

Pieces of Eight

An Economic Perspective on the 8th District



Life After the Drought

Slow Growth in Rural America

The Wave of Bank Failures

THE EIGHTH FEDERAL RESERVE DISTRICT



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Pieces of Eight—An Economic Perspective on the 8th District is a quarterly summary of agricultural, banking and business conditions in the Eighth Federal Reserve District. Single subscriptions are available free of charge by writing: Research and Public Information Department, Federal Reserve Bank of St. Louis, Post Office Box 442, St. Louis, MO 63166. The views expressed are not necessarily official positions of the Federal Reserve System.

Agriculture in 1989: Life After the Drought

by Michael T. Belongia

The 1988 drought temporarily reversed the upward trends in grain surpluses and excess capacity that have typified American and, indeed, world agriculture in the 1980s. At the end of 1986, with U.S. stocks of coarse grains, wheat and rice standing at 204 million tons, about equal to one year's domestic use, domestic farm programs idled more than 75 million acres of cropland in 1987. Although stocks fell somewhat by the end of 1987, helped in part by stronger exports, further acreage reductions were viewed as necessary to lower accumulated stocks to less costly levels. Therefore, 1988 program enhancements idled an additional 3 million acres of cropland.

What analysts had expected to be a gradual reduction in stockpiles became, with the help of the severe early-season drought, the largest one-year reduction in world grain stocks on record: U.S. grain stocks fell 100 million tons. Rice stocks were relatively unaffected, in contrast, as the 1988 crop escaped most of the drought's damage.

As farmers, consumers and policymakers look to 1989, they face a number of conflicting signals. Some, fearing the consequences of a world food shortage, view the sharp reduction in stocks as dangerous footing for the next crop year. After all, the 1980s have seen three droughts already in the U.S. (1980, 1985, 1988) and, in some analysts' view, it is prudent to idle less acreage in 1989 to rebuild stocks somewhat and ensure against the possibility of another drought-damaged crop. Others, however, note that crop production has tended to rebound sharply after a drought and that the world agricultural problem remains the overemployment of resources in farming as technological advances continue to increase food output at a rate faster than the growth in food demand. According to this view, 1988 was an aberration and the best strategy is to continue to move resources out of agriculture permanently.

While much discussion in 1988 focused on lower grain production and stocks, 1989 involves choices beyond the achievement of desired levels of output and stock rebuilding. Reductions in grain production led to higher prices for grain buyers—households as well as poultry and livestock producers who incur the cost of higher prices for feed. The point, as always, is that agricultural program decisions lead to redistributions of costs and

benefits between farmers, consumers and among various groups of farmers. Moreover, as illustrated by the repeated failures of the General Agreement on Tariffs and Trade (GATT) negotiations on farm subsidies across countries, domestic policy decisions can have substantial effects on the welfare of foreign consumers and farmers. With this as a backdrop, the short summaries below indicate the expectations for 1989 held by speakers at the U.S. Department of Agriculture's recent Outlook Conference.¹

Farm Finance

Overall, the prospect is good for additional improvements in farm balance sheets in 1989. On the negative side, it has been estimated that, despite nearly \$3 billion in special disaster payments, the drought threatened the financial survival of 15,000 farms. On the positive side, however, stabilizing land values, higher receipts from both grain and livestock marketings and moderate input price increases all indicate some improvement in farm finances. Moreover, direct payments to farmers from government programs, although smaller, will continue to be substantial. Government payments are expected to be near \$11 billion in 1989, down from \$14 billion in 1988 and \$17 billion in 1987; as a percentage of net farm income, this represents a two-year decline from 37 percent to 24 percent.

A breakdown of the income outlook is shown in table 1. Among items to note, the increase in cash expenses will be due primarily to increases in planted acreage and input use rather than higher input prices. Farmers should rebuild inventories somewhat, reversing the decline associated with the drought. This inventory rebuilding, in turn, will imply quite different movements in farm income depending on the measure used. Net farm income is projected to rise in 1989 because it is an accrual-based measure, which will increase as crop yields and receipts rise. Net cash income, however, is expected to decline because lower commodity sales associated with inventory rebuilding will tend to reduce this measure.

Livestock

Beef

Beef production in 1989 is expected to be 7 percent lower than in 1988, falling to the lowest level since 1980. Cattle inventories in 1988 fell below 100 million head for the first time since 1961 and may fall another 1 percent this year.

Table 1
Farm Income Outlook for 1989¹

Receipts (\$ billions)	1987	1988	1989
Livestock (total)	\$76.0	\$80	\$79-81
Cattle/Calves	33.8	37	37
Hogs	10.3	9	10
Poultry/Eggs	11.5	13	14
Dairy	17.8	17	18
Other	2.6	4	0-2
Crops (total)	62.0	69	69-72
Wheat	4.9	6	7
Corn	8.8	9	10
Soybeans	9.6	13	12
Fruits/Vegetables	23.5	24	25
Other	15.2	17	15-18
Direct Payments from Government Programs	17	14	10-12
Cash Expenses	103	111	115-118
Inventory Change	- 1	- 9	8-10
Net Farm Income	46	39	44-48
Net Cash Income	57	57	48-52

¹ This partial table, compiled from speeches at the USDA Outlook Conference, does not include all income and expense items necessary to derive the Net Farm Income and Net Cash Income figures.

Tightening beef supplies were associated with a 5 percent increase in beef prices to an average of \$2.59 per pound during the summer of 1988—a record average price. A further rise of 1 percent to 3 percent is forecast for 1989.

The outlook for 1989 beef production is affected by the aftermath of the drought. On one hand are the negative effects of higher production costs. Feed prices rose sharply late in 1988 as available grain supplies declined: corn prices in November, at \$2.60 per bushel, were 50 percent higher than a year earlier and hay prices were about 35 percent higher. A normal 1989 grain crop, which would reverse some or all of these feed price increases, would not be an influence until late 1989. Offsetting this factor, however, is the prospect for a fourth consecutive year of profits for beef producers, following five years of losses. Net returns to cow-calf producers, which are projected to be in the range of \$40-\$45 per head, will be less than the \$54 average last year. Thus, analysts expect these returns to be sufficient to encourage some heifer retention by existing producers but not re-entry to the industry by those who left in the early 1980s.

Pork

As with beef, the effects of the drought are a major variable in the pork outlook. Higher feed costs have raised the break-even price for hog producers about \$5 per hundredweight. Because hog prices are expected to rise only slightly, however, returns to many producers could be negative in 1989, encouraging some herd liquidation. Moreover, even though total pork output for 1989 is expected to be near 1988's level, herd liquidations associated with the sharply higher feed prices during the second half of 1988 will be responsible for a decline in pork production late in 1989. Overall, 1989 pork supplies are expected to hold near the 64 pounds per capita of 1988; retail prices should rise between 1 percent and 3 percent.

