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# Pieces of Eight

An Economic Perspective on the 8th District

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*State Governments Feel Fiscal Squeeze*

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*Cloudy Forecast for Farmland Values*

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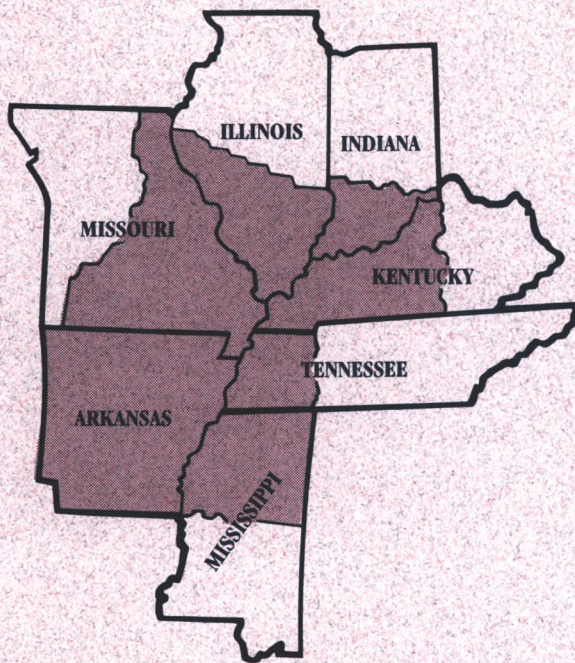
*Credit Unions Contend for Bigger Piece of the Pie*

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## THE EIGHTH FEDERAL RESERVE DISTRICT



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### CONTENTS

#### **Business**

District States Confront Mounting Fiscal Problems ..... 1

#### **Agriculture**

Where Are Farmland Prices Headed? ..... 5

#### **Banking and Finance**

Banking at Credit Unions: An Industry Profile ..... 9

#### **Statistics**

..... 14

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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.

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# District States Confront Mounting Fiscal Problems

by *Thomas B. Mandelbaum*

Research assistance by *Thomas A. Pollmann*.

**T**he recession that began after July 1990 has been accompanied not only by the usual rising unemployment and falling incomes, but also with the deteriorating financial condition of many state and local governments. Layoffs of thousands of state government workers and large state budget shortfalls in California and throughout the Northeast beg the question: Is the Eighth Federal Reserve District next? This article examines fiscal conditions in the seven states in the Eighth District and describes the developments that have led to the current crisis in state government.<sup>1</sup>

## Are District State Governments In Trouble?

Most analysts are worried primarily about shortfalls in state operating budgets. Unlike the federal government, state governments calculate their operating budgets separately from their capital budgets. The operating budget essentially is the spending needed to provide government services during the fiscal year. It includes compensation for employees, outlays for goods and services, and interest expense. The capital budget, on the other hand, encompasses spending for infrastructure projects—water treatment facilities, highways and schools—and are largely financed through the sale of bonds that are paid off over time.<sup>2</sup>

Except for Vermont, all states' operating budgets must balance over the fiscal year or, in some cases, over a two-year period. Operating budgets generally are balanced by collecting revenues as least as large as outlays. Past reserves—sometimes called "rainy day" funds or budget stabilization funds—can also be drawn upon to eliminate shortfalls in many states. In District states, the governor must propose a balanced budget, and the legislature must pass a balanced budget, allowing no deficit to be carried over to the next fiscal year.<sup>3</sup>

One way to assess recent state fiscal problems is to examine how large each state's operating

budget deficit would have been had the state not taken action to balance its budget. This measure reflects the amount by which expenditures had to be cut or revenues had to be increased—either by dipping into reserves or raising taxes—to balance the budget. Figure 1 shows the projected fiscal 1991 deficits in dollars and as a percentage of the original budget in Eighth District states.<sup>4</sup> Arkansas and Kentucky, where revenues are near expectations, have avoided the current problems. Mississippi, Missouri and Tennessee had the most severe problems: each was forced to adjust its budget by roughly 5 percent. In absolute dollar terms, however, Illinois' deficit is twice as large as any other District state.

Those District states required to take corrective action have generally chosen to reduce their deficits by cutting spending, rather than increasing taxes, which is apparently too difficult in times of economic contraction. Table 1 summarizes the budget strategies states have implemented during fiscal 1991. Mississippi, Missouri and Tennessee resorted to "across-the-board" cuts, though certain high-priority programs, such as primary and secondary education in Missouri and Tennessee and Medicaid in Mississippi and Tennessee, were exempted.

## National Recession Precipitates State Fiscal Problems

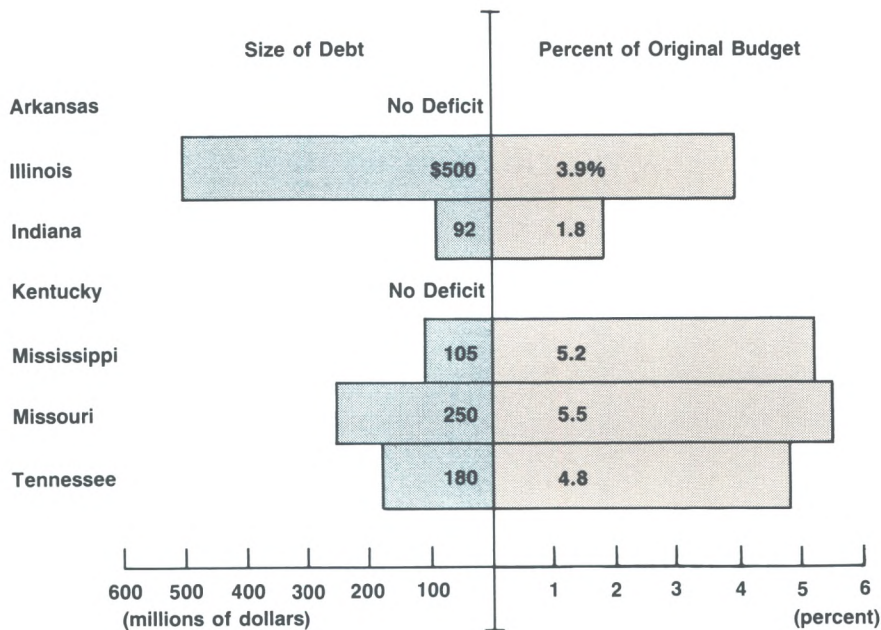
Illinois' projected deficit—the largest among District states—was swamped by that of California (\$3.6 billion or 8.6 percent of the original budget) and was smaller, in both dollar and percentage terms, than the deficits in Connecticut, Florida, Maryland, Massachusetts, Michigan, New Jersey, New York, North Carolina, Pennsylvania and Virginia. In both fiscal 1990 and 1991, state governments in New England and the Mid-Atlantic states have fared the worst.

Not coincidentally, these two regions have been the most severely economically depressed during the last few years, bothered by problems in real estate, financial and defense-related sectors. As unemployment rates in these states rose, consumers earned and spent less, slowing state revenues from personal income taxes and sales taxes, which typically account for almost two-thirds of state revenues.<sup>5</sup> As corporate profits in these regions were curtailed, corporate income tax revenues fell off as well. At the same time, state spending on transfer programs, such as Aid to Families with Dependent Children and Medicaid rose, as it tends to in times of economic contraction.<sup>6</sup> Since

Business



Figure 1  
Projected Deficits for Fiscal 1991 Before State Action



SOURCE: National Conference of State Legislatures (June, 1991) and Arkansas Department of Finance and Administration (July, 1991)

those who projected state revenues and expenditures failed to foresee this turn of events, state revenues fell short of budgeted expenditures.

