suffered almost as large an adverse rate effect as in 1986. As measured by the 6-month T-bill rate, the average level of market interest rates rose only 2 basis points in 1987. During the year, however, banks' average returns on assets and liabilities responded with a lag to the substantial decline in market rates in 1985 and 1986, when the 6-month T-bill rate fell 214 basis points and 163 basis points, respectively. As shown in Table 4, this fall in banks' average returns reduced the ratio of interest income to assets by 64 basis points and the ratio of interest expense to assets by 54 basis points.

Two factors help explain why the rate effect was stronger for interest income than expense in 1987, hurting NIM on balance. The first factor was the turnover and growth in banks' holdings of long-term securities. Banks purchased substantial amounts of new securities in 1987, not only to roll over securities that were maturing but also to replace securities sold on secondary markets

⁵ For a more detailed explanation of the decomposition, see William R. Keeton and Lyle Matsunaga, "Profits of Commercial Banks in Tenth District States," *Economic Review*, Federal Reserve Bank of Kansas City, June 1985.

CHART 4
Loan loss provisions at banks in Tenth District states*



and make up for declines in loans. Because market interest rates were much lower in 1987 than earlier in the decade, the securities purchased last year had relatively low yields, causing the average return on banks' security holdings to fall. The second factor depressing interest income was the elimination of the tax deductibility of interest on state and local securities as a result of the Tax Reform Act of 1986. This change sharply reduced the tax-adjusted yield on banks' holdings of state and local securities, contributing about 5 basis points to decline in their interest income ratio.

Loan loss provisions

Relative to assets, loan loss provisions fell 28 basis points in 1987 (Table 3), the first decline since provisions began rising in the early 1980s. The fall in loss provisions was accompanied by an equally steep decline in loan chargeoffs. Thus,

provisions continued to exceed chargeoffs, with the excess representing net additions to banks' loan loss reserves.⁶

Provisions by size and type

Changes in loan loss provisions differed sharply among the three size groups, with large banks faring the worst for the second year in a row (Chart 4). In 1987, provisions fell sharply at both small and medium-size banks, reaching 0.8 percent of assets at both groups. At large banks, on the other hand, provisions remained virtually unchanged at 1.1 percent of assets.

⁶ When banks write off bad loans, they charge their loan loss reserves, not their earnings. Writeoffs affect earnings only to the extent that banks provide enough funds for their reserves to make up for the chargeoffs.

TABLE 5
Net chargeoffs by type of loan, Tenth District states
 (percent of end-of-year loans)

	<u>1985</u>	<u>1986</u>	<u>1987</u>
Real estate loans	0.6	0.8	0.7
Consumer loans	1.0	1.4	1.4
Agricultural operating loans	4.3	4.2	1.8
C&I and all other loans	2.1	2.6	2.2
Total loans	1.7	1.9	1.4

TABLE 6
Nonperforming loans by size and type of bank, Tenth District states*
 (percent of total loans)

	<u>Dec.</u> <u>1986</u>	<u>Dec.</u> <u>1987</u>
All banks	4.1	4.0
Small banks	4.8	4.3
Agricultural	5.8	5.0
Nonagricultural	4.2	3.9
Medium banks	4.4	4.0
Agricultural	5.9	5.0
Nonagricultural	4.2	3.9
Large banks	3.3	3.8

*Nonperforming loans at banks in operation all of 1987. Includes renegotiated loans in compliance with modified terms.

TABLE 7
Nonperforming loans by type of loan, Tenth District states*
 (percent of total loans)

	<u>Dec.</u> <u>1986</u>	<u>Dec.</u> <u>1987</u>
Real estate loans	3.9	3.9
Consumer loans	1.3	1.1
Agricultural operating loans	7.0	5.6
C&I and all other loans	5.1	5.3
Total loans	4.1	4.0

*Nonperforming loans at banks in operation all of 1987. Includes renegotiated loans in compliance with modified terms.