Poultry and Eggs

Broiler production is expected to increase between 3 percent and 5 percent in 1989, with most of the increase occurring during the second half of

the year. Prices are expected to average between 50 cents to 56 cents per pound in the first quarter, compared to the 45-cent average of the same period in 1988. For the second and third quarters, however, prices are expected to fall between 3 cents and 7 cents per pound relative to their 1988 values for the same periods. Turkey production also is expected to increase 3 percent in 1989, following 17 percent and 6 percent rises in 1987 and 1988. Prices may rise to the range of 68 cents to 74 cents per pound, up from the 62-cent to 64-cent average expected for 1988.

Egg production has shown negative returns to producers since 1987 and, as a consequence, is expected to decline 2 percent in 1989; 1988 production is expected to be down 1 percent from a year ago. Negative returns to producers are expected at least through the first half of 1989, due largely to higher feed costs. Retail prices are expected to rise 9 percent to a range of 68 cents to 74 cents per dozen. This would be the highest average egg price since 1984.

Dairy

Although cow numbers were down 1 percent from 1987, a 3 percent increase in output per cow raised 1988 milk production to a record high. A declining milk-to-feed price ratio—caused by a combined 50-cent reduction in the support price and higher feed prices—will limit herd expansions and tend to reduce output per cow in 1989 so that production next year will be near the 1988 level. This level of output is expected to raise prices received by farmers by 10 cents to 50 cents above the 1988 average price of about \$12 per hundredweight. Retail prices are expected to rise 2 percent. Commodity Credit Corporation (CCC) purchases are expected to be eight to nine billion pounds (milk equivalent) in 1988, up from 6.7 billion pounds in 1987. Purchases are expected to fall in 1989, however, to five billion to seven billion pounds.

Crops

Corn

A 4 percent decline in harvested acreage, combined with a 31 percent reduction in yields, produced a 1988 corn crop 34 percent smaller than the previous year's. At 4,671 million bushels, this was the smallest harvest since the drought-damaged 1983 crop. Ending stocks, forecast to be 1,446 million bushels, represent a 66 percent decline from the 1987/88 crop year.

With more lenient provisions for corn program participation [a 10 percent Acreage Reduc-

tion Program (ARP) and no paid land diversion versus a 20 percent ARP and 15 percent diversion in 1987/88], planted acreage is expected to rise between 8 million and 10 million acres this year. With normal yields, a corn crop of between 7.7 billion and 8.3 billion bushels is estimated. If the crop turns out nearer the low estimate of 7.7 billion bushels, analysts expect little rebuilding of stocks and only slight declines in price from the \$2.40-\$2.80 per bushel average projected for 1988/89. Production at the high end of the range, however, will likely trigger stock rebuilding and push prices toward the \$1.65 per bushel loan rate.

Soybeans

One effect of the drought, which reduced U.S. soybean production in 1988 by 21 percent and exports by 30 percent, has been the creation of an opportunity for producers in the southern hemisphere to expand production and output. Because their crop followed the U.S. crop, South American soybean producers had strong price signals to plant more acreage and, perhaps, gain a larger share of the world soybean market; the 1988/89 crop year price is expected to be \$6.75 to \$8.75 per bushel, up from \$6.15 in 1987/88. An indicator of their expanded production is the projection that larger soybean exports from South America will offset the 30 percent decline in U.S. exports so that, on net, world trade in soybeans will decline only 4 percent.

Rice

Rice production of 158.4 million hundredweight in 1988 was up 24 percent from the previous year and was the largest crop harvested since 1981. Most of this expansion can be attributed to relatively high prices when the 1988 crop was planted and a loosening of planting restrictions under the rice program as growers were allowed to plant 75, rather than 65, percent of their base acreage. World rice supplies are expected to be relatively tight in 1989, despite near-record production levels, because of increased utilization; usage is forecast to rise by 6 million tons. World trade also is expected to expand, in part, because higher grain prices have made rice an attractive substitute.

Wheat

1989 will begin with the lowest stocks-to-use ratio in 15 years. Consequently, the ARP for this year's crop was reduced from 27.5 percent to 10 percent. This, plus higher prices, leads analysts to expect planted acreage to expand between 13 million and 15 million acres. A trend yield of 38

Table 2
Percentage Changes in Food Price Indicators, 1986 through 1989

	1986	1987	1988p	1989f
Consumer Price Indexes				
All food	3.2%	4.1%	4.0%	3 to 5%
Food away from home	3.9	4.0	3.9	4 to 6
Food at home	2.9	4.3	4.0	3 to 5
Meat, poultry and fish	4.3	6.4	3.2	0 to 3
Meat	3.2	7.1	2.0	1 to 3
Beef and veal	0.6	7.6	4.9	1 to 3
Pork	8.2	8.2	-2.9	1 to 4
Poultry	7.5	-1.5	6.6	-4 to -7
Fish and seafood	9.2	10.6	6.1	4 to 7
Eggs	6.9	-5.9	5.2	15 to 20
Dairy products	0.2	2.5	2.0	2 to 4
Fats and oils	-2.2	1.5	4.1	3 to 6
Fruits and vegetables	0.9	8.8	7.3	3 to 6
Fresh fruits	2.1	11.3	7.8	6 to 9
Fresh vegetables	4.0	12.9	5.8	0 to 3
Processed fruits and vegetables	-1.6	3.5	8.1	4 to 7
Processed fruits	-2.9	4.1	10.6	4 to 7
Processed vegetables	-0.2	2.7	4.7	4 to 7
Sugar and sweets	3.2	1.8	2.7	4 to 7
Cereals and bakery products	2.8	3.5	6.4	4 to 7
Nonalcoholic beverages	5.9	-2.6	0.0	4 to 7
Other prepared foods	2.6	4.2	3.6	3 to 5

p = preliminary f = forecast

bushels per acre would increase the 1989/90 wheat crop by 40 percent more than last year's drought-damaged crop. The season average price for 1988 is expected to be between \$3.55 and \$3.85 per bushel, compared to \$2.57 in the previous year. A season average price between \$3.40 and \$3.80 per bushel is expected for 1989. This expectation of continued high wheat prices is based on the historically low stocks entering 1989, world utilization projected at 530 million tons and world production somewhat less than 530 million tons.

Cotton

The 1988/89 crop, at 14.8 million bales, was slightly larger than the previous year's. With domestic use and exports both declining, however, stocks are expected to rise 3 million bales to 8.8 million, about 30 percent larger than the 1982-86 average. The 25 percent decline in exports can be attributed to the price support program that causes noncompetitive U.S. prices.