As one might expect, District states without significant budget shortfalls—Arkansas and Kentucky—are enjoying the most rapid economic expansion among District states. Between April 1990 and April 1991, payroll employment in Arkansas and Kentucky grew at 3.2 percent and 1.5 percent rates, respectively, while the five other states reported employment changes ranging from a 1 percent decline in Missouri to a 0.4 percent increase in Mississippi.

Another reason Kentucky escaped the fiscal problems of other states is because it had taken steps to increase revenues in early 1990. Kentucky raised its sales tax from 5 percent to 6 percent, broadened the scope of its personal income tax by repealing automatic deduction of federal personal income tax payments, changed its personal income tax code to conform to Internal Revenue codes and increased its corporate income tax. (The changes in Kentucky were enacted, in part, to fund a court-ordered two-year education program to reduce inequalities in its school system.)

Arkansas recently increased its corporate income tax rate by one percentage point, its sales tax rate from 4 percent to 4.5 percent and its taxes on gasoline, diesel fuel and cigarettes. These changes may help the state to continue to avoid problems in fiscal 1992.

Another measure of the soundness of District state governments is their general obligation bond ratings, which reflect states' ability to pay their debts. Except for Indiana, which has no general obligation debt, bonds from all District states were rated as high grade. As of July 1991, Moody's Investors Service assigned its highest rating, **Aaa**, to bonds issued by Illinois, Missouri and Tennessee. This rating carries the smallest degree of investment risk. Moody's rated bonds from Arkansas, Kentucky and Mississippi as **Aa**, which are high quality, but with slightly more risk than **Aaa** bonds. Reflecting the stability of fiscal conditions in District states, the July 1991 bond ratings were unchanged from the past two years with one exception: in 1990, Moody's upgraded Arkansas' bond rating one step from **A1** to **Aa**. States with more serious problems, such as Massachusetts, had July ratings as low as **Baa**, a rating assigned to medium-grade obligations lacking outstanding investment characteristics and carrying greater risk.

### Longer-Run Problems

In addition to the depressed economy, state governments have been affected by a decline in federal government aid in the 1980s and, simultaneously, a rise in the demand for and costs of state services. Making matters worse, many state governments failed to build adequate "rainy day"



**Table 1**  
**State Budget Reduction Strategies in Fiscal 1991**

	<u>Across-the-board cuts</u>	<u>Targeted cuts</u>	<u>Delayed spending</u>	<u>Rainy day fund</u>	<u>Hiring freeze</u>
Arkansas					
Illinois		X			
Indiana		X			X
Kentucky					
Mississippi	X	X		X	X
Missouri	X	X	X		X
Tennessee	X		X	X	X

SOURCE: National Governors' Association, National Association of State Budget Officers, *Fiscal Survey of the States* (April 1991).

funds in the boom years following the 1981-82 recession that could have provided a financial buffer against unforeseen problems.

### *The Federal-Local Squeeze*

Throughout the 1960s and 1970s, federal aid to state and local governments rose rapidly: federal aid rose from 15 percent of state and local government outlays in 1960 to 26 percent in 1979.<sup>7</sup> Such programs as Medicaid and so-called general revenue sharing provided federal monies for state and locally administered programs. This ended in the late 1970s and was reversed by the Reagan Administration's "New Federalism." Federal aid to states fell to 17 percent of 1989 state and local government outlays. As federal aid to states was cut back, states were forced to rely on within-state revenue sources to keep the level of services up.

Meanwhile, local governments have also been under pressure from cuts in federal aid and widespread taxpayer resistance to higher property taxes, which fund the bulk of local government functions. Thus, many state governments are being pressed to increase aid for functions that were previously local responsibilities. Most importantly, roughly half the funding for primary and secondary public education now comes from state governments, while local governments' share of such expenditures has declined.

### *Cost Pressures*

While state governments have received less aid from Washington in the 1980s, the cost of providing desired services has escalated. Since the early 1980s, when reports publicized the shortcomings of the nation's public schools, there has been a

widespread demand to improve our educational system. District states have responded to the call for educational improvements. Revenues from Arkansas' recent sales tax increase will be used to improve the state's school system. Kentucky's recent \$1.3 billion program to reduce educational inequalities and improve education is one of the region's most ambitious. In November 1991, Missouri voters will decide the fate of "Proposition B," a \$385 million program to improve elementary, secondary and higher education. The program would be funded by increased corporate income taxes, limiting the deduction of federal income tax payments from Missouri personal income taxes, increasing the state's sales tax rate by three-eighths of 1 percent and raising cigarette taxes. The governor of Tennessee is calling for a restructuring of state taxes, in part, to raise money for education. His program includes a reduction of sales taxes coupled with a broad personal income tax. Currently, only income from dividends and interest is taxed.

Increases in outlays for Medicaid, which provides medical services for the poor and disabled, also have pressured state budgets. As medical care prices have risen sharply and caseloads have increased, states have been forced to increase funding. Total outlays for Medicaid rose 18 percent in fiscal 1990 alone. In fiscal 1991, the costs of the program were higher than originally budgeted in most states, including all seven District states.

Finally, spending for corrections, largely for prison construction and maintaining prisoners, rose rapidly during the 1980s. Although the nation's crime rate was actually lower at the end of the decade than at the beginning, the national trend to "get tough" on criminals by imposing longer sentences led to increased spending, as did court orders to improve prison conditions.<sup>8</sup>



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## Summary

The fiscal problems of most states in the Eighth District are not as serious as those in California or the Northeast. One reason District states have avoided these larger problems is their relative economic strength during the national recession. None of the District states have experienced the severe downturns of the New England and Mid-Atlantic states, nor the associated revenue shortfalls. Still, the forces that have affected most states during the 1980s—declining federal aid and increased calls to fund education, corrections and social services—have put the squeeze on District state governments.

When the national recession ends, and employment, earnings and corporate profits rise, so will

state tax revenues. While this may help balance state budgets in the short run, many state governments, including those in the Eighth District, will continue to feel pressured. It is likely that demands to boost spending for education and medical programs will not slacken, while demands for improvement of the quality of highways, bridges and the environment will intensify.

State policymakers, therefore, will continue to face the difficult choice between raising taxes and cutting expenditures. Research suggests that, other things equal, higher state tax rates tend to hinder economic growth. Such a slowing could conceivably negate any revenue gains that higher tax rates would create. If, however, lawmakers cut government spending, especially for services such as improving highways and education, they may well end up hindering economic growth anyway.<sup>9</sup>

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## FOOTNOTES

<sup>1</sup>Many local governments are also facing budgetary problems. See Laura S. Rubin, "The Current Fiscal Situation in State and Local Governments," *Federal Reserve Bulletin* (December 1990), pp. 1009-18. The Eighth District includes Arkansas and parts of Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee.

<sup>2</sup>Social insurance funds, such as employee pension funds and unemployment insurance, are not considered part of operating or capital funds and are handled separately. For a discussion of state social insurance funds, as well as problems with state capital budgets, see Laura S. Rubin, *op cit*.

<sup>3</sup>Arkansas' unique budgeting system technically precludes a deficit.

<sup>4</sup>Fiscal 1991 ends June 30, 1991, in District states.