TABLE 8
Nonperforming real estate loans,
Tenth District states*
 (percent of total loans)

	<u>Dec.</u> <u>1986</u>	<u>Dec.</u> <u>1987</u>
Residential real estate loans	1.6	0.7
Nonresidential real estate loans	3.4	5.1
Construction loans	8.7	8.7
Farm real estate loans	9.8	8.5
Total real estate loans	3.9	3.9

*Nonperforming loans at banks in operation all of 1987. Estimated for subcategories by regression analysis.

As in 1986, changes in loan loss provisions were more favorable at agricultural banks than at nonagricultural banks of similar size. As shown in the right panel of Chart 4, the ratio of provisions to assets fell three times as much at small agricultural banks as at small nonagricultural banks, leaving small agricultural banks with a lower ratio for the first time since the early 1980s. Within the medium size group, relative performance was similar, with provisions falling sharply at both types of banks but especially at agricultural banks.

Further insight into loan loss trends can be obtained from loss rates on different types of loans. Table 5 breaks down the net chargeoffs of district banks by major categories of loans for the years 1985-87.⁷ Given the sharp decrease in loan losses at agricultural banks last year, it comes

⁷ At the end of 1987, real estate loans accounted for 39 percent of total loans, consumer loans for 18 percent, agricultural operating loans for 8 percent, and C&I and all other loans for 35 percent.

as no surprise that the biggest decline in chargeoffs was for agricultural operating loans, from 4.2 percent of loans in 1986 to 1.8 percent in 1987. Despite the widely publicized problems of the commercial real estate sector, the average chargeoff rate on real estate loans edged downward in 1987. Also, the chargeoff rate on C&I and all other loans decreased moderately, just making up for the previous year's increase.

Nonperforming loans

Future loan losses are closely related to the current level of nonperforming loans. These loans are loans that have not been written off but are at least 90 days overdue, nonaccruing or renegotiated.⁸ Although some nonperforming loans may be fully repaid and others partly salvaged, banks with high levels of nonperforming loans today are likely to have high rates of loan losses in the future.

In 1987, the proportion of nonperforming loans failed to increase for the first time since banks began publicly reporting such data in the early 1980s. As shown in Table 6, the average delinquency rate of district banks edged downward from 4.1 percent at the end of 1986 to 4.0 percent at the end of 1987. The stability in the overall delinquency rate masked significant differences among banks. At large banks, nonperforming loans increased half a percentage point to 3.8 percent of total loans. At the two sizes of agricultural banks, by contrast, the delinquency rate fell almost a percentage point to 5.0 percent. Small and medium-size nonagricultural banks fell in the

⁸ Banks are allowed to count as income any interest that is due but not received, provided the interest and principal are less than 90 days overdue or the loan is well secured and in process of collection. Nonaccruing loans are overdue loans that do not meet either of these conditions. Renegotiated loans are troubled loans with terms that have been eased to facilitate repayment by the borrower.

middle, experiencing modest decreases in nonperforming loans and ending up with about the same average delinquency rate as large banks.

Evidence of lessening agricultural credit problems can also be found in the behavior of nonperforming loans by type of loan. As shown in Table 7, delinquency rates were relatively flat for real estate loans, consumer loans, and C&I and all other loans in 1987, but fell sharply for agricultural operating loans. By the end of the year, agricultural operating loans still had the highest delinquency rate of the four categories, 5.6 percent. However, that rate was only slightly higher than the delinquency rate on C&I and all other loans, 5.3 percent.

Although the percent of nonperforming real estate loans was unchanged in 1987, there were signs of continued deterioration in the nonresidential sector. Delinquency rates for different types of real estate loans are not reported directly but can be estimated by comparing total real estate delinquencies at banks with different lending specializations. As shown in Table 8, delinquency rates estimated in this manner declined for residential real estate loans and farm real estate loans and remained unchanged for construction loans.⁹ For loans backed by nonresidential real estate, however, the estimated delinquency rate continued to rise, reaching 5.1 percent by the end of the year.