The 1989/90 crop will be influenced by a doubling of the cotton program's ARP to 25 percent of base acreage. Combined with reductions in both the target price (down 2.5 cents to 73.4

cents) and loan rate (down 1.8 cents to 50 cents), domestic production should decline about 2 million bales; this projection is based on trend yields and a reduction in planted acreage between 2 million and 3 million acres.

Food Prices

Domestic retail food prices are expected to increase in 1989 at close to the 4 percent rate experienced in 1987 and 1988. Prices for eggs, fish and seafood, fruits, cereal and bakery products and nonalcoholic beverages are forecast to rise slightly faster than the overall rate. The rise in the food index will be held down, however, by slower increases in meat prices generally (and poultry prices, in particular), and fresh vegetable prices. Table 2 summarizes the projections for food price changes by component for 1989.

FOOTNOTES

¹Much of the material in the introduction is taken from Ewen M. Wilson, "Implications of the 1988 Drought for Agricultural Production and Stocks," Washington, D.C., December 1, 1988.

Rural Economic Performance Slows in the 1980s

by *Kenneth C. Carraro and Thomas B. Mandelbaum*

Many people imagine rural America as a sparsely populated expanse dominated by farms and a few oil wells. In most rural communities, however, far more people are working in either manufacturing or service jobs than are employed in farming or mining. Given the publicity regarding the "rural crisis," many envision deteriorating economic conditions throughout the countryside precipitated by the fall in commodity prices during the 1980s. On average, it is true that rural economies have grown more slowly than metropolitan areas during the current decade; however, a closer look reveals wide variations in rural economic conditions among regions and even within states.

This article provides an overview of the performance of rural economies in the 1970s and early 1980s. After summarizing national economic trends in rural areas, the focus is narrowed progressively to examine rural economic growth at the District, state and county levels. In this article, the term "rural" refers to those counties not included in metropolitan statistical areas as defined by the federal government.¹

Are Rural Areas Falling Behind?

Rural areas have grown more slowly than metropolitan areas in the 1980s, evidenced by numerous economic measures. The concern regarding the slower rural growth in recent years may stem partially from a comparison with the 1970s, when U.S. rural areas outpaced metropolitan areas in terms of most economic and demographic indicators (see table 1).

From 1979 to 1986, growth in real personal income was more than twice as fast in the nation's metropolitan areas (2.3 percent annual rate) as it was in rural areas (0.9 percent annual rate). In stark contrast, real personal income grew faster (3.8 percent rate) in rural areas than in metropolitan areas (2.8 percent rate) in the 1970s.

The relatively slow rural growth has led to a decline in rural per capita income as a percentage

of metropolitan per capita income. In 1979, the nation's rural per capita income (adjusted for inflation, 1982-84 dollars) stood at \$10,151 or 77 percent of the nation's metropolitan per capita income of \$13,163. By 1986, rural per capita income of \$10,330 fell to only 72.4 percent of the nation's metropolitan per capita income of \$14,271.

Not surprisingly, total employment, as well as other economic indicators shown in table 1, are consistent with the relative income trends. Total employment in the 1970s grew at a 2.2 percent annual rate in both areas. In the 1980s, however, the rural employment growth rate fell sharply to 0.8 percent annually while the metropolitan employment growth rate fell only slightly to 2 percent. The rate of decline of farm employment increased from 0.6 percent per year in the 1970s to 2 percent per year in the 1980s.

Eighth District Trends

As in the nation, the Eighth District's rural growth was faster than in metropolitan counties in the 1970s and then slowed in comparison to metropolitan counties in the 1980s.² Additionally, the District grew more slowly than the nation in the 1980s after closely mirroring the national growth rate in the 1970s. The overall slower District growth may reflect the pattern of national economic growth during the 1980s that has been called the "bi-coastal economy." This term emphasizes the relatively rapid economic growth on the East coast and in California compared with interior states.

Table 1
Compounded Annual Growth Rates

	1969-79		1979-86	
	Rural	Metro	Rural	Metro
Real Personal Income				
United States	3.8%	2.8%	0.9%	2.3%
District	3.8	2.4	0.2	1.0
Population				
United States	1.3	1.0	0.7	1.1
District	1.1	0.7	0.3	0.4
Real Per Capita Income				
United States	2.5	1.7	0.3	1.2
District	2.7	2.1	0.0	0.6
Total Employment				
United States	2.2	2.2	0.8	2.0
District	1.8	1.7	0.4	0.9

Table 2
Compounded Annual Growth Rates of Real
Personal Income in Eighth District States

	1969-79		1979-86	
	Rural	Metro	Rural	Metro
Arkansas	4.9%	4.7%	1.0%	1.8%
Kentucky	4.8	3.0	0.2	0.9
Illinois	2.9	1.8	-0.8	0.6
Indiana	2.5	2.4	-0.1	0.2
Mississippi	4.3	4.9	0.2	1.5
Missouri	3.9	2.2	0.6	1.8
Tennessee	4.6	3.8	1.1	2.2

Table 2 demonstrates that the faster rural growth of the 1970s and slower rural growth of the 1980s, relative to metropolitan areas, was present in each District state except Mississippi. In all cases, both rural and metropolitan real personal income growth was slower in the 1980s than in the 1970s. In fact, two states, Illinois and Indiana, registered declines in rural income. On the other hand, Tennessee had both the highest rural growth, 1.1 percent, and the highest metropolitan growth, 2.2 percent, in the 1980s.

Other economic measures, shown in table 1, confirm the story of slower rural development. In the District, the growth rates of population, per capita income and total employment all were slower in rural areas than in metropolitan areas in the 1980s. Per capita personal income in the District's rural counties fell to \$9,634 or 77.4 percent of the District's metropolitan counties' \$12,444 in 1986. In 1979, rural per capita income was 80.7 percent of metropolitan per capita income.

The relatively slow rural growth has especially important consequences for the District economy. In 1986, 34.9 percent of District residents lived in rural areas compared with 23.2 percent of the nation's population. There is substantial variation among District states, however. Just 17.6 percent of Illinois residents lived in rural areas, while more than half of those living in Arkansas, Mississippi and Kentucky did.

What Accounts for the District's Slow Rural Growth

One of the first places to look for an explanation of the economic performance of an area is its economic composition. In terms of employment, metropolitan and rural areas of the District are similar in most major categories. A few sectors, however, provide important clues to help explain the growth differential between rural and

metropolitan counties. These employment sectors are services, wholesale and retail trade, manufacturing and finance.

