



## President's Message: Is 3 Percent Inflation Still Too High?

**Thomas C. Melzer**

As a public speaker, I've never been keenly accomplished at eliciting a good laugh from the audience. Several months ago, however, I stumbled onto a sure-fire laugh line in a speech I gave in St. Louis. Here it is: "The current trend rate of inflation remains stubbornly high at 3 percent."

Not exactly Rodney Dangerfield, I know. But to those who remember the disastrous, double-digit inflation rates of the 1970s, that characterization can be somewhat amusing. What the amusement reflects is the startling contrast between the variable and rising inflation of two decades ago, which caused uncertainty and speculative behavior that made it nearly impossible to maintain long-run growth, and the inflation rate of today, which is remarkably low and stable.

Indeed, for four years now, the annual rate of CPI inflation has remained at 3 percent or lower, and most forecasters project a similar outcome again this year. Looking further down the road, however, it is clear that few people expect additional improvement in inflation trends. A recent survey conducted by the University of Michigan Research Center found that most households expect inflation to exceed 3 percent well into the next century.

Some of you may recall that inflation was about 4 percent when, in what was regarded as a time of crisis, President Nixon imposed wage and price controls in 1971. Thus, a little over a generation ago, modest, single-digit inflation was understood to be unnecessary and undesirable. We should be no more indifferent to the dangers of inflation today than we were then.

The unfortunate fact is, inflation—even at low levels—erodes purchasing power. Since the beginning of the decade, for example, relatively low inflation has already reduced the purchasing power of the dollar by almost 20 percent. Keep inflation growing at a 3 percent rate, and in a single generation a dollar will buy only half of what it can today!

I do not want to detract from the impressive record of the past few years. In a very short period, we have witnessed the remarkable concurrence of several positive economic conditions: strong investment; moderate, balanced growth; and low, steady inflation. But as long as households and businesses are forced to take the inflation rate into account before they make economic decisions, inflation is still too high. We must not be complacent in our resolve to bring it down. For it is only in an environment free from inflation and inflation expectations that our economy can achieve its maximum potential.



## **Bullish on Banking: Thriving in the Information Age**

**Mark D. Vaughan**

Are banks going the way of the dinosaur? Will savers and borrowers bypass them altogether to make transactions and obtain loans in the new millennium? Over the past decade, questions about the future of banking have filled business periodicals and dominated banking policy debates on Capitol Hill and in state legislatures. Sagging profitability, declining market share and record bank failures in the 1980s nursed this speculation. Recent data and banking theory suggest, however, that the industry is very much alive and kicking. While it's clear that banks will lose market share and the business of banking will change, it's also a sure bet that banks will continue to provide valuable services in 21st century financial markets.

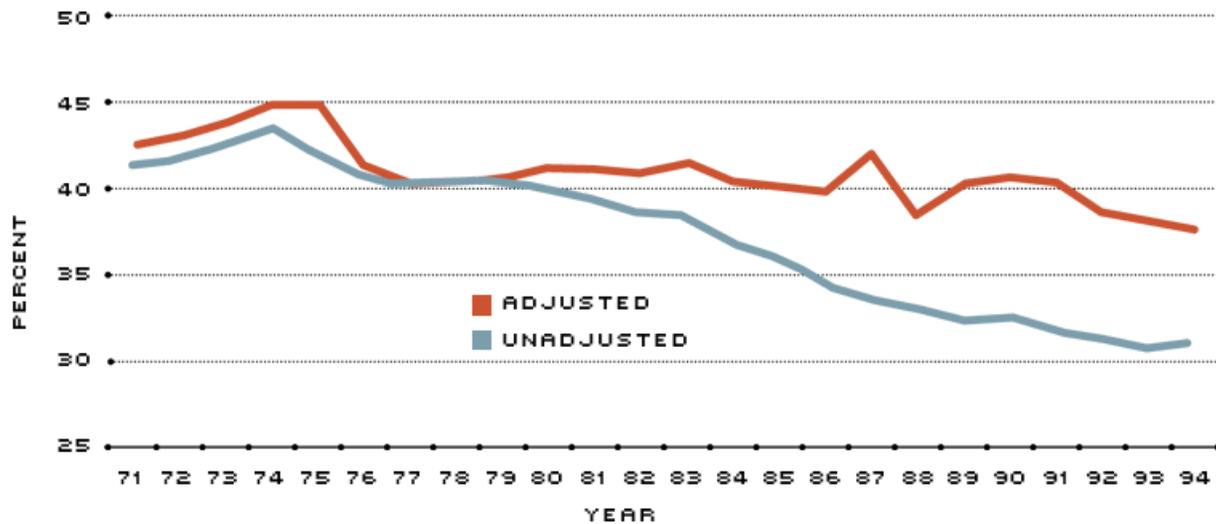
### **Signs of Life**

From the 1970s to the early 1990s, a number of gauges of the health of the banking sector indicated problems. First, bank earnings suffered. For example, return on equity (ROE)—defined as pretax net income divided by average equity—plunged from 18 percent in 1980 to 10 percent in 1990. Second, banks' share of total assets held by all private financial intermediaries dropped from 41 percent in 1971 to 33 percent in 1990. Third, bank failures soared. Between 1980 and 1990, 1,205 U.S. banks failed, compared with just 557 banks between 1935 and 1979. Fourth, the number of commercial banks and trust companies tumbled from 14,435 in 1980 to 12,342 in 1990—a 14 percent decline.<sup>1</sup>

A careful examination of recent data, however, suggests that the problems of the 1980s may have been transitory, or even illusory. For starters, bank profits began improving in the late 1980s, reaching record levels in 1994. Also, banks' share of assets held by all intermediaries has proved to be a misleading indicator of total banking activity because it fails to include off-balance sheet (OBS) banking and U.S. lending by foreign banks, both of which have exploded in recent years (see Chart 1).