Capital

A final dimension of performance is capital,

⁹ At the end of 1987, residential real estate loans accounted for 46 percent of total real estate loans, nonresidential real estate loans for 31 percent, construction loans for 16 percent, and farm real estate loans for 7 percent. The estimates in Table 8 were obtained by regressing the total delinquency rate on real estate loans against the shares of real estate loans in the four subcategories, weighting each observation by the square root of the bank's total real estate loans.

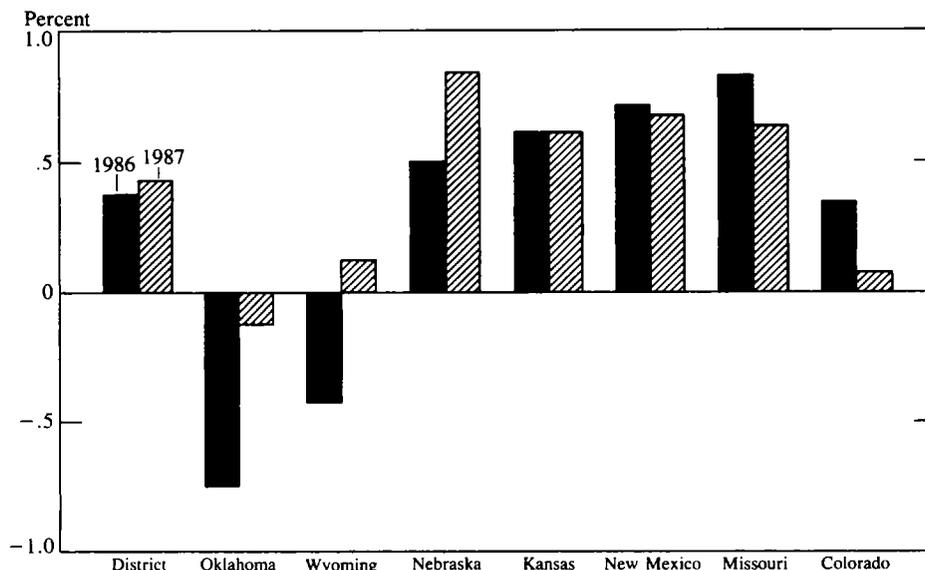
the cushion banks build to protect themselves against unforeseen losses. Like profitability, a bank's capital can be measured in various ways. The measure used in this article is primary capital, the sum of equity capital and loan loss reserves.¹⁰

Thanks to slow asset growth and the stabilization of earnings, district banks were able to increase their capital-asset ratios moderately in 1987. At banks in operation the entire year, primary capital rose from a little more than 8.3 percent of assets at the end of 1986 to just under 8.7 percent at the end of 1987. Some of the improvement in the capital-asset ratio was due to the contraction in assets over the course of the year. However, loan loss reserves continued to grow, and with the increase in profitability, banks managed to add a small amount to their equity through earnings retention.

Although most banks shared in the increase in capital-asset ratios in 1987, the reasons for the increase varied. Among the different sizes and types of banks, large banks reported the biggest increase in capital-asset ratios, a rise of over 60 basis points. However, this achievement was due entirely to an increase in loan loss reserves and a sharp decline in assets. Indeed, large banks as a group paid out slightly more in dividends than they earned in 1987, reducing their total equity. Agricultural banks had more modest increases in capital-asset ratios in 1987 but achieved those increases mainly by building up their equity and not by running down their assets. Regardless of the sources of the increase, capital-asset ratios ended up high in all categories of banks, ranging from 8.0 percent at large banks to 10.2 percent at small agricultural banks.

¹⁰ In calculating primary capital to meet regulatory requirements, banks include minority interests in consolidated subsidiaries and mandatory convertible instruments and exclude intangible assets such as goodwill. These items are relatively unimportant at most district banks.