The most rapid expansion of jobs in the District during the 1980s occurred in the services sector. Not only has the services sector produced the largest job growth, it has also provided the largest share of District employment. The rural-metropolitan growth disparity is most apparent in this sector. Service jobs grew at an annual rate of 4.2 percent in metropolitan counties and at a 3.4 percent rate in rural areas. Service jobs also accounted for a smaller share of rural employment, 18.8 percent, than in metropolitan counties where service jobs accounted for 26 percent of all jobs in 1986. In summary, not only were rural areas handicapped with a smaller share of the most rapidly growing employment sector, but also that sector expanded slower than in metropolitan areas.

Similar stories characterize the District's finance, insurance and real estate sector and the wholesale and retail trade job sector. Rural areas had smaller shares of these rapidly growing sectors and each sector had poorer performance in rural areas than in metropolitan areas.

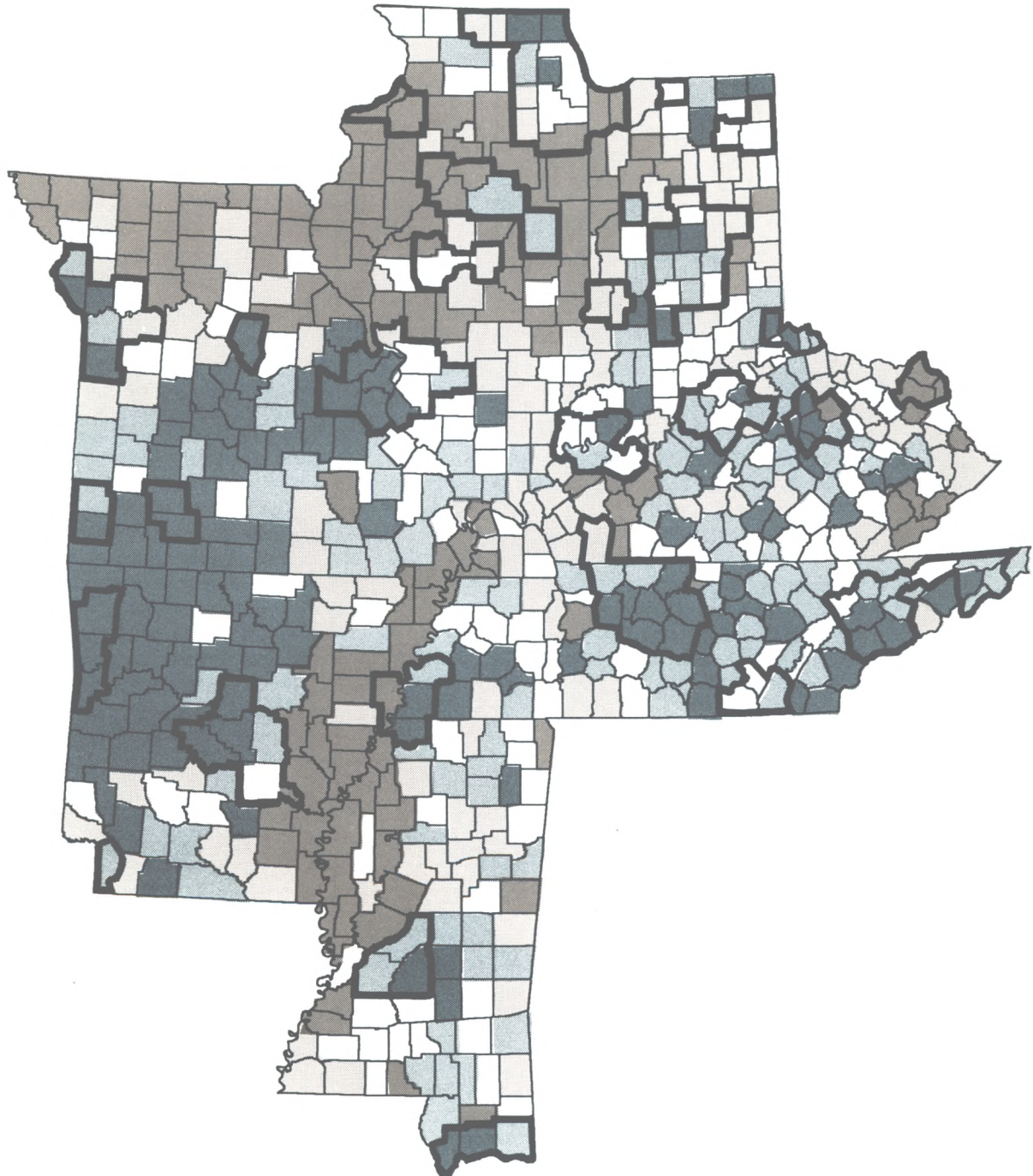
The manufacturing sector, however, provides an interesting contrast to the job trends in the above-cited sectors. Many observers are surprised to find that rural economies have a heavier reliance on manufacturing as a source of jobs and income than do metropolitan areas. For example, in 1986, 20.3 percent of all rural jobs were classified as manufacturing jobs compared with only 17 percent in metropolitan areas. This higher reliance on manufacturing is a relatively new phenomenon; as recently as 1978 manufacturing accounted for a higher proportion of metropolitan jobs than it did of rural jobs (22.9 percent versus 22.8 percent). This change has occurred because rural areas have lost manufacturing jobs at a slower rate than have metropolitan areas. The difference in manufacturing structure, therefore, serves to counteract the slower rural growth.





Rural Heterogeneity

We have all heard horror stories regarding the problems of some rural communities in recent years. For example, in Arkansas, the unemployment rate in St. Francis County stood at more than 27 percent in June 1988 due to manufacturing layoffs. Although situations such as these publicize the severe difficulties facing some rural counties, particularly those lacking a diversified economic base, they are atypical. Like metropolitan areas, rural America is far from homogeneous, a fact hidden by aggregate growth rates such as those in table 1.

Real Personal Income Growth

Compounded Annual Rates, 1979-86



-  Fastest fifth
-  Second-fastest fifth
-  Middle fifth
-  Second-slowest fifth
-  Slowest fifth
-  Denotes metropolitan counties

The variation in economic performance among District counties can be seen in the map on the previous page. Areas that contain one or more metropolitan areas are enclosed by a heavy outline. The 681 counties on the map are shaded according to real personal income growth between 1979 and 1986. They are divided into five groups of counties ranging from the slowest fifth, shaded dark gray, to the most rapidly growing fifth, shaded dark green³

The largest concentration of rapidly growing counties is in northwestern Arkansas and south-central Missouri. Metropolitan counties, which account for 20 percent of the 681 counties in the seven states, account for 31 percent of the two most rapidly growing groups of counties. Tennessee is notable because only three of the state's 95 counties fall into the slowest group and two-thirds of the counties are in the top two growth categories. The fastest growing county in the seven states was Williamson County, part of the Nashville, Tennessee, metropolitan area, with an annual real income growth of 6.2 percent. St. Charles County, part of the St. Louis metropolitan area, was the second-fastest growing county with annual growth of 5.6 percent.