Chart 1

## Banks' Share of Total Assets Held by Financial Intermediaries



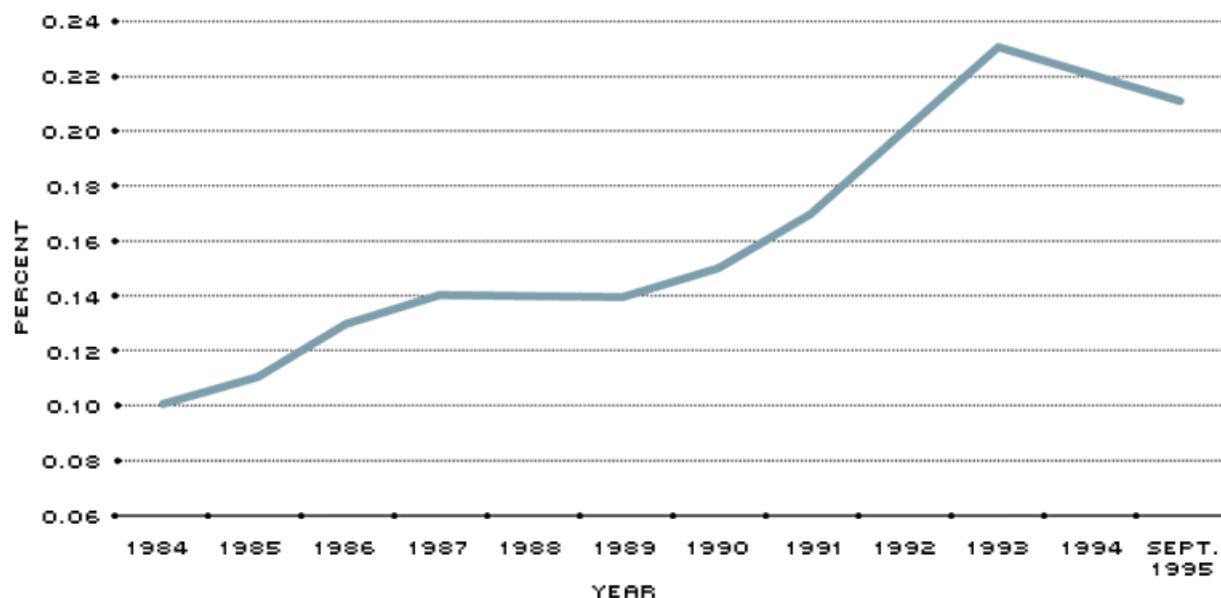
NOTE: Failing to adjust for off-balance sheet banking and foreign bank loans indicates a steady decline in the percentage of total financial institution assets held by commercial banks. Adjusting for such activity significantly reduces the downward trend.

SOURCE: Adapted from Boyd and Gettier (1994).

OBS banking generates income, but not necessarily corresponding assets and liabilities on a bank's books. One example is loan commitments, which give firms the right to borrow from a bank and appear on the bank's balance sheet only if the right to borrow is exercised.<sup>2</sup> Derivative securities, which are assets that derive their payoffs from the prices of other securities, do not appear on the balance sheet, either. In the 1980s, OBS banking became attractive to banks, especially large regional and money center banks, as a tool for managing interest rate and credit risks, as well as sources of additional income and end-runs around capital requirements. OBS banking has also been good for the industry's bottom line (see Chart 2).

Chart 2

## Noninterest Income as a Proportion of Total Income



### Breakdown of Banks' Noninterest Income—Sept. 30, 1995

Banks by Asset Category	Service Charges as a Percent to Total Noninterest Income	Other Noninterest Income as a Percent of Total Noninterest Income
<\$100 million	44.6	55.4
\$100 million-\$1 billion	34.0	66.0
>\$1 billion	17.8	82.2
All banks	20.6	79.4

NOTE: The rise in noninterest income as a percentage of total bank income illustrates the increasing importance of OBS banking in the past decade. Noninterest income includes all revenue that has not been generated from earning assets like loans and investment securities. Between 1984 and September of 1995, noninterest income rose from 10 percent to 21 percent of total bank income. Breaking noninterest income into its component parts—revenue from service charges on deposit accounts and "all other" noninterest income confirms the trend. The "all other" category captures the revenue from OBS banking and dominates total noninterest income, especially at larger U.S. banks. From 1984 through the third quarter of 1995, this component of total income rose from 7 percent to 17 percent.

SOURCE: FFIEC Reports of Condition and Income for Insured Commercial Banks, 1984-1995.

At the same time that U.S. banks were pursuing OBS banking, foreign banks were successfully wooing U.S. loan customers. In 1983, loans by foreign banks constituted just 19 percent of U.S. commercial and industrial (C&I) loans; by 1991, these loans had increased to 45 percent. The jump resulted both from a cost of capital advantage that allowed foreign banks to underprice U.S. banks on loans, as well as a superior ability to offer international banking services. Although foreign banks have not gobbled up market share in the 1990s at the rate they did in the 1980s, overall penetration of the U.S. C&I loan market remains high. Indeed, foreign market share has hovered just over 45 percent during the last few years.<sup>3</sup>

Adjusting for OBS banking and lending by foreign banks, then, wipes out most of the decreased share of financial intermediary assets held by banks.<sup>4</sup> Moreover, as a percentage of nominal Gross Domestic Product (GDP), the adjusted measure of banking assets—that is, the measure including OBS banking and U.S. lending by foreign banks—has increased over the past decade, suggesting that banking is becoming *more*, not less, important to the economy.

Studies that focus on other measures of banking's health—like value-added and stock market returns—also counter the notion that banking is on the verge of becoming extinct. The value that the banking sector adds to the economy can be measured by the difference between the value of banking inputs and banking outputs. Far from declining, this measure reveals no clear downward trend in banking's share of total intermediation. Indeed, value-added as a percentage of GDP—a measure of banking's importance to the overall economy—actually rose from 1.9 percent in 1938 to 4 percent in 1989.<sup>5</sup>

The stock market tells a similar story. If banking were a declining industry, one would expect bank holding company stocks to underperform other stocks on a risk-adjusted basis. Yet, between 1986 and 1992, bank holding company stocks performed on par with other stocks.<sup>6</sup> Hence, there is no reason to expect capital to exit the banking sector.