CHART 5
Return on assets at banks in Tenth District states*



*Profits divided by average assets

The adequacy of capital must be judged relative to the potential for future losses. As suggested earlier, a useful indicator of future loan losses is the level of nonperforming loans. At the end of 1987, 86 percent of the region's 2,700 banks had more than twice as much primary capital as nonperforming loans. Furthermore, only 126 banks ended the year with less primary capital than nonperforming loans, down from 165 a year earlier.

Performance by state

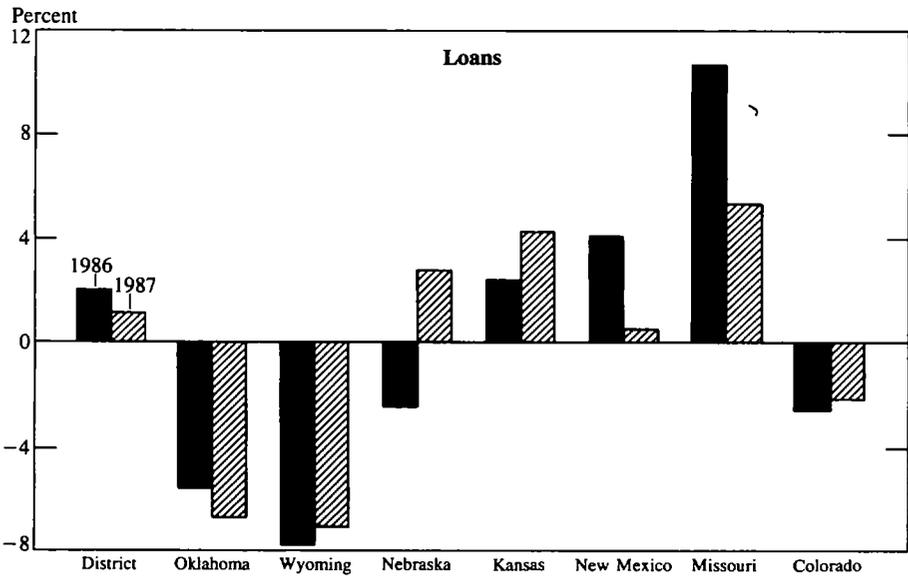
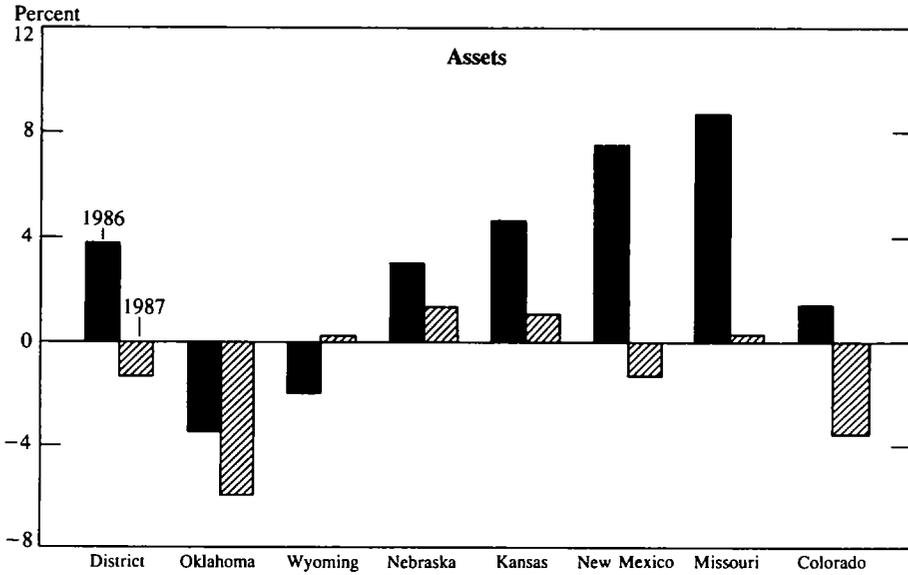
The recovery in banking performance was not uniform across states in 1987. By most measures, performance improved sharply in Oklahoma, Wyoming, and Nebraska, remained stable in Kansas and Nebraska, and declined in Missouri and Colorado. This section briefly reviews the banking performance of each state in order of the increase in ROA last year.