The slowest growing counties, shaded dark gray, are concentrated in two bands and are primarily in rural areas. The largest concentration of slow-growing counties is spread across rural portions of northern Missouri and north-central Illinois. The second concentration of slow-growing counties spans the lower Mississippi River valley. The four counties with the least growth are in rural areas in this region. Issaquena and Jefferson counties in Mississippi—in which real income dropped at rates of 6.3 percent and 5.0 percent—border the river. Prairie County, Arkansas, and Quitman County, Mississippi—in which real income fell at rates of 4.4 percent and 4.1 percent—are within 50 miles of the Mississippi River.

The Congressional Research Service reported last year that the lower Mississippi Valley has replaced Appalachia as the nation's poorest area. Indeed, the slowest growing counties are in this area. In response to the economic problems in the lower Mississippi Valley area, Congress recently created a regional commission to study and suggest programs to aid the troubled economies.

FOOTNOTES

¹Metropolitan statistical areas are regions that have a city of at least 50,000 in population or an urbanized area of at least 50,000 with total population of at least 100,000. Metropolitan areas are generally defined in terms of entire counties and include the county containing the main city as well as surrounding counties that have strong economic and social ties to the central county.

²In this article, the Eighth Federal Reserve District is represented by the entire states of Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee.

³Compounded annual growth rates of real personal income in the slowest fifth were less than or equal to -1.02 percent; the second-slowest fifth, greater than -1.02 percent and less than or equal to 0.01 percent; the middle fifth, greater than 0.01 percent and less than or equal to 0.72 percent; the second-fastest fifth, greater than 0.72 percent and less than or equal to 1.60 percent; and in the fastest fifth, greater than 1.60 percent.

U.S. Bank Failures Hit 200 in 1988

by Lynn M. Barry

Bankrupt savings and loans are the focus of an enormous amount of media and public attention. Their federal insurance agency, the Federal Savings and Loan Insurance Corporation, is mentioned weekly if not daily in newspapers and periodicals throughout our country. Failures, however, have not been restricted to savings and loans; an increasing number of commercial banks have failed in recent years.

The Federal Deposit Insurance Corporation (FDIC), through its regulatory and insurance functions, has a mandate to preserve confidence in and provide stability to the commercial banking system. In addition, the FDIC is empowered to maintain that confidence and stability through the quick and efficient resolution of bank failures. The recent wave of failures has challenged the FDIC's ability to achieve these objectives. Having weathered in 1988 the largest number of bank failures since its formation, the FDIC is currently operating with a weakened deposit insurance fund.

In 1988, the FDIC handled 198 commercial bank failures and two FDIC-insured thrift and loan association failures. Texas and Oklahoma again ranked number one and two in the number of bank failures as banks located in the energy belt continued to suffer from energy-related loan exposure. For farm banks, however, 1988 marked a year of continued recovery.

This article provides an analysis of 1988 bank failures, looking at various geographic and statistical breakdowns as well as describing the process by which the FDIC handles insolvent banks.

1988 Failures

The 221 failed and assisted banks in 1988 were far more than in any other year since the Great Depression and compare with 203 in 1987, 145 in 1986, 120 in 1985 and 79 in 1984. To put the volume of recent bank failures into perspective, from the early 1940s through the early 1980s, an average of less than six banks failed each year.

The FDIC began 1988 with roughly \$18 billion in reserves in addition to annual income

from premium assessments of approximately \$3.3 billion. In closing or merging these institutions last year, gross outlays of roughly \$8.3 billion were incurred by the FDIC. For 1988, the FDIC expects to post its first yearly operating loss, an estimated \$3 billion to \$4 billion.

The assets of banks that failed or received assistance in 1988 amounted to \$53.8 billion, the highest in the FDIC's 55-year history, nearly eight times the 1987 level. In all, however, the assets of these failed banks represented less than 2 percent of total U.S. bank assets.

The largest failed bank last year, First RepublicBank Dallas, held \$17.1 billion in assets. The Dallas-based holding company was acquired on July 29, 1988, by NCNB Corporation, Charlotte, North Carolina, with \$4 billion in federal funds or guarantees. In 1987, the largest commercial bank failure was Capital Bank and Trust Company, Baton Rouge, Louisiana, with closing assets of \$384.4 million.

In 1988, the average failed bank held \$191.7 million in assets compared with \$37.7 million in 1987 (see table 1). The 1988 average is dominated by the failure of 40 banks owned by First RepublicBank Corporation; 31 of its 40 failed banks had assets exceeding \$100 million. Excluding the banks associated with First RepublicBank Corporation from the averages yields an average failed bank asset size in 1988 of \$40.4 million.

Table 1 shows that 92 bank failures (46 percent) last year were at banks with less than \$25 million in assets, 29 fewer than in 1987. In 1987, 66 percent of the year's failures were in the smallest asset size category. The failure rate for banks with assets less than \$25 million was 2.2 percent in 1988, down from 2.8 percent in 1987. Banks with assets less than \$100 million accounted for 80.5 percent of 1988 failures, down from 93 percent in 1987. All but 39 of the 200 banks that failed last year had assets less than \$100 million; while, in 1987, all but 13 of the 184 failures had assets less than \$100 million.

Geographic Distribution

Table 2 shows that 1988 commercial bank failures were concentrated in the Tenth (Kansas City) and Eleventh (Dallas) Federal Reserve Districts where 159, or approximately 80 percent, of the 200 bank failures were located. The 117 failures in the Dallas District had combined closing assets of \$34.9 billion, representing 19.1 percent of total bank assets in the District. Assets at failed Texas banks accounted for 91 percent of total District failed bank assets in 1988. In the Kansas City District, the 42 failures totaled \$970.8 million

Table 1
Failed Bank Statistics by Asset Size 1987-1988

Asset Size (millions)	1988			1987		
	Failures	Average Asset Size (millions)	Failure Rate ¹	Failures	Average Asset Size (millions)	Failure Rate ¹
Less than \$25	92	\$ 13.5	2.2%	121	\$ 13.0	2.8%
\$25 -\$50	46	36.0	1.4	36	36.1	1.0
\$50 -\$100	23	70.0	0.8	14	68.5	0.5
\$100-\$300	25	178.3	1.4	10	180.3	0.5
\$300-\$1,000	10	598.8	1.9	3	433.1	0.6
More than \$1,000	4	5,848.7	1.1	0	0.0	0.0
	200	\$ 191.7	1.5%	184	\$ 37.7	1.4%

¹Number of bank failures as a percentage of the total number of insured U.S. commercial banks as of year-end in each respective asset size category.

in assets, 0.8 percent, of District bank assets.