In short, the evidence does not conclusively point toward the end of banking as we know it. On the contrary, banking's profitability has rebounded, adjusted measures of banking's share of assets held by financial intermediaries have held steady, gauges of banking's importance to the economy have gone up, not down, and bank stocks have earned returns sufficient to keep investors happy. Collectively, this suggests that the record number of bank failures and the secular decline in the number of banks in the 1980s did not represent the last gasps of banking, but, rather, the impact of regional economic shocks and restructuring in the financial services industry as a whole.

This evidence does not, however, offer many clues about the future prospects for banking because it is backward-looking. Put another way, the evidence reveals only what has happened in the past and offers a guide to the future *only if past trends continue*. To find out what lies ahead for banking in the 21st century, it makes sense to look at the foothold it has carved in the past; that is, to identify the special services banks provide in financial markets and speculate about the extent to which banks will offer these services in the future.

## A Breed Apart

In modern financial markets, banks earn profits by reducing transaction costs, which are the costs of buying and selling financial instruments like stocks and bonds. They include search costs and negotiation costs. Search costs are the costs to savers of identifying profitable lending or investing opportunities and the costs to borrowers of finding households or firms with money to lend. Negotiation costs include the costs of haggling over terms like the interest rate, loan size or loan maturity. As intermediaries, banks make money by bringing savers and borrowers together, thereby reducing search and negotiation costs for both parties.

Banks also earn profits by reducing the information costs associated with transferring funds from savers to borrowers.<sup>7</sup> One source of such information costs is *moral hazard*, which refers to the difficulties associated with monitoring people in positions to take advantage of third parties. A number of markets—especially insurance—have inherent moral hazard problems. For example, an insurance company could offer to indemnify a customer for 100 percent of his losses from theft, regardless of the value of the items stolen. In this case, the customer would have no incentive to guard against theft; indeed, he might even choose to "steal" his own property. Monitoring myriad property insurance claims to reduce fraud, for example, would quickly eat up profits, which is why insurance companies insist on deductibles on theft claims.

Moral hazard is present in lending because only borrowers know the outcomes of investment projects. After obtaining funds from savers, a borrower could, for example, renege on a loan by falsely claiming that the project lost money. To prevent such duplicity, savers would have to commit additional resources to monitor actual project outcomes—a burden that would likely be unattractive to them. Banks lower the costs of moral hazard by serving as *delegated monitors* for savers by lending their deposits to borrowers and then monitoring the performance of the loans or investments for them. In contrast to a given saver, banks have strong incentives to monitor these investments because of their large stake in the borrowers to whom they lend. Moreover, by serving as delegated monitors, banks also reduce economy-wide monitoring costs.

Banks are in an ideal position to serve as monitors because of the economies of scope that exist in writing loans and offering checking accounts, and the cost advantages they enjoy from prior lending relationships. Economies of scope exist if the cost of providing two services is lower than the cost of providing each service separately. In banking, for example, handling a firm's checking account yields financial information that reduces the costs of originating and monitoring loans, especially if the firm is small and has only one checking account. The long history of banks as lenders gives them an advantage over other intermediaries that do not have established customer relationships.

Another costly type of information problem that banks are adept at solving is *adverse selection*, which occurs when one party in a transaction has difficulty assessing product quality. As a result, the transaction either breaks down or takes place on unfavorable terms. A good example is used cars. Sellers know the quality and, hence, the value of the cars they offer, but buyers can only guess. Consequently, a used car will often be priced below its true value (called a "lemon's discount") in case the car is of low quality. If the discount is large enough, the market will collapse because sellers of high-quality cars will not want to deal at such a low price.

In financial markets, adverse selection problems interfere with individual savers' attempts to obtain both high liquidity and high returns from investments. Individuals generally like to hold some cash for emergencies; however, because cash doesn't pay interest, they must part with liquidity and invest in real financial assets to obtain a positive return. Suppose, however, an insurance company could assess the probability that an individual would find himself short of ready cash; if this were the case, the insurer could offer "liquidity" insurance. That is, it could write a policy that would deliver liquidity if some unforeseen event left the individual cash-strapped. This would give the individual saver the high returns from real financial assets, without the worry of becoming short of cash. Unfortunately, however, only an individual knows the likelihood he will suffer a cash shortfall, making it impossible for an insurance company to sort good and bad risks. Hence, the adverse selection problem.

Banks solve the problem by offering transaction deposits that are highly liquid. In turn, they invest in illiquid assets, like loans, that offer high returns. Banks also keep ample cash on hand to meet routine withdrawal needs. What is considered ample is pegged to past withdrawals.<sup>8</sup> Individual savers find bank deposits more attractive than other liquid assets because banks can pass along some of the higher returns from illiquid assets in the form of more services or higher interest.

Adverse selection also makes it more expensive for firms to raise capital by directly issuing securities because the capital market has trouble distinguishing firms with good prospects from those with poor prospects. Managers of firms possess inside information that cannot be credibly communicated to the market. In other words, every manager has an incentive to boast of rosy future prospects, even if such boasting is untrue. Because this incentive taints all firms, those with good prospects find their stocks undervalued.

Banks help solve this undervaluation problem through their lending decisions. For example, research indicates that a firm's stock price rises when the market learns that a bank has renewed a loan to that firm. If a bank is willing to renew the loan, the firm's prospects must be good. That the market perceives a loan renewal as good news implies that banks gather valuable information—information that even security analysts cannot obtain—

about a firm's prospects in the course of a normal banking relationship. This information enables banks to certify a firm's quality to financial markets, making it easier for firms to market debt and equity (see below).

## **Decisions, Decisions**

Banks earn profits by reducing transaction and information costs. Consequently, predicting the future of banking involves evaluating the extent to which banks will reduce these costs in 21st century financial markets. Such an evaluation suggests that banks will probably lose market share in the future. For example, even now, banks are not the only financial intermediaries that reduce transaction costs for borrowers and savers; brokerage firms and mutual funds offer the same services. In addition, regulatory reform may further erode the role of the banking sector in transferring funds from savers to borrowers. Future advances in telecommunications and technology will also undoubtedly threaten banking's competitive position by significantly reducing the costs of directly issuing securities.