<sup>5</sup>As personal incomes fall, state tax revenues tend to fall proportionately more, especially personal income tax revenues. This "income-elasticity" of state taxes can exert a destabilizing influence on state budgets.

<sup>6</sup>States pay slightly less than half the costs of these programs, with the federal government funding the remainder.

<sup>7</sup>State and local government revenues are aggregated because of differences among states in the way state and local governments allocate services and because some federal aid to states is transferred to local governments.

<sup>8</sup>See Steven D. Gold, "Changes in State Government Finances in the 1980s," *National Tax Journal* (March 1991), pp. 12-13.

<sup>9</sup>One study found that state and local government tax increases retard economic growth when the revenue is used to fund transfer payments. When the revenue is used to improve public services, however, growth is enhanced. See L. Jay Helms, "The Effect of State and Local Taxes on Economic Growth: A Time Series-Cross Section Approach," *Review of Economics and Statistics* (November 1985), pp. 574-82.



## Where Are Farmland Prices Headed?

by Kevin L. Kliesen

Kevin B. Howard provided research assistance.

**T**he value of farmland in the Eighth District, after adjusting for inflation, was the same in 1990 as it was in 1970. But to think that farmland prices were fixed during the intervening 20 years is to miss the whole story. What happened is that the substantial increases in District farmland values in the 1970s were offset by corresponding declines in the 1980s. Though not quite as pronounced, farmland values nationally exhibited similar movements.

After providing details on U.S. and District farmland values, this article examines some of the factors that have contributed to these changes in land values. In addition, some of the factors likely to affect future land values are identified.

### Land Values Since 1970

Figure 1 illustrates the behavior of real farmland values at the District and national levels since 1970.<sup>1</sup> After declining slightly in 1970, Eighth District real land values increased by 106 percent from 1971 to their subsequent peak in 1981. National land prices show a similar movement: from 1971 to 1981, U.S. real land prices rose by 91 percent. Since 1981, however, real land values have fallen significantly. District land prices have fallen by over 50 percent and at the national level by about 42 percent. Since 1987, real land prices have remained virtually unchanged.

Underlying the general movement in District farmland values is substantial variation across states. The decline in farmland values shown in figure 2 was most severe in Illinois, Indiana and Missouri as land prices in real terms declined by 59 percent, 58 percent and 51 percent, respectively. Slightly less severe declines occurred in the Delta states of Arkansas and Mississippi. In each of these states, prices in real terms declined by approximately 50 percent. The remaining two states in the District—Kentucky and Tennessee—experienced smaller declines of 37 percent and 36 percent, respectively.<sup>2</sup>

States with the largest declines in the 1980s were also those with the largest gains in the 1970s. For example, as table 1 shows, Illinois and Indiana

had both the largest increases in farmland prices and the largest decline in land values. As of January 1, 1991, prices in both states were less than one-half their peak value in inflation-adjusted terms. On the other hand, those states that exhibited the smallest increases in farmland values—Kentucky and Tennessee—also have retained the greatest percentage of their peak values.

Interestingly enough, some states may not have hit bottom in land values yet. As of January 1, Kentucky, Missouri and Tennessee have recorded their lowest values since their peak year. Moreover, although Arkansas and Mississippi reached their lowest values in 1990, the rise in land prices over the past year was only 0.2 percent in Arkansas and 1 percent in Mississippi. Only two states seem to be rebounding, albeit at a slow pace: since their trough in 1987, real land values have risen 9 percent in Illinois and 5 percent in Indiana.

### What Determines Land Values?

The present value of an acre of farmland is determined by the amount of income it can generate now and in the future and the expected interest rate for converting the value of future income flows to the present.<sup>3</sup> In a highly simplified world, if an asset like land yields the same expected flow of income forever, then its present value is expressed by the following equation:

$$P = E/r,$$

where P equals the price of land, E is the expected earnings component and r is the discount rate.<sup>4</sup> Thus, if the expected earnings from an acre of farmland are \$100 and the discount rate is 10 percent, then the price of land would equal \$1000. Accordingly, the price of land will increase if expected earnings increase or the interest rate decreases.

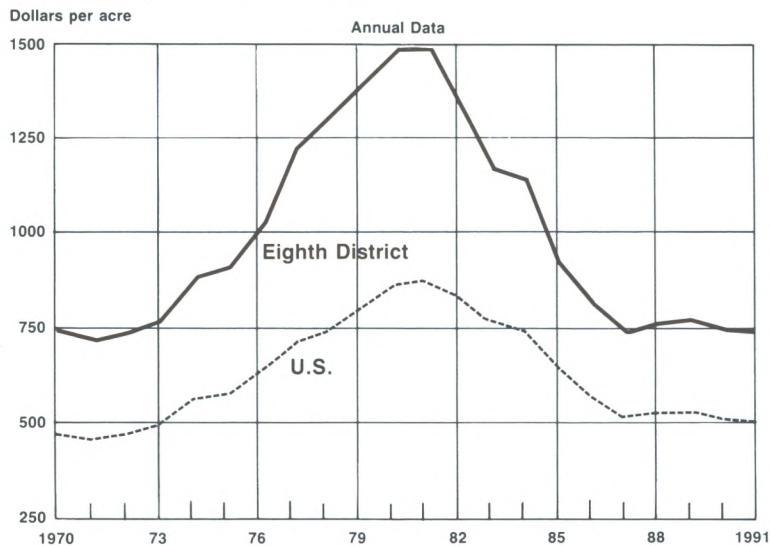
The expected earnings component depends on those factors that influence the expected revenues and costs associated with agricultural production. Thus, any factor that affects the demand for or supply of agricultural production can affect land prices.

### Determinants Of The Recent Movements Of Land Prices

Several reasons are usually given for the rise and fall of U.S. land prices over the past two decades. A significant factor accounting for the rise in the 1970s was the increase in U.S. agricul-



Figure 1  
Real U.S. and Eighth District Farmland Values<sup>1</sup>



<sup>1</sup>See footnote 1 in the text for a description of the data.

tural exports. The primary reason for the surge in exports was the substantial demand by the Soviet Union for U.S. farm products beginning in 1972. Other factors that contributed to rising land values were low real interest rates and certain tax advantages that encouraged the holding of farmland as an investment.

The early 1980s saw a reversal of these conditions: significantly higher real interest rates, a strong dollar and a generally weak world economy, which caused U.S. exports of farm products to fall by almost 40 percent from 1981 to 1986. Weakness in the agricultural sector had direct effects on many farmers who purchased additional land or equipment based on what in hindsight were inflated equity values. In turn, agricultural banks were harmed.

Before the 1980s, agricultural bank failures were rare, as farmers enjoyed relative prosperity. In 1982, however, a total of 11 agricultural banks failed; this number jumped to 32 in 1984, before more than doubling to 68 in 1985, then peaking at 69 in 1987. The number of agricultural banks that failed in 1990 dropped to 17.

Conditions in the farm sector have improved somewhat in recent years. Since 1986, agricultural exports, spurred on by a declining dollar, have increased by 53 percent. This increase has effectively tripled the agricultural trade balance, rising from \$5.4 billion in 1986 to \$17.7 billion in 1990. This favorable movement in agricultural exports has also contributed to the upward trend in real net farm income, which reached a 15-year high in 1990.

Undoubtedly, the preceding developments affected the movement of land values at the District level; however, the question of what explains the

substantial differences in the movement of land prices across District states remains. A simplistic explanation may be found in the type of commodities produced in each state.