As shown in table 3, Texas led all states with 113 bank failures in 1988, followed by Oklahoma with 23, Louisiana with 11 and Colorado with 10. Many of these failures can be attributed to energy-related loan exposure. These four states accounted for 157, 78.5 percent, of 1988 failures. Of the 184 bank failures in 1987, 108, or 59 percent, took place in these states. At the other extreme, 27 states were failure-free in 1988 while another 14 states had only one bank closing.

Table 2
1988 Bank Failures by Federal Reserve District

Federal Reserve District	Failures
Boston	0
New York	1
Philadelphia	1
Cleveland	1
Richmond	0
Atlanta	10
Chicago	9
St. Louis	1
Minneapolis	10
Kansas City	42
Dallas	117
San Francisco	8 ¹
TOTAL	200

¹Includes the failure of two FDIC-insured thrift and loan associations in California.

Of the 1988 bank failures, only one was located in the Eighth (St. Louis) Federal Reserve District. Lakeland State Bank, Sunrise Beach, Missouri, closed on September 1, 1988, with assets of \$9.1 million. In 1987, the St. Louis District reported two bank failures having combined assets of \$47.1 million.

Agricultural Banks

The brighter news in 1988 was the continuing recovery of Farm Belt banks. The health of agricultural banks—those with 25 percent or more of their portfolio in farm loans—is improving. With total assets of \$422.5 million, failures of agricultural banks accounted for 12 percent (24 of 200) of 1988 bank failures. As shown in table 4, this compares to 29 percent, or 53 of the 184 bank failures, in 1987. Iowa, Kansas and Minnesota led in the number of farm bank failures in 1988 with six in Iowa and five each in Kansas and Minnesota.

In 1988, the average failed agricultural bank had \$17.6 million in assets. The largest, Liberty Bank and Trust, Warsaw, Indiana, had closing assets of \$48.7 million.

Handling Failed Banks

When a bank fails, the FDIC can exercise several options in its role of protecting depositors: purchase and assumption, deposit transfer or deposit payoff.

Table 3
FDIC-Insured Bank Failures by State 1984-1988

	1988	1987	1986	1985	1984
Alabama	0	2	1	2	1
Alaska	1	2	1	0	0
Arizona	1	0	0	0	0
Arkansas	0	0	0	1	2
California	3	8	8	7	6
Colorado	10	13	7	6	2
Delaware	1	0	0	0	0
Florida	3	3	3	2	2
Idaho	0	0	1	0	0
Illinois	1	2	1	2	5
Indiana	1	3	1	1	2
Iowa	6	6	10	11	3
Kansas	6	8	14	13	7
Kentucky	0	1	2	0	1
Louisiana	11	14	8	0	1
Massachusetts	0	2	0	0	0
Michigan	1	0	0	0	1
Minnesota	7	10	5	6	4
Mississippi	0	1	0	0	1
Missouri	2	4	9	9	2
Montana	1	3	1	0	0
Nebraska	1	6	6	13	5
New Jersey	0	0	0	0	1
New Mexico	0	0	2	3	0
New York	1	1	0	4	0
North Dakota	1	2	0	0	0
Ohio	1	1	0	0	0
Oklahoma	23	31	16	13	5
Oregon	0	1	1	3	5
Pennsylvania	0	1	0	0	0
Puerto Rico	0	0	1	0	1
South Dakota	1	2	1	0	1
Tennessee	0	0	2	5	11
Texas	113	50	26	12	6
Utah	2	3	3	1	1
Washington	1	0	0	0	0
West Virginia	0	0	0	0	1
Wisconsin	0	0	1	1	0
Wyoming	1	4	7	5	2
	200	184	138	120	79

NOTE: States not listed were failure-free during this five-year period. Totals do not include 21 assistance transactions in 1988, 19 in 1987 and seven in 1986.

Table 4
Agricultural Bank Failures by State 1986-1988

	1988	1987	1986
Colorado	0	1	1
Idaho	0	0	1
Illinois	0	2	1
Indiana	1	3	0
Iowa	6	6	10
Kansas	5	6	13
Kentucky	0	0	1
Louisiana	1	1	0
Minnesota	5	8	4
Missouri	1	4	8
Nebraska	1	6	6
North Dakota	0	2	0
Oklahoma	3	6	5
South Dakota	1	2	1
Tennessee	0	0	2
Texas	0	6	5
Wyoming	0	0	1
	24	53	59

NOTE: There were 62 agricultural bank failures in 1985 and 25 in 1984.

Purchase And Assumption

Purchase and assumption transactions (P&A), which protect all depositors, are the dominant method used by the FDIC to handle failed banks. In a P&A, the failed bank is sold to another financial institution. The FDIC notifies bankers that a bank is for sale, accepting sealed bids from interested parties with each bid indicating how much money will be required from the FDIC to take over the bank. The acquiring bank assumes most of the bank's liabilities and, in return, receives the failed bank's quality assets (performing loans, securities, plant and equipment, etc). The acquiring bank also receives cash from the FDIC for the amount by which the assumed liabilities exceed the purchased assets minus the premium paid by the acquiring bank.

The number of bank failures handled by this method has risen dramatically in recent years. In 1982, the FDIC handled 26 failed banks by P&A transactions, while in 1988, 165 of the 200 failures were resolved by this method at a cost of \$5.1 billion (see table 5).

Deposit Transfer and Deposit Payoff

Insured-deposit transfers and insured-deposit payoffs are last-resort alternatives employed by bank regulators in dealing with a failed bank. In 1988, 27 of the 200 failed banks were handled as insured-deposit transfers at a cost of \$633.7

million to the FDIC. Seven failures were classified as insured-deposit payoffs, costing \$130.7 million.

Insured-deposit transfers appear as if the bank is being purchased, but in reality the acquiring bank is simply taking over the failed institution's insured deposits. Normally, the transferee bank will purchase good assets of the failed bank, with any shortfall (less the purchase premium) being funded with cash from the FDIC. The acquiring bank takes on this responsibility in the hopes of adding the former customers of the failed bank to its own customer base. It acts as an agent for the FDIC, providing the failed bank's customers with access to their insured accounts. As the FDIC sells off the failed bank's assets, it divides the remaining proceeds among uninsured account holders and creditors, including the insurance fund. In some cases, the FDIC will make a cash advance to uninsured general creditors based on anticipated collections from remaining failed bank assets. Creditors suffer a loss if the proceeds of the asset sale do not cover creditor claims.