Oklahoma

The stabilization of oil prices in 1987 helped banks in energy-dependent Oklahoma recover from a sharp deterioration in performance the year before. ROA rose more in Oklahoma than any other district state, 60 basis points (Chart 5). However, 31 of Oklahoma's 510 banks failed during the year, twice as many as in 1986. And at remaining banks, both assets and loans continued to fall (Chart 6).

Despite the improvement in earnings in 1987, Oklahoma banks suffered losses equal to 0.1 percent of their assets, the lowest ROA in the district. About half of the increase in ROA was due to the elimination of banks that had incurred heavy losses the year before. Among remaining banks, most of the improvement was at large banks, whose losses declined to 0.6 percent of assets. Medium-size banks enjoyed somewhat greater increases in ROA than in the district as a whole

CHART 6
Growth in bank assets and loans in Tenth District states



and small banks somewhat smaller increases. Despite these improvements, all categories of banks continued to earn significantly less than in the district as a whole.

Just as previous declines in ROA were due to sharp increases in loan loss provisions, so was last year's recovery due to a steep decline in provisions. Among banks that were in business throughout 1986 and 1987, provisions fell about 50 basis points, with nonagricultural banks enjoying the same decrease as agricultural banks. Despite the decline, provisions were 1.3 percent of assets for the state as a whole, a third higher than the district average. Reinforcing the decline in provisions at large banks was a steep increase in noninterest income that far outweighed the rise in their noninterest expense.

At the end of 1987, 7.6 percent of loans at Oklahoma banks were nonperforming. This figure was slightly lower than a year earlier, but only as a result of the failure of banks with very high delinquencies. The delinquency rate on agricultural operating loans was below the average for the district. However, the delinquency rate on real estate loans was almost six percentage points higher and the delinquency rate on C&I and all other loans over three percentage points higher.

Wyoming

The relative stability in energy and mining also enabled banks in Wyoming to make up ground lost the previous year. ROA rose over 50 basis points in 1987, the second largest increase in the district (Chart 5). Four of the state's 105 banks failed during the year, fewer than in 1987. At other banks, assets were unchanged and loans continued to fall (Chart 6).

Even with the rebound in profitability, Wyoming banks earned an ROA of only 0.1 percent in 1987. No banks in Wyoming fell into the large size group in 1987. Among nonagricultural banks, medium-size banks reported a bigger increase in

profitability than small banks; nevertheless, medium-size banks failed to break even while small banks earned a modest profit. Performance at the state's agricultural banks was highly diverse, with small banks experiencing a big increase in ROA and medium-size banks a big decrease.

As in Oklahoma, the main cause of the 1987 earnings recovery was a large decrease in loan loss provisions. The decline left provisions at 0.9 percent of assets, the same as in the district as a whole. Chargeoffs fell by a much smaller amount, however, forcing Wyoming banks to draw down their loan loss reserves during the year. Partially offsetting the impact of lower provisions on ROA was a sharp decrease in net security gains at all categories of banks.

At the end of 1987, 7.1 percent of loans at Wyoming banks were nonperforming, considerably more than in the district as a whole but less than a year earlier. The delinquency rate was about average for agricultural operating loans but significantly higher than average for all other categories, especially C&I and all other loans.

Nebraska

Banking performance improved markedly in Nebraska, reflecting the turnaround in the state's all-important agriculture sector. ROA increased almost 40 basis points in 1987, the third largest increase in the district (Chart 5). Of the state's 440 banks, six banks failed, the same number as in 1986. At other banks, asset growth continued to slow but loans increased substantially following two consecutive years of decline (Chart 6).