Nor do banks monopolize the role of delegated monitor. Other intermediaries—like pension funds, life insurance, finance and brokerage companies—can and do reduce the costs of containing moral hazard in lending. Although banks now possess an edge as delegated monitors because of their history as lenders, they will likely lose that edge overtime as rival intermediaries build customer relationships.

The role of banks as liquidity insurance providers is also threatened. Any intermediary that invests the proceeds from transaction deposits in a portfolio containing illiquid and liquid assets can easily perform the same function. For example, Merrill Lynch's cash management accounts compete directly with bank transaction deposits. Although banks' access to deposit insurance gives them an edge in the market for deposits, reform of the Glass-Steagall Act—legislation that maintains walls between commercial and investment banking—could make deposit insurance available to other intermediaries. This would enable nonbank intermediaries to make further inroads into the market for transaction deposits.<sup>9</sup>

In fact, the only arena in which banks may continue to have a clear advantage is in lending to small firms. Informational economies of scope between checking and lending will continue to give banks a competitive edge in originating and monitoring loans for firms small enough to need only one bank for their checking services. Of course, economies of scope exist among a number of financial services besides checking and lending. Some versions of Glass-Steagall reform would strengthen banks by allowing them to evolve into warehouses of financial services, like the universal banks in Germany. In this scenario, banking would flourish, but in an environment analogous to the supermarket, bundling commercial banking, investment banking, insurance and brokerage services to capture economies of scope in financial services.

## **Secure for Now**

After a period of sluggishness, the U.S. banking industry is again enjoying robust profits. Bank stocks continue to earn returns that compare favorably to other stocks. Banking activity—whether measured by value-added or by assets adjusted for OBS banking and lending by foreign banks—has remained high as a percentage of total intermediation. It has also grown as a percentage of overall economic output. The industry may be restructuring, but borrowers and savers still apparently value banking services.

Banking's future is also secured in large part by its past. Banks historically have earned profits by reducing transaction and information costs for borrowers and savers. Although technological advances and regulatory changes will no doubt enable other intermediaries to attract some customers away from banks, or enable other customers to by pass intermediaries altogether, banks will continue to thrive as long as information problems plague markets.

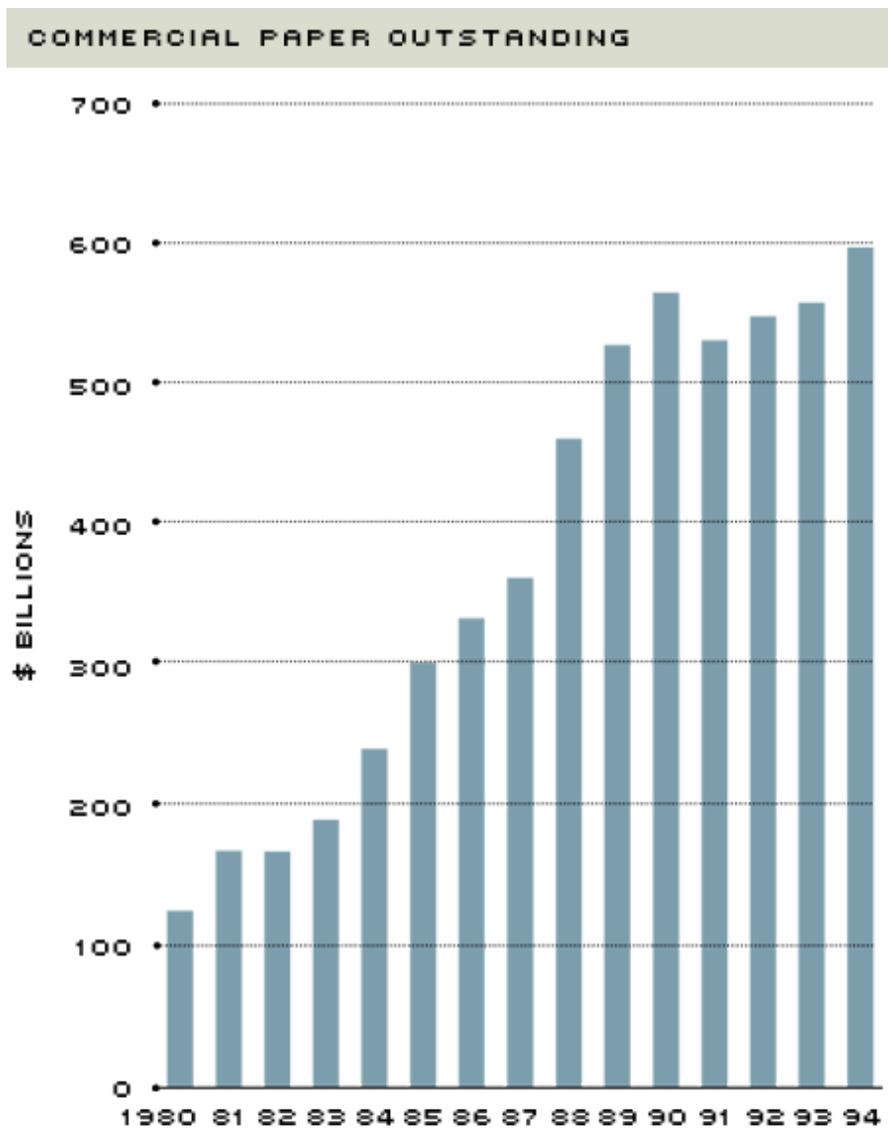
## Banks: The Backbone of the Commercial Paper Market

The commercial paper market offers a good example of banks' ability to facilitate the direct issue of securities and, in the process, help solve adverse selection problems.<sup>10</sup>

Commercial paper is an unsecured, short-term promissory note generally issued by large, well-known firms to fund current transactions, as opposed to long-term investment projects. For such firms, obtaining financing with commercial paper is often cheaper than bank loans. As a result, the level of outstanding commercial paper has risen sharply: Between 1980 and 1994, outstanding commercial paper climbed from \$124.4 billion to \$595.4 billion—an 11.8 percent annual growth rate (see chart).