With the exception of Illinois and Indiana, every state in the District derives the majority of its cash receipts from livestock and livestock products. Accordingly, when livestock prices rise faster than crop prices, farm income—and thus farmland values—in those states more dependent on livestock than crops should rise. Although livestock prices received by farmers increased an average of 7.1 percent per year from 1970 to 1981, crop prices increased even more, rising an average of 9 percent per year. It is not surprising then that the rise in farmland values in Illinois and Indiana should have outpaced those of other District states.

During the period of falling land prices, the opposite occurred. Farmland values in crop-producing states fell relatively more than in the livestock-producing states, as livestock prices over the period 1982-90 increased an average of 2.1 percent per year vs. the less than 1 percent per year for crop prices.<sup>5</sup>

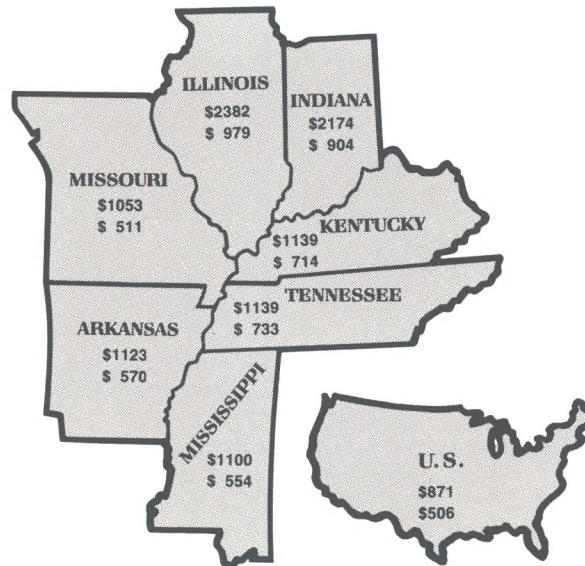
## Future Land Prices

What does the future hold? Over time, several factors are likely to affect farmland prices.<sup>6</sup> Forecasting the quantitative impact of these factors is not possible; it is possible, however, to identify three factors that are likely to have substantial effects on farmland prices: government policies, the



Figure 2

## Highest and Lowest Farmland Prices in District States Since 1980.



Top Number is peak land value; bottom number is trough land value.  
Land values measured in constant (1982) dollars.

international trading environment and environmental concerns.

#### Government Policies

Since land prices respond to current and expected future earnings, government policies designed to support farm income likely influence farmland values. This occurs because government payments to existing landholders become capitalized into higher asset (land) values. The recent farm bill attempts to reduce government involvement in agriculture by mandating cuts in farm subsidies of \$13.6 billion. Moreover, its five-year cost is projected to be approximately one-half of the previous farm bill's final cost.<sup>7</sup>

In the Eighth District, government payments as a percentage of gross farm income (GFI) vary substantially. For the past four years, three states

have derived an average of over 10 percent of their GFI from government payments: Illinois, 14 percent; Indiana, 10.5 percent; and Mississippi, 10.5 percent. Two states depend on government monies for nearly 10 percent of their GFI: Arkansas at 9.1 percent and Missouri at 9.2 percent. Kentucky and Tennessee depend much less on government support payments, with averages of 4.5 percent and 5.8 percent, respectively. It is reasonable to anticipate that farmland values in states with relatively more government support in the past are likely to be the most adversely affected by the reduction in this support.

#### International Trading Environment

Related to the effects of government policies are the effects of trade policies. Currently, the U.S. government is proposing large cuts in world-

**Table 1**  
Movements in Real Farmland Values

Category	Arkansas	Illinois	Indiana	Kentucky	Mississippi	Missouri	Tennessee	United States
Percent Change, 1971 to Peak	96	114	129	89	105	98	83	91
Current Percent of Peak Value	51	45	44	63	51	49	64	58

SOURCE: U.S. Department of Agriculture.



wide farm and export subsidies at the General Agreement on Tariffs and Trade (GATT) negotiations in Uruguay. If successful, the so-called Uruguay Round could have substantial implications for farm incomes and farmland prices.

Research, however, is inconclusive about how liberalized trading agreements will affect farm income. One study predicts that by 1995—assuming complete trade liberalization—annual real farm income in the United States will be \$3.1 billion larger than if no trade liberalization occurred. Another study, conducted by the U.S. Department of Agriculture (USDA), paints a different picture. The USDA predicts that free trade in agricultural commodities would actually *lower* farm income by almost \$10 billion annually.<sup>8</sup> Although no one expects the complete elimination of farm subsidies and price supports in the near future, the prevailing trend seems to be toward less government support for agriculture. The precise consequences of these changes internationally on U.S. farmland prices remain to be seen.

### *Environmental Concerns*

Concerns about the environment and the effects of agriculture production on soil and water quality are becoming increasingly commonplace. Although environmental policies are ostensibly designed to protect the productivity of farmland and ensure a safe and reliable source of food and fiber, they also affect farm income and thus the

price of farmland. One such policy is the Conservation Reserve Program (CRP). The CRP attempts to retire, for at least 10 years, those lands subject to erosion, usable as a wildlife habitat or which contribute to surplus production of agricultural commodities.

Although CRP land tends to be marginally productive in the first place, the effective reduction in the supply of land puts a premium on the most productive land left out of the program, thereby raising the average price of farmland near CRP concentrations.<sup>9</sup> In the Eighth District CRP enrollment varies. Mississippi has had the greatest percentage of its farmland enrolled (5.8 percent), followed by Missouri (5.1 percent), Tennessee (3.6 percent) and Kentucky (3.0 percent). The remaining states have less than 3 percent of their farmland enrolled in the program.

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## *Conclusion*

After posting large gains in the 1970s, U.S. and Eighth District land values in real terms have declined for most of the 1980s. The future course of land prices remains nebulous because of numerous and conflicting policy-induced pressures on farm income. Among these influences is the pressure to reduce government intervention in agriculture, increased trade liberalization and policies designed to enhance environmental concerns.

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### FOOTNOTES

<sup>1</sup>Land prices are defined as the average value per acre of the 48-state average. From 1970 to 1975, land prices are measured as of March 1; from 1976 to 1981 and 1986 to 1988, February 1; from 1982 to 1985, April 1; from 1989 on, January 1. Real land values are constructed by deflating nominal land values by the annual average of the GNP deflator. The January 1, 1991, real land value uses the first quarter 1991 deflator.

<sup>2</sup>In nominal terms, the highest and lowest average farmland values in each of the District states since 1980 are as follows: Arkansas, \$1096 and \$724; Illinois, \$2188 and \$1149; Indiana, \$2031 and \$1061; Kentucky, \$1058 and \$878; Mississippi, \$1034 and \$685; Missouri, \$990 and \$604; Tennessee, \$1070 and \$935.

<sup>3</sup>This future income is referred to as its capitalized value or the present discounted value of all future earnings. See Bruce L. Gardner, *The Economics of Agricultural Policies* (Macmillan, 1987) for a more formal discussion.

<sup>4</sup>The expected earnings component and the discount rate do not have to be constant over time, and in all likelihood they will not.

<sup>5</sup>Prices received by farmers are the compounded annual growth rate of the Index of Crop Prices Received by Farmers and the Index of Livestock Prices Received by Farmers over the periods indicated.

<sup>6</sup>The U.S. Department of Agriculture (USDA) recently forecasted nominal land values to increase next year by about 1 percent to 3 percent, but an expected inflation rate in the 4 percent to 5 percent range will necessarily offset any gains in real terms. See Roger Hexem "Farmland Value Change Varies Regionally," *Agricultural Outlook*, U.S. Department of Agriculture (June 1991), pp. 21-22.