At times, the FDIC cannot interest a solvent bank in either a purchase and assumption or an insured-deposit transfer. In these instances, the FDIC will bolt the bank's doors and payoff the holders of insured deposit accounts.

Of these three methods of handling bank failures—P&A, deposit transfer, deposit payoff—a purchase and assumption is probably the least disruptive to the local community. Customer services are not interrupted because generally this transaction takes place over a weekend. Checks continue to clear, interest-bearing accounts continue to accrue interest, and generally, the failed bank's borrowers receive financing with terms

their uninsured deposits. Deposit payoffs can result in the greatest loss exposure to uninsured depositors, particularly if there is no cash advance by the FDIC based on estimated recoveries. Moreover, creditworthy borrowers of the failed banks will not automatically have a new lender nor will depositors and borrowers have an assuming bank to provide banking services.

Bridge Bank

A new program used by the FDIC to handle failures of larger, more complex banks is the bridge bank program. Under this method, the FDIC approves the organization of a new full-service bank to take over the liabilities and assets of the failed bank until a purchaser can be found. Prior to the purchase, the FDIC operates the new bank. In 1988, First Republic Bank, Newark, Delaware, a credit card operation, was reorganized under the bridge bank program. Assets of \$590 million were transferred to the newly chartered Delaware Bridge Bank, Newark, Delaware. On September 9, 1988, Citibank, New Castle, Delaware purchased the bank for \$782 million.

Open-Bank Assistance

The FDIC also has another approach for handling failed banks: the open-bank assistance program. Twenty-one insolvent banks were handled under this program in 1988 at a cost of \$2.4 billion to the FDIC. With an open-bank assistance, the bank does not close and technically "fail" before being acquired. Instead, a potential buyer can approach the bank and buy it, with FDIC assistance, before the bank actually becomes insolvent. Because of the recent rise in bank failures, most of the FDIC's initiatives attempt to address the problems of troubled banks before they fail.

Under the Federal Deposit Insurance Act of 1950, the FDIC obtained authority to intervene prior to a bank's failure to 1) facilitate the merger of a failing bank or 2) prevent failure of a bank that is deemed 'essential.'

The open-bank assistance process typically starts with the banking grapevine. Bankers hear that a bank in a desirable market is having trouble. They contact the owners and ask to review the bank. Many times the potential buyer will discover that the bank's potential for loss far outstrips its capital. Therefore, the only way the sale makes financial sense is with FDIC open-bank assistance. The buyers agree to purchase the bank subject to this assistance.

Table 5
Disposition of Failed and Assisted Banks by the FDIC 1988

Purchase and assumptions	165
Insured-deposit transfers	27
Insured-deposit payoffs	7
Bridge banks	1
Failed banks	200
Open-bank assistance	21
TOTAL FAILED AND ASSISTED BANKS	221

similar to previous arrangements. With a deposit transfer, the effects on a community are minimal except that uninsured creditors are exposed to some chance of loss and, if there is no cash advance by the FDIC, some delay in access to

Conclusion

A record number of FDIC-insured banks failed in 1988; the fifth consecutive year. Last year's 221 failures brought to 858 the number of banks that have failed or received assistance since 1982. From the inception of the FDIC in 1933 through 1981, a total of 586 banks failed.

Regulators predict that last year was the final record breaker. William Seidman, chairman of the FDIC, projects that the insurance fund will grow in 1989 and that the number of bank failures will decline. In 1989, the farm economy and therefore, agricultural banks, should show continued improvement, however, problems will persist in the oil patch.

Eighth District Business

	Level	Compounded Annual Rates of Change			
	IV/1988	III/1988- IV/1988	IV/1987- IV/1988	1988 ¹	1987 ¹
Payroll Employment (thousands)					
United States	107,344.0	3.3%	3.5%	3.6%	2.8%
District	6,527.0	3.4	1.6	2.3	2.9
Arkansas	868.3	5.4	2.3	3.0	2.5
Little Rock	239.7	5.5	3.4	3.1	1.8
Kentucky	1,364.2	1.6	2.7	3.3	3.1
Louisville	459.2	4.1	3.4	4.3	3.5
Missouri	2,231.0	4.6	1.2	1.4	2.0
St. Louis	1,144.8	3.8	1.2	1.4	1.8
Tennessee	2,063.5	2.3	1.1	2.5	4.1
Memphis	432.7	2.1	0.9	2.8	4.5
Manufacturing Employment (thousands)					
United States	19,699.7	2.7%	2.1%	2.5%	0.5%
District	1,428.3	2.2	1.2	1.8	1.0
Arkansas	230.7	5.4	2.5	3.7	3.6
Kentucky	274.1	0.4	3.9	4.4	2.6
Missouri	423.4	2.1	0.7	0.5	-1.2
Tennessee	500.1	1.7	-0.4	0.8	1.0
District Nonmanufacturing Employment (thousands)					
Mining	50.4	-7.6%	-7.0%	-4.9%	-4.5%
Construction	294.4	6.2	-0.1	3.0	3.0
FIRE ²	338.6	1.3	0.6	0.8	4.2
Transportation ³	369.6	-0.8	0.8	1.6	3.6
Services	1,401.0	8.6	2.4	3.3	4.8
Trades	1,565.0	2.4	2.2	2.9	3.9
Government	1,078.9	2.4	1.7	2.0	1.8
Real Personal Income⁴ (billions)					
	III/1988	II/1988- III/1988	III/1987- III/1988	1987 ¹	1986 ¹
United States	\$3,424.2	2.7%	3.4%	3.2%	4.2%
District	189.4	0.6	2.7	3.2	3.8
Arkansas	24.9	0.0	3.8	1.7	3.5
Kentucky	40.7	2.0	2.5	3.1	2.4
Missouri	67.0	-0.6	2.0	2.3	3.7
Tennessee	56.8	1.4	3.3	5.0	5.2
Unemployment Rate					
	IV/1988	III/1988	1988	1987	1986
United States	5.3%	5.5%	5.5%	6.2%	7.0%
District	6.5	6.7	6.5	7.2	7.8
Arkansas	7.0	8.1	7.7	8.1	8.8
Little Rock	5.8	6.6	6.4	7.1	6.9
Kentucky	7.6	7.8	8.0	8.8	9.3
Louisville	7.1	5.9	6.3	6.9	7.1
Missouri	5.9	6.0	5.6	6.3	6.1
St. Louis	6.5	6.5	6.3	7.0	7.0
Tennessee	6.0	6.0	5.8	6.6	8.0
Memphis	5.2	5.2	5.0	5.7	6.8

Note: All data are seasonally adjusted. On this page only, the sum of data from Arkansas, Kentucky, Missouri and Tennessee is used to represent the District.