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### Commercial Paper Market Growth



SOURCE: Federal Reserve Board of Governors

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Although commercial paper is a substitute for bank financing, banks play a key role in supporting the commercial paper market through such instruments as liquidity enhancements. Because commercial paper has a very short maturity—typically 30 to 35 days—firms continuously issue new paper to pay off maturing paper. Any disruption of the market, such as the 1970 commercial paper default of Penn Central Railroad, can prevent a firm from rolling over its paper, even if the disruption has nothing to do with the quality of the firm's outstanding paper. Liquidity enhancements, also called back-up lines of credit, provide stopgap funding to retire maturing paper when market disruptions prevent a rollover. These lines of credit have become so important, that it's standard practice for ratings services to require one before providing a credit rating for a commercial paper issue.

Banks also support the commercial paper market by providing credit enhancements for certain issues. Credit enhancements, or stand-by letters of credit, differ from liquidity enhancements by *guaranteeing* support for a commercial paper issue. Credit enhancements are essentially analogous to default insurance; with one, a bank guarantees that it will retire an issue if the firm *for any reason* cannot. Consequently, the bank's credit rating is substituted for the firm's credit rating. As of the first quarter of 1992, roughly 6 percent of commercial paper issues were fully backed by credit enhancements, most of them bank letters of credit.

Credit enhancements also reduce adverse selection problems for the capital market. As with a loan renewal, a firm obtaining a credit enhancement for a commercial paper issue enjoys a jump in its stock price when the market learns of the enhancement. Because the bank is on the hook if the issuer defaults, the enhancement announces that the bank has examined the issuer and concluded that the probability of default is negligible. In short, firms buying credit enhancements for their commercial paper issues get two products: default insurance and a seal of approval.

While, in one sense, banks have lost business to the commercial paper market, in another, the commercial paper market could not operate as it does without them. For large, well-known firms, credit and liquidity enhancements reduce the cost and risk associated with raising money in the commercial paper market. For their part, banks earn fee income that helps recoup the interest income lost as some borrowers switch from traditional loans to commercial paper.

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Thomas A. Pollmann and Dusan Stojanovic provided research assistance.

## Endnotes

1. Although bank failures have decreased since the 1980s—only 13 banks failed in 1994—mergers have continued apace. Hence, the number of banks has still continued to fall. As of Sept. 30, 1995, the number of banks and trusts stood at 10,054—a 30 percent decline since 1980. [back to text]
2. See Saunders (1994). [back to text]
3. See McCauley and Seth (1992) and Nolle (1994). [back to text]
4. See Boyd and Gertler (1994) and Kaufman and Mote (1994). [back to text]
5. See Kaufman and Mote (1994). [back to text]
6. See Levonian (1994). [back to text]
7. See Hubbard (1994). [back to text]
8. Banks do not need to assess the probability that a household will need cash because they can rely on estimates of average cash withdrawals. [back to text]
9. See Clark (1995). [back to text]
10. For more details on the commercial paper market, see Hahn (1993). [back to text]

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# Chained, Rested and Ready: The New and Improved GDP

Kevin L. Kliesen

Accurate estimates of U.S. gross domestic product (GDP) are a necessity. Why? Because the growth rate of GDP affects everything from presidential elections to a firm's sales forecast. If policymakers or business executives lack accurate estimates of economic growth, the decisions they reach will contain an element of error, which could then produce unintended consequences. To improve the measurement of real GDP—the broadest yardstick available for gauging the economy's performance—the U.S. Department of Commerce recently decided to compute GDP differently than the way it has in the past. Although the new measure of GDP, which took effect in January 1996, shows the economy to have grown more slowly over the past few years than originally thought, most economists have given it their stamp of approval.

## Accounting for GDP

GDP is the capstone measure of the U.S. National Income and Product Accounts (NIPA). The NIPAs are an array of economic statistics designed to measure the production of goods and services and the income derived from the factors of production (land, labor and capital) that produce them. To calculate GDP, the Commerce Department collects millions of pieces of data from tax returns, census surveys and profit statements. These data, which are culled from households, businesses and government agencies, enable the department to construct a single measure of the dollar value of output produced in the United States every quarter. By definition, GDP counts only *final* goods and services—like the production of *new* cars, refrigerators and computers, or the services rendered by doctors, travel agents and hair dressers.<sup>1</sup> Specifically, GDP is the sum of consumer spending on goods and services, investment expenditures by businesses (including any additions to inventory) and households, government purchases of goods and services, and the difference between exports and imports.

The problem with measuring the current dollar value of economic activity is that GDP will always rise as long as prices of goods and services rise. To properly analyze changes in economic activity, economists separate GDP into two parts: its price component and its quantity component. The price component of GDP refers to the prices of the millions of types of goods and services produced; the quantity component refers to the actual number of units produced. Thus, current dollar value of GDP—called nominal GDP—is simply price times quantity.

The quantity, or "real," measure of GDP is what most economists follow because it is an indication of the demand for goods and services produced. To construct real GDP, the current dollar value of its components are "deflated" by a series of price indexes and then "summed up."<sup>2</sup> These price indexes are known as "fixed-weight" indexes because they measure changes in prices relative to a fixed base year, which Commerce would change about every five years.

Despite its familiarity, this measure of real GDP is flawed. Economists have known for quite a while that calculating real GDP using a fixed weighting scheme eventually produces substantial measurement error. There are two reasons for this. First, the structure of the economy—meaning the relative prices and types of goods and services produced—changes significantly over time.<sup>3</sup> For example, think of the advent of the Internet and the products and services now offered online. Second, these relative price changes cause corresponding changes in the purchasing patterns of consumers. If, for instance, technological innovations lower the cost of producing a product, which should then lower its selling price, the quantity demanded of that product should increase and, accordingly, its importance in the calculation of GDP should increase.

Prior to the 1980s, the Commerce Department believed that these problems were not serious enough to warrant a change in the methodology used to calculate real GDP. The computer revolution, though, convinced them otherwise. In 1982, the production of information processing equipment (largely computers) as a share of GDP was 1.8 percent; by 1994, this share had more than doubled to 4.7 percent. At the same time, computer prices fell dramatically: Between 1982 and 1994, they dropped by roughly 13 percent a year. While a bonanza for consumers, these kinds of changes caused a significant problem for the number crunchers at Commerce.