<sup>7</sup>See Gene D. Sullivan, "The 1990 Farm Bill," *Economic Review*, Federal Reserve Bank of Atlanta (January/February 1991), pp. 22-29, for a discussion of the 1990 farm bill's features.

<sup>8</sup>The studies cited here are summarized in Alan Barkema, David Henneberry and Mark Drabenstott, "Agriculture and the GATT: A Time for Change," *Economic Review*, Federal Reserve Bank of Kansas City (February 1989), pp. 21-42. In general, those countries who have relatively low-cost, low-subsidized agricultural economies (for example, the United States or Australia) will inevitably reap larger benefits than those nations who subsidize their agriculture sector heavily because of its relatively high-cost nature (for example, Japan and the European Community).

<sup>9</sup>Michael D. Boehlje, Philip M. Raup and Kent D. Olson, "Land Values and Environmental Regulation," Staff Paper P91-3, Department of Agricultural and Applied Economics, University of Minnesota (January 1991).



# Banking at Credit Unions: An Industry Profile

by Michelle A. Clark

Thomas A. Pollmann provided research assistance.

Over the past decade, financial news reporters have chronicled the troubles of the nation's banks and thrifts—failures, mergers, fraud, problem loans, insurance fund shortfalls. At the same time, but with far less fanfare, another type of financial institution—the credit union—has challenged these traditional players for a position in the increasingly competitive arena of consumer banking. Though a look at the numbers would show you that there are substantially fewer credit unions in the United States today than there were at the start of the last decade, the fact is, the number of Americans “banking” at credit unions continues to rise, as does the industry’s share of total depository institution assets.

How are credit unions doing in the Eighth Federal Reserve District? How do they compare with their commercial bank counterparts? These issues and a few more related to safety, soundness and competition with other depository institutions are discussed in this article.

## Credit Union Basics

More than one-fifth of all Americans are members of credit unions. Moreover, at year-end 1990, there were more credit unions—about 14,000—in the United States than any other type of depository institution. Despite tremendous growth in membership and assets in the last two decades, however, credit unions still rank well below other financial institutions in industry size. At year-end 1990, for example, the industry’s \$245 billion in assets accounted for just 5.2 percent of the total for all depository institutions, compared with 71.5 percent for commercial banks and 23.3 percent for thrifts (savings and loans and savings banks). Still, credit unions’ share of this pie almost doubled during the last decade, while

thrifts’ share dropped and commercial banks’ share rose only slightly.

Unlike commercial banks and thrifts, credit unions are non-profit institutions. Cooperatively organized, credit unions take deposits (or shares) from and make loans to members who share a common bond; that bond may be an employer, an industry, or a religious, social or community organization. The common bond is supposed to facilitate judgment about the creditworthiness of potential borrowers, and therefore rationalizes the existence and contributes to the safety and soundness of the industry. Much of the industry’s rapid growth during the 1980s can be attributed to the easing of the “common bond” criteria for membership and the authorization of new deposit and loan powers, both of which have blurred the lines among depository institutions. The common bond rationale for credit unions has become quite controversial as credit unions have become larger and more diverse in membership.

The largest U.S. credit union is the Navy Federal Credit Union, a \$4.6 billion institution in Merrifield, Virginia. Its members are active-duty and retired employees of the U.S. Navy and their dependents. The vast majority of credit unions are much smaller than Navy Federal: at year-end 1990, about 80 percent had less than \$15 million in assets.

Credit unions were first established to make loans to workers who had difficulty obtaining the types and sizes of loans they needed from banks. Although credit unions have greatly diversified their services during the past 20 years, the bulk of their lending is still consumer-based. Most loans are backed by physical collateral (a house or an automobile) or by the borrowing member’s shares. Credit union earnings (after distribution to capital and loss allowance accounts) are paid out to members as dividends or as rebates on outstanding loans. Each credit union member has one vote, regardless of the number of shares held, and is eligible to vote on the institution’s board of directors.

Many small credit unions’ day-to-day operations are conducted by volunteers, although most have some paid employees. The vast majority of their share accounts are federally insured for amounts up to \$100,000. Since 1985, regulators have required federally insured credit unions to maintain a non-interest-bearing deposit in the insurance fund equal to 1 percent of their deposits, which is adjusted annually to reflect current insured deposits. Federal credit union regulators also have the authority to levy an insurance premium on institutions if the fund balance drops below a certain level. The regulatory structure of credit unions is much like that of banks and thrifts: credit unions can be state- or federally-chartered and they are subject to on-site as well as off-site (through financial reports) examinations.



*Figure 1*  
*Number of District Credit Unions and Their Assets*  
*(in millions of dollars)*  
*December 31, 1990*



SOURCE: Report of Condition and Income for Credit Unions.

## *Eighth District Credit Unions*

About 680, or 5 percent, of all U.S. credit unions are located in the Eighth District, compared with the District's 10 percent share of commercial banks. The District's distribution of credit unions and their assets are presented in figure 1. Credit union trends in the District have closely mirrored those in the nation: though the number of institutions continues to decline from its 1969 peak, credit unions are drawing more members and growing in total assets. In the District, the number of credit unions declined almost 9 percent from 1987 through 1990, yet membership increased 16.3 percent to 1.87 million. The number of *potential* members (those who share the common bond of the credit union's charter) has risen even faster: about 5.35 million District residents are eligible to join credit unions, up almost 37 percent from 1987.

U.S. trends are much the same, with the number of institutions declining about 12 percent and membership increasing about 15 percent from 1987 through 1990. Potential membership at U.S. credit unions rose 21.6 percent. Approximately 35 per

cent of eligible District credit union customers were credit union members at year-end 1990, vs. a 27.7 percent rate of participation in the nation.

Asset and deposit growth at both District and U.S. credit unions has outpaced membership growth. At year-end 1990, District credit unions had \$6.39 billion in assets and \$5.78 billion in shares, up 29 percent and 25.9 percent, respectively, from their 1987 levels. The assets of U.S. credit unions rose more than 30 percent from 1987 through 1990. District and U.S. commercial bank assets, in contrast, rose 21.1 percent and 14.4 percent, respectively.

As with commercial banks, assets at credit unions are heavily concentrated at the largest institutions: in the District, 87 percent of all credit unions have less than \$15 million in assets, yet their share of District credit union assets is about 24 percent. The distribution of assets is even more skewed in the nation, as the four-fifths of credit unions with assets of less than \$15 million control only about 15 percent of total assets.

Eighth District credit unions compare favorably to their national peers in conventional measures of financial performance and operating soundness. As indicated in table 1, District credit unions are more profitable (as measured by return on average assets or ROA), better capitalized, and have lower problem loan and loan loss ratios than their U.S. peers. Despite a slightly lower average loan-to-deposit ratio, District credit unions earn proportionately more income from loans than the average U.S. credit union. In addition, both the average loan and the average share account have lower balances in the District than in the nation. Table 1 also illustrates the improvement in some important measures of performance for credit unions since 1984: higher capital ratios, lower nonperforming loan ratios and lower operating expense ratios.