¹Figures are simple rates of change comparing year-to-year data.

²Finance, Insurance and Real Estate

³Transportation, Communications and Public Utilities

⁴Annual rate. Data deflated by CPI-U, 1982-84 = 100.

U. S. Prices

	Level	Compounded Annual Rates of Change			
	IV/1988	III/1988- IV/1988	IV/1987- IV/1988	1988 ¹	1987 ¹
Consumer Price Index (1982-84=100)					
Nonfood	120.1	4.4	4.2	4.0	3.6
Food	120.9	4.4	5.2	4.1	4.1
Prices Received by Farmers (1977=100)					
All Products	144.0	2.8	11.9	8.8	3.1
Livestock	152.3	4.3	6.0	2.6	5.6
Crops	135.0	2.1	19.8	17.8	-0.8
Prices Paid by Farmers (1977=100)					
Production items	162.0	5.1	8.0	7.2	1.9
Other items ²	174.0	4.7	5.5	4.6	1.9

Note: Data not seasonally adjusted except for Consumer Price Index.

¹Figures are simple rates of change comparing year-to-year data.

²Other items include farmers' costs for commodities, services, interest, wages and taxes.

Eighth District Banking

Changes in Financial Position for the year ending September 30, 1988 (by Asset Size)

	Less than \$100 million	\$100 - \$300 million	\$300 million - \$1 billion	More than \$1 billion
SELECTED ASSETS				
Securities	-3.3%	7.6%	14.1%	5.2%
U.S. Treasury & agency securities	-2.6	10.7	9.5	4.4
Other securities	-10.6	1.0	24.2	6.8
Loans & Leases	3.6	10.0	24.4	5.3
Real estate	139.9	143.7	153.7	97.8
Commercial ¹	53.1	1.8	19.8	8.6
Consumer	2.8	16.5	20.7	-7.9
Agriculture	1.8	26.3	12.5	3.8
Loan loss reserve	1.2	7.5	20.7	5.9
Total Assets	-0.6	8.6	18.9	3.4
SELECTED LIABILITIES				
Deposits	-0.9%	8.7%	18.6%	7.3%
Nontransaction accounts	-0.3	9.6	19.8	9.9
MMDAs	-14.7	-8.8	7.8	2.7
\$100,000 CDs	10.3	17.3	21.1	7.9
Demand deposits	-3.7	0.8	12.0	0.7
Other transaction accounts ²	-2.0	13.2	21.9	6.8
Total Liabilities	-0.8	8.5	19.0	3.8
Total Equity Capital	1.3	9.5	18.7	5.4

Note: All figures are simple rates of change comparing year-to-year data. Data are not seasonally adjusted.

¹Includes banker's acceptances and nonfinancial commercial paper

²Includes NOW, ATS and telephone and preauthorized transfers

Performance Ratios (by Asset Size)

	Eighth District			United States		
	III/88	III/87	III/86	III/88	III/87	III/86
EARNINGS AND RETURNS						
Annualized Return on Average						
Assets						
Less than \$100 million	1.06%	.99%	1.06%	.74%	.64%	.66%
\$100 - \$300 million	1.01	1.00	.99	.85	.80	.85
\$300 million - \$1 billion	1.07	.96	.83	.68	.58	.68
\$1 - \$10 billion	.86	.59	1.01	.76	.60	.80
More than \$10 billion	—	—	—	.91	- 1.08	.51
Agricultural banks	1.14	.90	.97	1.01	.76	.59
Annualized Return on Average						
Equity						
Less than \$100 million	11.52%	11.03%	11.88%	8.32%	7.28%	7.55%
\$100 - \$300 million	12.19	12.25	12.29	10.85	10.33	11.18
\$300 million - \$1 billion	13.46	12.12	10.69	9.80	8.21	9.79
\$1 - \$10 billion	12.80	8.90	14.93	11.89	9.36	12.15
More than \$10 billion	—	—	—	18.90	- 24.50	9.96
Agricultural banks	11.49	9.42	10.25	10.45	8.11	6.44
Net Interest Margin¹						
Less than \$100 million	3.95%	4.02%	4.12%	4.25%	4.32%	4.38%
\$100 - \$300 million	3.88	4.00	3.97	4.25	4.24	4.24
\$300 million - \$1 billion	4.04	4.12	4.09	4.15	4.24	4.25
\$1 - \$10 billion	3.72	3.73	3.71	4.06	4.01	4.02
More than \$10 billion	—	—	—	3.30	3.26	3.29
Agricultural banks	3.83	3.87	4.00	4.07	4.04	4.11
ASSET QUALITY²						
Nonperforming Loans³						
Less than \$100 million	1.82%	2.28%	2.80%	2.43%	2.90%	3.37%
\$100 - \$300 million	1.72	2.07	2.21	2.01	2.45	2.66
\$300 million - \$1 billion	1.33	1.84	2.51	2.19	2.54	2.71
\$1 - \$10 billion	2.03	2.45	2.14	2.13	2.51	2.33
More than \$10 billion	—	—	—	5.53	5.53	3.62
Agricultural banks	2.08	2.84	3.74	2.69	3.81	4.94
Loan Loss Reserves						
Less than \$100 million	1.45%	1.48%	1.40%	1.62%	1.62%	1.51%
\$100 - \$300 million	1.36	1.39	1.31	1.51	1.52	1.41
\$300 million - \$1 billion	1.32	1.36	1.34	1.64	1.72	1.59
\$1 - \$10 billion	1.82	1.95	1.45	1.78	1.85	1.55
More than \$10 billion	—	—	—	4.18	4.22	1.80
Agricultural banks	1.73	1.75	1.65	2.07	2.12	1.94
Net Loan Losses⁴						
Less than \$100 million	.27%	.46%	.60%	.51%	.72%	.91%
\$100 - \$300 million	.32	.41	.57	.46	.53	.63
\$300 million - \$1 billion	.29	.51	.58	.56	.68	.66
\$1 - \$10 billion	.83	.46	.40	.74	.52	.61
More than \$10 billion	—	—	—	.78	.60	.63
Agricultural banks	.25	.69	.89	.46	.86	1.48

Note: Agricultural banks are defined as those with 25 percent or more of their total loan portfolio in agriculture loans.

¹Interest income less interest expense as a percent of average earning assets

²Asset quality ratios are calculated as a percent of total loans.

³Nonperforming loans include loans past due more than 89 days and nonaccrual.

⁴Loan losses are adjusted for recoveries.