The problem arises because the fixed-weighted system used to calculate GDP is not capable of fully accounting for these structural changes. As a result, the further the measure of GDP gets from the base year, the less accurate the calculation of real GDP becomes.

Under the old calculation method, the most recent base year was 1987. This meant that calculating real GDP in, say, 1994, was determined by: 1) how much the price of a particular good or service changed in relation to its price in 1987; and 2) how large a share it accounted for in relation to total GDP in 1987. To see how this works, let's use the example of the personal computer. According to the Commerce Department, today's Pentium personal computer would have cost about the same as what a new car cost in 1987—or, a little more than \$13,700.<sup>4</sup> In the fixed-weighted calculation of GDP, then, each new computer and new car produced added the same amount to GDP (about \$13,700). By 1994, however, because of falling computer prices and rising new car prices, the average price of a new personal computer was around \$2,500, while the price of a new car was almost \$19,700. By calculating real GDP (in 1994) using fixed 1987 weights, however, each new computer was still being counted as if it were equal to one new car (\$19,700) instead of its actual amount (about \$2,500). This meant that fixed-weighted measures were overstating real growth in the output of computers and, thus, real GDP growth.

To counter this upward bias, the Commerce Department decided to estimate the quantity measure of GDP using a chain-weight system. Essentially, a chain-weight system differs from a fixed-weight system in that it measures output using current and previous year prices—something akin to a floating base year. For example, calculating chain-type GDP for 1994 is done using prices and quantities from 1993 and 1994.

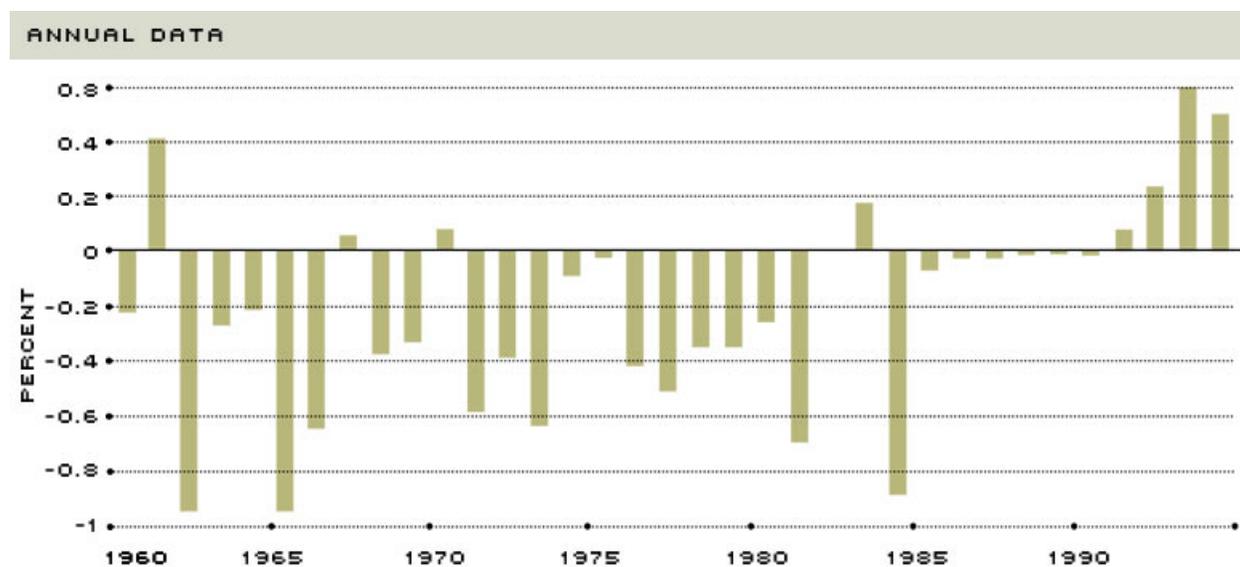
## **Can the Chain-Weight Measure Up?**

The primary advantage of the chain-weight measure is that it allows for substitution effects overtime—that is, it accounts for changes in consumption and production patterns that occur from relative price changes. Another important advantage is that chain-type measures value output of final goods and services for any period in terms of what the structure of the economy was at the time. Under the old method, Commerce would effectively rewrite economic history every time it reconfigured the GDP accounts to a different base year. Although the chain-weight measure of GDP depicts a more accurate portrayal of the business cycle, there are some drawbacks associated with using it. First, because of the way the chain-type measures are constructed, the components of GDP do not sum exactly to the total. In contrast, under the old method, GDP was the exact sum of its components. In percentage terms, however, this discrepancy is pretty small.

An ancillary problem that must be overcome concerns making economic forecasts with large-scale macroeconomic models. Under the old methodology, forecasters relied on the fact that GDP was the sum of its components. Because this is no longer strictly correct, forecasters will now be forced to restructure their models in a way that introduces a greater potential for forecast error. While this hurdle may be eventually overcome through a process of learning-by-doing, it nevertheless introduces a further element of uncertainty that policymakers and others who closely monitor GDP forecasts must take into account.<sup>5</sup> Despite these encumbrances, though, the new measure of GDP should more than measure up to its predecessor.

Figure 1

## Difference In Real GDP Growth Using Fixed and Chain Weights



SOURCE: U.S. Department of Commerce

NOTE: The differences in real GDP growth rates over the 1960 to 1994 period using fixed weights and chain-type weights are illustrated in Figure 1. As expected, around 1987 the two rates were nearly identical because the fixed-weighted measures and the chain-type measures were using a similar base period. However, for the years before 1987, the chain-weight measure shows real GDP to have increased more than the fixed weight measure—sometimes by nearly 1 percentage point per year. Conversely, since 1992 the fixed-weight measures of GDP have been increasing about 0.4 percentage points a year faster than the chain-weight measures. In the latter period, this was largely because the old method was improperly measuring computer output.

Heidi L. Beyer provided research assistance.