Table 2 presents data for entire states rather than for just that portion of the state in the Eighth District. As the table shows, the operating and financial characteristics of credit unions vary substantially. Credit unions in states with the smallest numbers of institutions (Arkansas and Mississippi) are, on average, better capitalized than their larger counterparts. Arkansas and Mississippi also have the highest loan-to-deposit ratios in the District, which may account for their relative profitability since loans tend to generate higher returns than other assets. Despite an underrepresentation (in numbers and market share) of credit unions in the District, the rate of credit union participation is higher than the national average in every District state but one.

Performance ratios for U.S. and District credit unions compare quite favorably to those of their commercial bank competitors. In 1990, District credit unions recorded an average ROA of 0.99 percent, compared with 0.88 percent for District



banks. The difference between credit union and bank earnings ratios were more pronounced at the national level: U.S. credit unions recorded an ROA of 0.79 percent vs. 0.53 percent for U.S. banks with assets of less than \$15 billion. District and U.S. credit unions also had lower nonperforming loan ratios ratios, 1.48 percent and 1.69 percent, respectively, than the 1.81 percent and 3.05 percent ratios posted by their commercial bank counterparts.

While the tax-exempt status of credit unions no doubt contributes to their superior performance over banks, the composition of their loan portfolios is another important factor. Auto loans make up about 40 percent of District credit union loans, real estate loans comprise about 30 percent and credit card and other consumer loans another 20 percent. In contrast, real estate loans make up almost 50 percent of District commercial bank loans, and consumer loans of all types make up only about 21 percent of the portfolio. Business loans make up a mere 0.2 percent of credit union loans vs. the 23 percent share of District banks' loan portfolio.

The lack of commercial real estate, domestic and foreign business and agricultural loans in credit union loan portfolios has shielded them from the loan problems and, hence, losses suffered by banks in the past decade. In addition, because more than 99 percent of District credit union loans are made to members, the bulk of which are secured by tangible property or member shares, loan default rates at credit unions are substantially below those of commercial banks. Nonetheless, as the General Accounting Office (GAO) noted in its recent review of federally insured financial institutions, the potential for substantial loan problems at credit unions exists because of the industry's increasing exposure to real estate.<sup>1</sup> Between 1985 and 1990, the share of real estate loans in credit union portfolios quadrupled, putting the industry in the same vulnerable position as many troubled banks and thrifts.

**Table 1**  
**Selected Measures of Credit Union Performance**

	Eighth District		United States	
	1990	1984	1990	1984
Return on average assets	0.99%	1.32%	0.79%	1.22%
Equity/assets	8.06	6.09	6.78	5.85
Nonperforming loans/total loans	1.48	2.14	1.69	2.02
Net loan losses/total loans	0.56	n/a	0.63	n/a
Loans/deposits	60.5	65.8	63.0	64.5
Loan income/gross income	67.4	62.9	64.2	62.0
Operating expenses/total assets	3.18	3.48	3.13	3.22
Loan loss provision/total loans	0.59	0.22	0.71	0.30
Average loan	\$3,480	\$2,539	\$4,499	\$3,156
Average deposit	\$2,105	n/a	\$2,352	n/a

SOURCE: Report of Condition and Income for Credit Unions, Federal Financial Institutions Examination Council, 1984-90.

## Safe and Sound?

Despite their rapid growth during the 1980s, credit union safety has gone largely unnoticed by policymakers. While the GAO's review of the industry's financial health was mostly favorable, it did recommend a number of changes to credit union supervision, regulation and accounting practices that would lessen the potential for problems.

Specific recommendations were made concerning the National Credit Union Administration

**Table 2**  
**A Snapshot of Credit Unions in Eighth District States, December 31, 1990**

	AR	IL	IN	KY	MO	MS	TN
Number of credit unions	107	900	350	179	252	165	348
Number of current members (thousands)	191	2,238	1,688	485	933	336	1,225
Current members/potential members	41.6%	31.4%	47.8%	48.8%	27.1%	48.7%	38.6%
Total assets (millions)	\$563.8	\$10,612.7	\$6,319.6	\$1,731.9	\$3,926.6	\$936.5	\$4,878.1
Loans/(deposits and shares)	71.6%	56.1%	59.4%	59.9%	52.2%	69.8%	62.2%
Return on average assets	1.32%	0.70%	0.94%	0.96%	0.74%	0.87%	1.12%
Nonperforming loans/total loans	1.84%	1.46%	1.57%	1.50%	1.53%	1.63%	1.40%
Equity/assets	10.4%	5.5%	6.8%	8.0%	6.3%	9.2%	7.8%

SOURCE: Report of Condition and Income for Credit Unions, Federal Financial Institutions Examination Council, 1990.



(NCUA), the federal agency charged with overseeing the industry's federally chartered credit unions and running its insurance fund, the National Credit Union Share Insurance Fund (NCUSIF). The NCUA is responsible for chartering, supervising and providing insurance to the vast majority of credit unions in the United States. While commending the NCUA for its managerial prudence, the GAO recommends several management-related changes. First, it recommends the NCUA establish links to other regulatory bodies and suggests placing the Chairman of the Federal Reserve Board and the Secretary of the Treasury on the NCUA's Board of Directors. Second, the GAO advises the NCUA to rely less on informal approaches to correcting problems at credit unions and establish instead "tripwires," such as minimum capital requirements.

The second major area of concern was the industry's capitalization. The target range for the NCUSIF is \$1.25 to \$1.30 for each \$100 of insured deposits. At year-end 1990, the fund was at the low end of the range. The Federal Credit Union Act mandates that if NCUSIF capital is below the minimum ratio of 1 percent, the NCUA can assess a premium for each credit union equal to one-twelfth of a percent of insured shares; if the fund is above the target range, the surplus is distributed back to credit unions. Premiums have not been assessed since the NCUSIF was recapitalized in 1985.<sup>2</sup>

Because problems in insurance funds can arise quickly, the GAO recommends the NCUA be given the authority to raise the target range for the fund and assess premiums as needed. Indeed, five years of bank failures has virtually depleted the fund that insures commercial bank deposits, the Bank Insurance Fund (BIF). At year-end 1990, the BIF had \$0.26 for every \$100 in insured deposits vs. the \$1.19 per \$100 it had at year-end 1985. The GAO also recommends the NCUA establish a two-tiered method for measuring fund capital: one based on total capital to insured shares, the other based on liquid fund assets to insured shares. Maintaining a higher ratio of liquid fund assets to total insured deposits, currently at 1 percent, would help ensure the prompt resolution of a failing credit union.

In addition, the credit union industry's method for counting capital came under fire. The 1 percent of insured shares a credit union is required to maintain in the NCUSIF is counted as fund capital by the NCUSIF and as an asset by the contributing credit union. This double-counting "produces a misleading picture of the combined strength of the NCUSIF and the credit unions." The GAO recommends credit unions count the insurance contribution as an expense, which will reduce their capital while having no effect on the NCUSIF. This change will help policymakers and credit union supervisors accurately gauge the industry's total capitalization.

The GAO made a number of additional recommendations designed to strengthen credit union supervision and mitigate the possibility of thrift-like problems. Among the major recommendations were: a cap on permissible commercial lending; limits on the amount of money that can be loaned to one borrower; minimum capital standards that are no less stringent than those for other insured depository institutions; specific underwriting standards for real estate loans; and more frequent off-site monitoring through the submission of quarterly, as opposed to semiannual, reports of condition and income, especially for large credit unions.

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## *A Competitive Edge?*

While the existence of federal insurance makes credit union safety and soundness of concern to all taxpayers, the competitive position of credit unions is of most concern to other depository institutions. Banking and thrift industry leaders view many credit unions as equals in the financial marketplace, so they oppose any regulatory or legislative practices that give credit unions a competitive advantage. Not surprisingly, concern about the competitive nature of credit unions has increased as the industry has grown.