The improvement in earnings in 1987 was widespread, with both agricultural banks and non-agricultural banks sharing in the increase. As a result of the increase, both types of banks earned more than 0.8 percent on their assets, significantly more than their counterparts in other states.

The rebound in profitability at Nebraska banks

resulted from a very large decrease in loan loss provisions. At agricultural banks, loss provisions fell by more than a half to 0.7 percent of assets, slightly less than the district average. Provisions also fell sharply at nonagricultural banks, reaching 0.6 percent of assets. The large banks in this group also benefited from an unusually large increase in NIM which outweighed the reduction in net security gains and the increase in net non-interest expense.

At the end of 1987, 3.1 percent of loans at Nebraska banks were nonperforming, less than in the district as a whole and down from a year earlier. Delinquency rates were slightly below average on real estate loans and agricultural operating loans and far below average on C&I and all other loans.

Kansas

In keeping with recent experience, banking performance in Kansas changed very little in 1987. ROA remained the same (Chart 5). During the year, eight of the state's 610 banks failed, about half as many as in 1986, and one new bank was started.¹¹ At remaining banks, assets grew much slower than before but loans somewhat faster (Chart 6).

Despite the lack of improvement in 1987, the ROA of Kansas banks remained higher than the district average at 0.6 percent. The profitability of agricultural banks increased, but by a smaller amount than in the district as a whole. Among nonagricultural banks, ROA declined slightly at large and medium-size banks but was virtually unchanged at small banks. Even with the decline, the state's large banks had the highest ROA in the district for their size group, over 1.1 percent.

¹¹ In this section, the term "new banks" refers only to banks established *de novo* and not to banks formed to take over the deposits of failed banks.

The reason the average ROA of Kansas banks failed to change is that steep declines in NIM and net securities gains were just offset by a sharp drop in loan loss provisions. Provisions fell more at agricultural banks than at nonagricultural banks, ending up at 0.8 percent of assets in both groups. In contrast to the district as a whole, large banks shared in the decline in loss provisions. However, these banks also suffered a steep decline in net security gains, preventing their ROA from rising.

Nonperforming loans were 3.0 percent of total loans at the end of 1987, below the district average and down moderately from the previous year. As in the past, delinquency rates on consumer loans and agricultural operating loans were about the same as elsewhere, while rates on real estate loans and C&I and all other loans were lower.

New Mexico

Banking performance was also stable in New Mexico. Profitability was virtually the same in 1987 as in 1986 (Chart 5). None of the state's 90 banks failed during the year, but asset growth and loan growth both fell sharply (Chart 6).

With profitability little changed, the ROA of New Mexico banks remained at 0.7 percent, well above the district average. The state's agricultural banks experienced about the same increase in earnings as in other states. Among nonagricultural banks, ROA edged downward at small and medium-size banks but was unchanged at large banks. The state's large banks continued to enjoy much higher profitability than smaller banks, earning an average ROA of just under 1.1 percent.

As in the district as a whole, the stability of profits resulted from offsetting declines in NIM and loan loss provisions. Provisions remained below district averages at small and large banks but above the district average at medium-size

banks. For the state as whole, provisions were 0.8 percent of assets, the same as in Kansas.

At the end of 1987, 4.1 percent of New Mexico bank loans were nonperforming. The delinquency rate on C&I and all other loans was higher than the district average, having risen a full percentage point over the course of the year. Delinquency rates on other categories were about the same as elsewhere.

Missouri

Banking performance declined in Missouri after several years of relative stability. ROA fell 20 basis points, the largest decline in the state this decade (Chart 5). Four of the state's 610 banks failed in 1987 but seven new banks were started. During the year, 18 open banks disappeared through mergers, about a third as many as in 1986. At remaining banks, growth in loans declined significantly and growth in assets fell almost to zero (Chart 6).