### Endnotes

1. To avoid double counting, real GDP is calculated using the value-added concept. This means, for example, that instead of adding up the total dollar value of all intermediate materials (like cotton) and labor used to produce a new shirt, their value is represented in the price of the shirt (the final good).  
[back to text]
2. A price index, such as the consumer price index (CPI), attempts to aggregate into one number the prices of a large number of goods and services. For instance, in the NIPAs, a price index for personal consumption expenditures (PCE) is calculated, which attempts to measure the prices attached to

everything from consumer spending on Big Macs to bib overalls. Similar price indexes are calculated for the other components of GDP. The real component of GDP is simply the current dollar value of each component of GDP divided by its respective price index. Real consumer spending, then, is the current value of spending divided by the PCE price index. [back to text]

3. A relative price change occurs when the price of a good or service changes in relation to another. For example, if the price of hamburgers rises and the price of tacos stays the same, the relative price of hamburgers (to tacos) has risen. All other things equal, we should see people consume more tacos and fewer hamburgers. [back to text]
4. See Ehrlich (1995). [back to text]
5. See NABE News (1995). [back to text]

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## ABOUT THE AUTHOR



### Kevin L. Kliesen

Kevin L. Kliesen is a business economist and research officer at the Federal Reserve Bank of St. Louis. His research interests include business economics, and monetary and fiscal policy analysis. He joined the St. Louis Fed in 1988. Read more about the author and his

research.



## Exports in the Eighth District—An Update

Adam M. Zaretsky

Over the past few months, stories suggesting that exports and foreign markets are supplementing and, in some cases, substituting for domestic market demand have become more common. In fact, between 1984 and 1995, real exports of goods and services increased from a mere 7 percent of gross domestic product (GDP) to more than 13 percent. This increase in export's share of output translates into an average growth rate of about 8 percent per year since 1984. No other component of GDP has grown at such a rate; GDP itself increased at an average rate of 2.6 percent per year over the period.

In the District, it's harder to track the progress of exports relative to total output because gross state product data—the state equivalent of GDP—are released with at least a two-year lag. Tracking the level of exports by state, however, is not that difficult because the University of Massachusetts maintains a data base of exports based on state of origin. Currently, the data are available through the first quarter of 1995. The data set's one drawback, though, is that it records only exports of goods, and not services; data for service exports are collected at the national level only. Table 1 therefore, lists the top five goods-exporting industries for each District state during the first quarter of 1995.

Table 1

## Top Exporting Industries in Eighth District States

(First Quarter 1995)

<b>Arkansas</b>	Chemicals	Food	Electrical Equipment	Computers & Nonelectrical Equipment	Crops
<b>Illinois</b>	Electrical Equipment	Computers & Nonelectrical Equipment	Transportation Equipment	Chemicals	Scientific & Measuring Equipment
<b>Indiana</b>	Transportation Equipment	Computers & Nonelectrical Equipment	Chemicals	Electrical Equipment	Primary Metal
<b>Kentucky</b>	Transportation Equipment	Computers & Nonelectrical Equipment	Paper	Food	Electrical Equipment
<b>Mississippi</b>	Transportation Equipment	Paper	Food	Chemicals	Electrical Equipment
<b>Missouri</b>	Transportation Equipment	Computers & Nonelectrical Equipment	Chemicals	Electrical Equipment	Food
<b>Tennessee</b>	Transportation Equipment	Chemicals	Computers & Nonelectrical Equipment	Crops	Electrical Equipment

NOTE: The top five exporting industries represent almost two-thirds of each state's total value of exports. On average, about 70 percent of all exports are produced by the top five industries. Indiana and Kentucky are at the high end with 77 percent of exports coming from their top five industries, while Arkansas and Tennessee are at the low end with 65 percent. The top exporting industry—transportation equipment in most cases—represented, on average, almost a quarter of all exports from each state.

SOURCE: Massachusetts Institute for Social and Economic Research (MISER), University of Massachusetts.

## District Exports: Who Ships What, Where

For the seven District states—Arkansas, Illinois, Indiana, Kentucky, Mississippi, Missouri and Tennessee—most of the top five exporting industries are identical. In fact, transportation equipment, which includes motor vehicles, aircraft, ships and boats, railroad equipment and missiles, is not only the largest export sector in the United States, but also the No. 1 export sector in five District states. In Illinois it ranks third, while, in Arkansas, it ranks sixth. Three other industries—chemicals, electrical equipment and nonelectrical equipment—are also in most of the District states' top-five lists.

Crops, which include corn, rice and soybeans, makes the top five in only two states, even though agriculture's share in total District output is greater than its share in national output. Crops are, however, among the top 10 exporting industries in six District states.

Not surprisingly, the food products sector—meat and dairy, fruits and vegetables, breads and bakery goods and beverages—is also among the top five exporting industries in many states. In Arkansas, one of the country's largest poultry-producing states, food is the second most important export. A large share of exports from Kentucky, Mississippi and Missouri is also food products, especially poultry and pork.

The destination for many of these exports is also similar across states. Canada is far and away the largest trading partner for all District states, except Mississippi. During the first quarter of 1995, Israel received about 19 percent of Mississippi's total exports—more than any other country. A very large portion of this was warships valued at more than \$145 million. In 1994, though, Canada was Mississippi's largest trading partner. Japan and Mexico are the District's next most important trading partners. Others are China, France, Germany, Hong Kong, Russia, South Korea, Spain and the United Kingdom.

None of these other countries, however, comes close to the volume and dollar value of District exports to Canada. Of all the exports shipped by District states in 1995, 35 percent were bound for Canada. In comparison, only 23 percent of U.S. exports were shipped to Canada. Japan, the District's and nation's second-largest trading partner, received 9 percent of all District exports, or about one-fourth of those shipped to Canada. The nation sent 11 percent of its exports to Japan. Mexico, which is the United States' and District's third largest trading partner, received about 8 percent of all U.S. exports, but only 5 percent of District exports. On average, each District state, except Mississippi, shipped about 38 percent of its exports to Canada.

Why does the District ship a relatively larger quantity of goods to Canada than the rest of the country does? One reason is that the area produces more of the goods Canadians want. For example, transportation equipment—especially motor vehicles and parts—and nonelectrical equipment, both of which account for a large piece of this relative strength, are two of the District's largest exporting industries to Canada. In addition, shipping costs to Canada are relatively low, and the United States has had free trade agreements, which have essentially eliminated all trade barriers between the two countries, with Canada since 1989.