### *Taxation*

No single competitive issue raises more hackles than the tax-exempt status of credit unions.<sup>3</sup> The exemption from the corporate income tax that banks and thrifts are required to pay means credit unions can finance services through untaxed rather than taxed retained earnings; they are therefore able to pay more on deposits and charge less on loans than banks and thrifts. Federal taxation of credit unions was proposed by the Carter Administration in 1978 and the Reagan Administration in 1985, both times on the grounds that it would level the playing field for depository institutions. Proponents of credit union taxation cite the relaxation of common bond rules, the expansion of credit union powers and the rising median income of members as evidence that credit unions today are virtually indistinguishable from other depository institutions.

Taxation opponents argue that credit unions serve a particular market segment with small loans, financial counseling and low-cost checking accounts that "for-profit financial institutions are unable or unwilling to provide."<sup>4</sup> They also contend that the safety and soundness of credit unions would be jeopardized by taxation, as credit unions can only raise capital through retained earnings, not stock sales. Opponents also point out that about 90 percent of credit union earnings are paid out as dividends to members (the equivalent of deposit interest income), and those earnings are taxed at the individual level. In addition, the



revenue gains from taxation are apt to be small—just \$3.7 billion over the 1991-95 period, according to Congressional Budget Office estimates.

### *The Common Bond*

The relaxation of membership requirements during the past two decades has prompted the development of some very large credit unions whose members constitute groups with very different common bonds. While this relaxation has facilitated mergers and diversification, both of which make the industry more financially viable, many bankers and thrift executives believe the bonds have been stretched too far. They argue that today's credit unions are essentially serving the same customers as banks and thrifts, and therefore should be subjected to the same market conditions.

One of the most controversial credit union charters was issued in 1987 to the American Association of Retired Persons (AARP), an association representing Americans 50 years of age and older. With a potential membership of 19 million, the AARP Federal Credit Union would have had one of the largest customer bases in the world. Banking and thrift industry groups called foul, however, and the credit union was disbanded in 1990, ostensibly because of a lack of participation. Analysts have suggested that credit union trade groups leaned heavily on AARP to dismantle its credit union because of fears it would threaten the industry's tax-exempt status.

### *Credit Union Powers*

The expansion of powers is another area of competitive concern. During the last 20 years, credit unions have been authorized to offer a varie-

ty of accounts, including ordinary checking and NOW accounts, money market deposit accounts, certificates of deposits, and, through third-party private companies, products like insurance. On the asset side, credit unions are permitted to offer a wide variety of consumer installment loans and real estate loans with terms as long as 30 years. Credit unions can now offer loans with variable rates of interest as well as business loans that meet certain criteria.

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## *Conclusion*

Credit unions have made a place for themselves in the financial marketplace by serving the needs of their members. Increased powers and diversity of membership, however, expose credit unions to risks similar to those borne by their bank and thrift counterparts. Concern has been directed, for example, at the rising share of real estate loans in credit union portfolios. Nevertheless, the industry today is healthy and there is no evidence to suggest that credit unions will experience the failure rates banks and thrifts experienced during the last decade.

Policymakers, however, will continue to hear complaints of unfair competition from bankers and thrift executives regarding the tax-exempt status of credit unions and the relaxation of the common bond. Whether and how legislators will respond to these complaints is unclear. What is clear is that tension between credit unions and other depository institutions is likely to continue as long as the credit union industry grows.

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### FOOTNOTES

<sup>1</sup>See "Credit Unions: Reforms for Ensuring Future Soundness," GAO Document GGD-91-85, July 1991, for a detailed analysis of the industry's condition and recommendations for reform.

<sup>2</sup>In mid-September, the NCUA Board of Directors voted to assess the statutory premium on insured credit unions effective January 1, 1992. This one-time assessment, the first in seven years, was deemed necessary to keep the target level for the NCUSIF in the desired range, after several large credit union failures in fiscal year 1991.

The premium, equal to 8.3 cents for every \$100 in deposits, is expected to raise \$160 million for the fund.

<sup>3</sup>Federally chartered credit unions are exempt from all federal taxes and most state taxes. State-chartered credit unions are required to pay federal tax on unrelated business income and can be taxed by their home state.

<sup>4</sup>Taken from 1985 testimony by credit union and consumer group lobbyists before the House Committee on Ways and Means, and contained in GAO report on credit unions, p. 307.



## Eighth District Business

	Level	Compounded Annual Rates of Change			
	II/1991	I/1991- II/1991	II/1989- II/1990	1990 <sup>1</sup>	1989 <sup>1</sup>
<b>Payroll Employment</b> (thousands)					
United States	108,836.0	-1.2%	-1.3%	1.5%	2.6%
District	6,921.9	-2.9	-0.1	1.9	3.2
Arkansas	948.1	1.6	2.9	3.6	3.3
Little Rock	256.3	-1.7	1.4	3.2	3.2
Kentucky	1,479.5	-4.2	0.9	2.9	3.7
Louisville	486.0	-4.6	1.9	2.7	3.7
Missouri	2,316.4	-3.6	-1.1	1.1	2.5
St. Louis	1,172.3	-3.0	-1.0	0.9	2.3
Tennessee	2,178.0	-3.1	-0.9	1.3	3.6
Memphis	478.5	-3.0	0.6	1.0	4.2
<b>Manufacturing Employment</b> (thousands)					
United States	18,400.0	-3.2%	-4.3%	-1.7%	0.5%
District	1,440.2	-3.3	-2.9	-0.1	2.2
Arkansas	234.4	0.3	0.9	0.7	2.1
Kentucky	281.5	-0.9	-2.0	0.9	3.7
Missouri	416.1	-4.5	-5.6	-0.8	1.6
Tennessee	508.1	-5.4	-2.8	-0.3	2.1
<b>District Nonmanufacturing Employment</b> (thousands)					
Mining	49.4	-8.4%	-4.3%	2.0%	-3.8%
Construction	289.1	-12.8	-1.9	1.6	1.1
FIRE <sup>2</sup>	340.3	-2.4	-0.1	0.6	0.7
Transportation <sup>3</sup>	408.6	-2.3	0.6	1.8	4.2
Services	1,615.1	-1.7	2.5	4.5	5.8
Trades	1,632.6	-3.4	0.0	1.0	2.5
Government	1,144.4	-1.7	0.4	2.6	3.3
<b>Real Personal Income<sup>4</sup></b> (billions)					
	IV/1990	III/1990- IV/1990	IV/1989- IV/1990	1990	1989
United States	\$3,528.7	-3.3%	-0.3%	1.0%	2.7%
District	193.2	-3.4	-0.6	0.7	1.9
Arkansas	25.2	-4.6	0.4	1.6	2.0
Kentucky	41.7	-3.7	0.2	1.4	2.5
Missouri	68.0	-1.7	-1.2	0.1	1.8
Tennessee	58.3	-4.7	-0.9	0.5	1.7
<b>Unemployment Rate</b>					
	II/1991	I/1991	1990	1989	1988
United States	6.8%	6.5%	5.5%	5.3%	5.5%
District	6.7	6.5	5.8	5.8	6.5
Arkansas	7.5	7.1	6.9	7.2	7.7
Little Rock	6.3	5.9	5.9	6.3	6.4
Kentucky	6.8	6.5	5.8	6.2	7.9
Louisville	5.6	5.4	5.1	5.6	6.3
Missouri	6.8	6.3	5.7	5.5	5.7
St. Louis	6.8	6.5	5.9	5.5	5.9
Tennessee	6.0	6.6	5.2	5.1	5.8
Memphis	5.1	5.2	4.5	4.7	5.1

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.