The decline in profitability left ROA a little below 0.7 percent, higher than in the district as a whole but lower than in first-place Nebraska. The unusually sharp decline in average earnings was due entirely to the state's large banks, where ROA fell over 40 basis points. As in other states, Missouri's agricultural banks enjoyed a substantial increase in earnings. And among nonagricultural banks, small and medium-size banks suffered only slight declines in ROA that left them with the highest profit rates in the district.

The cause of the steep decline in ROA at large banks was a sharp increase in loan loss provisions. After many years of low loss provisions, Missouri's large banks set aside 1.1 percent of their assets in 1987, the same percentage as for other large banks in the district. All of the increase in provisions at the state's large banks represented net additions to loan loss reserves, as the ratio of chargeoffs to assets remained unchanged.

Missouri continued to have the lowest propor-

tion of nonperforming loans in the district, 2.5 percent. However, the delinquency rate on C&I and all other loans moved closer to the district average, reflecting a large increase in such delinquencies at the state's large banks.

Colorado

Banking performance declined most in Colorado, as problems in the state's energy, mining and construction industries continued to take their toll. ROA fell almost 30 basis points (Chart 5). Thirteen of the state's 440 banks failed during the year and five closed voluntarily, while only three new banks were started. Nineteen more banks were eliminated through mergers. At those banks remaining in business, both loans and assets fell (Chart 6).

The drop in profitability left the ROA of Colorado banks just below 0.1 percent, the third lowest rate of return in the district after Oklahoma and Wyoming. At agricultural banks, ROA increased only slightly to 0.3 percent. Among nonagricultural banks, all three size categories experienced significant declines in ROA, but especially large and medium-size banks.

The decline in profitability in Colorado resulted from a steep decrease in NIM that was only partially offset by lower loan loss provisions. Even with the decrease, provisions exceeded 1.2 percent of assets for the state as a whole, second only to Oklahoma. Provisions fell somewhat more at the state's large banks. However, at these banks the favorable impact on earnings was outweighed by a sharp drop in interest income and a reversal of the previous year's unusually large gain in non-interest income.

At the end of 1987, 4.8 percent of loans at Colorado banks were nonperforming. This proportion was down slightly from the previous year but still higher than the district average, reflecting above average delinquency rates in all categories except consumer loans.

Conclusions

The year 1987 witnessed a stabilization in the overall performance of commercial banks in Tenth District states. As in the previous two years, more banks were closed than were opened and growth at other banks was sluggish. However, loan losses fell sharply enough to offset a decline in banks' net interest income. As a result, average profitability increased slightly, ending five consecutive years of decline. The combination of slower asset growth and stable earnings enabled district banks to increase their capital asset ratios during the year, and the number of highly vulnerable banks with more delinquent loans than capital declined.

Performance continued to vary greatly across banks. Agricultural banks showed the strongest signs of recovery, combining faster loan growth with lower loan losses and higher profits. Banks in the two states most dependent on energy production also reported large increases in earnings, but because profitability had declined so much in previous years, these banks continued to earn much less than banks in other states. Among different size groups, large banks did

the worst in 1987. Not only did their growth slow dramatically, but their loan losses failed to come down and their profitability continued to slide.

Prospects are good for a continued recovery in district banking performance in 1988. The surprisingly strong growth of the national economy should spill over to the regional economy, boosting loan demand and speeding loan repayments. At district agricultural banks, high farm income, stable land values and declining delinquencies all point to a further reduction in loan losses and increase in profits. With oil prices having recovered little from the 1986 collapse and with loan delinquencies still very high, the outlook for banks in energy-producing states is less bright. Nevertheless, continued stability in oil prices should give these banks time to work through their problem loans and move closer to profitability. Finally, it should be remembered that there is a positive side to the current contraction in the district banking industry. The industry that emerges from this period of retrenchment is likely to be both leaner and stronger, an industry less prone to the excesses of the late 1970s and early 1980s and better able to withstand future recessions.