<sup>1</sup>Figures are simple rates of change comparing year-to-year data.

<sup>2</sup>Finance, Insurance and Real Estate

<sup>3</sup>Transportation, Communications and Public Utilities

<sup>4</sup>Annual rate. Data deflated by CPI-U, 1982-84 = 100.



## U. S. Prices

	Level II/1991	Compounded Annual Rates of Change			
		I/1990- II/1991	II/1990- II/1991	1990 <sup>1</sup>	1989 <sup>1</sup>
		<b>Consumer Price Index</b> (1982-84 = 100)			
Nonfood	135.3	1.8%	5.0%	5.3%	4.7%
Food	136.9	3.9	4.1	5.7	5.9
<b>Prices Received by Farmers</b> (1977 = 100)					
All Products	152.0	16.5%	0.0%	1.6%	6.6%
Livestock	164.7	-5.4	-3.7	6.5	6.8
Crops	138.3	53.3	5.0	-4.8	6.6
<b>Prices Paid by Farmers</b> (1977 = 100)					
Production items	175.0	4.7%	2.9%	2.3%	6.4%
Other items <sup>2</sup>	190.0	4.3	3.8	3.4	4.9

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

<sup>1</sup>Figures are simple rates of change comparing year-to-year data.

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

## Eighth District Banking

### Changes in Financial Position for the year ending June 30, 1991 (by Asset Size)

	Less than \$100 million	\$100 million - \$300 million	\$300 million - \$1 billion	More than \$1 billion
<b>SELECTED ASSETS</b>				
<b>Securities</b>	1.7%	14.6%	27.6%	4.3%
U.S. Treasury & agency securities	3.4	16.1	34.6	5.7
Other securities <sup>1</sup>	-4.7	10.4	8.9	0.3
<b>Loans &amp; Leases</b>	1.9	2.7	10.5	1.2
Real estate	4.8	9.1	16.2	5.2
Commercial	-2.2	-8.4	-0.2	-1.7
Consumer	-3.1	-2.3	8.3	-2.5
Agriculture	9.3	13.9	18.8	23.6
Loan loss reserve	6.8	7.6	22.1	10.1
<b>Total Assets</b>	0.9	5.6	13.9	5.6
<b>SELECTED LIABILITIES</b>				
<b>Deposits</b>	0.8%	5.3%	14.9%	9.6%
Nontransaction accounts	1.2	5.1	14.4	10.4
MMDAs	5.3	5.1	13.5	14.6
Large time deposits	-2.6	-5.9	-6.7	-24.4
Demand deposits	-4.4	1.1	7.9	1.6
Other transaction accounts <sup>2</sup>	3.2	10.8	26.4	16.1
<b>Total Liabilities</b>	0.9	5.3	13.9	5.5
<b>Total Equity Capital</b>	0.9	8.6	13.8	6.4

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

<sup>1</sup>Includes state, foreign and other domestic, and equity securities.

<sup>2</sup>Includes NOW, ATS and telephone and preauthorized transfer accounts.



## Performance Ratios (by Asset Size)

	Eighth District			United States		
	11/91	11/90	11/89	11/91	11/90	11/89
<b>EARNINGS AND RETURNS</b>						
<b>Annualized Return on Average Assets</b>						
Less than \$100 million	.97%	1.07%	1.14%	.82%	.83%	.89%
\$100 million - \$300 million	1.05	1.06	1.09	.87	.96	1.01
\$300 million - \$1 billion	.98	1.05	1.03	.80	.82	.89
\$1 billion - \$5 billion	.97	.88	.77	.67	.61	.83
\$5 billion - \$15 billion	.78	.72	.79	.33	.58	.94
Agricultural banks	1.16	1.15	1.18	1.07	1.05	1.11
<b>Annualized Return on Average Equity</b>						
Less than \$100 million	10.59%	11.69%	12.52%	8.99%	9.16%	9.90%
\$100 million - \$300 million	12.73	13.18	13.40	10.74	11.97	12.82
\$300 million - \$1 billion	12.58	13.23	13.43	10.52	11.07	12.72
\$1 billion - \$5 billion	14.46	13.37	11.68	9.92	8.96	12.40
\$5 billion - \$15 billion	12.52	11.13	12.74	5.45	9.90	15.90
Agricultural banks	12.30	12.32	12.59	11.59	11.40	12.00
<b>Net Interest Margin<sup>1</sup></b>						
Less than \$100 million	4.30%	4.29%	4.36%	4.56%	4.61%	4.79%
\$100 million - \$300 million	4.28	4.25	4.42	4.63	4.66	4.91
\$300 million - \$1 billion	4.42	4.47	4.57	4.64	4.67	4.79
\$1 billion - \$5 billion	4.35	4.15	4.18	4.49	4.38	4.48
\$5 billion - \$15 billion	3.70	3.67	4.30	4.34	4.25	4.42
Agricultural banks	4.26	4.19	4.25	4.34	4.33	4.45
<b>ASSET QUALITY<sup>2</sup></b>						
<b>Nonperforming Loans<sup>3</sup></b>						
Less than \$100 million	1.70%	1.65%	1.67%	2.13%	2.03%	2.28%
\$100 million - \$300 million	1.80	1.76	1.79	2.17	1.98	1.93
\$300 million - \$1 billion	1.62	1.44	1.52	2.62	2.33	2.59
\$1 billion - \$5 billion	1.65	1.46	1.62	3.44	2.49	1.95
\$5 billion - \$15 billion	2.62	2.23	2.81	4.79	3.05	2.65
Agricultural banks	1.81	1.79	1.96	1.86	1.95	2.27
<b>Loan Loss Reserves</b>						
Less than \$100 million	1.53%	1.46%	1.47%	1.71%	1.65%	1.66%
\$100 million - \$300 million	1.58	1.51	1.49	1.64	1.49	1.48
\$300 million - \$1 billion	1.53	1.39	1.50	1.84	1.71	1.64
\$1 billion - \$5 billion	1.83	1.81	1.60	2.44	1.88	1.59
\$5 billion - \$15 billion	1.94	1.63	1.84	2.89	2.29	1.88
Agricultural banks	1.60	1.64	1.70	1.83	1.88	1.97
<b>Net Loan Losses<sup>4</sup></b>						
Less than \$100 million	.22%	.17%	.15%	.27%	.26%	.31%
\$100 million - \$300 million	.25	.20	.21	.34	.28	.29
\$300 million - \$1 billion	.33	.25	.18	.44	.38	.33
\$1 billion - \$5 billion	.35	.37	.37	.71	.51	.39
\$5 billion - \$15 billion	.53	.37	.33	.84	.80	.47
Agricultural banks	.17	.13	.18	.16	.20	.23

Note: Agricultural banks are defined as those banks with a greater than average share of agriculture loans to total loans.

<sup>1</sup>Interest income less interest expense as a percent of average earning assets

<sup>2</sup>Asset quality ratios are calculated as a percent of total loans.

<sup>3</sup>Nonperforming loans include loans past due more than 89 days and nonaccrual loans.

<sup>4</sup>Loan losses are adjusted for recoveries.