## **District Exports: How Have They Changed?**

Although the District's overall picture of the first quarter of 1995 closely resembles that of the first quarter of 1994, differences showed up in the types of industries shipping goods and the countries of destination. In most cases, the dollar value of shipments increased over the year, but the share of District exports each country received was little changed. Transportation, electrical and nonelectrical equipment, and chemicals, were the dominant exporting industries in 1994, but their relative importance, particularly transportation equipment, was different than in 1995.

Transportation equipment, which was the leading export industry in four of the seven District states in 1994, was the leading export industry in five District states in 1995. The amount the District shipped from this sector rose 36 percent between 1994 and 1995, although if Mississippi's shipment to Israel is excluded, the gain drops to 28 percent. During the same period, prices in this industry increased by about 4.4 percent. Indeed, in all industries, the growth rate of the dollar value of exports greatly exceeded the rate of inflation. In other words, the level of real exports increased.

The other major exporting industries also saw the value of their shipments increase—between 12 percent and 36 percent—over the period. Indeed, District crop exports more than doubled between 1994 and 1995. In fact, in 1994, crops were not even among the top five exports for any District state, but in 1995 they were for two states. This change occurred partly because, in the beginning of 1995, China imported a large amount of rice—a big crop in Arkansas—after bad weather reduced its own crop dramatically. Indeed, crop exports bumped transportation equipment exports off Arkansas' top-five list in 1995.

District exports to all major trading partners, except Mexico, also increased between 1994 and 1995. Total shipments from the District increased 27 percent, with shipments to Canada increasing 28 percent, and those to Japan rising 36 percent. Over the same period, U.S. exports to Canada increased 23 percent, while those to Japan rose 15 percent. South Korea, a big emerging market, imported 54 percent more from the District in the first quarter of 1995 than it did during the same period a year before. Total U.S. exports to South Korea over this period rose by the same amount.

As mentioned, Mexico is the one exception to this growth trend. Total District exports to Mexico declined 24 percent between 1994 and 1995, which equals a \$226 million drop. Mexico's share of District exports fell from 8 percent to 5 percent over the period; its share of U.S. exports fell from 10 percent to 8 percent. Much of this fall-off occurred because of the currency crisis Mexico experienced in late 1994, when the value of the peso dropped dramatically, causing the prices of foreign goods, particularly U.S. goods, to rise sharply. Before the crisis, though, District exports to Mexico had been increasing throughout 1994.

## **Even Larger Markets**

Exports continue to grow in importance, not only for the national economy, but for the District's as well. Although they still represent only about a tenth of total output, exports increasingly are becoming a more important piece in firms' future plans. Thus, firms have realized that their target markets are broader today than they were yesterday, and that they're likely to be even larger tomorrow.

Thomas A. Pollmann provided research assistance.



REGIONAL ECONOMIST | JANUARY 1996

<https://www.stlouisfed.org/publications/regional-economist/january-1996/news-bulletins-from-the-eighth-federal-reserve-district>

## Pieces of Eight: News Bulletins from the Eighth Federal Reserve District

### Clarifying CRA

Bankers befuddled by the recent—and extensive—revisions to Community Reinvestment Act regulation can turn to the Federal Reserve Bank of St. Louis for help.

Beginning in February, the Fed will sponsor free seminars on the new CRA regulation in cities across the Eighth District. Two different seminars will be offered: a half-day seminar for small institutions—those with less than \$250 million in assets or whose holding companies have less than \$1 billion in assets—and a full-day seminar for large institutions.

Officials from each of the federal supervisory agencies will be on hand at the seminars to explain the new regulation and answer any specific questions you may have.

If you would be interested in attending a seminar, call Diana Judge of the St. Louis Fed at (314) 444-8751 or 1-800-333-0810, ext. 8751.

### A Devil of a Time

A difference in political views wasn't the only thing keeping Congress and the president from reaching an agreement on the federal budget deficit. The two camps also squabbled over which deficit projections to use in their calculations—those from the Office of Management and Budget or those from the Congressional Budget Office. The two sides finally settled on using the CBO numbers.

In his article, "The Devil is in the Budget Details," featured in the January issue of *National Economic Trends*, St. Louis Fed economist Christopher Neely explains how tiny discrepancies in the OMB and CBO numbers can snowball into significant differences over time.

For example, the current difference in the two offices' average real growth projections stands at a mere 0.2 percent, with the CBO taking the more conservative stance. By Neely's calculations, between 1996 and 2002, the CBO's slightly lower estimate would translate into a deficit that's \$29 billion greater than that projected by the OMB for the same period.

"We need to keep in mind that these are very small fractions, but of very large numbers," Neely says.

For a copy of the *NET* issue featuring Neely's report, call Debbie Dawe of our Public Affairs office at (314) 444-8809.

### The ABCs of Homebuying

Those looking to help educate first-time homebuyers now have a new tool at hand: an educational video called "Both Borrower and Lender." The video program is divided into four segments, which run about 30 minutes each. The segments are:

- Financial preparedness
- Types and terms of mortgages
- The mortgage application process; and
- Settlement and closing

One to 30 copies of the video are available for \$12.95 each including shipping; 31 to 99 copies are available at \$11.45 apiece including shipping. To place an order, call VIDICOPY at 1-800-708-7080.

## Success Story: District Business Failures in 1994

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Rank Among 50 States	District State	# of Failures per 1,000 Businesses
22	Tennessee	9.4
23	Kentucky	9.4
30	Missouri	7.9
32	Indiana	7.8
38	Arkansas	6.8
40	Illinois	6.7
47	Mississippi	5.2
<b>National Average</b>		<b>12.0</b>

NOTE: Figures have been rounded.

SOURCE: Bureau of Labor Statistics and Dun & Bradstreet

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# District Data

Selected economic indicators of banking,  
agricultural and business conditions in  
the Eighth Federal Reserve District

Regional Economist  
January 1996

## Commercial Bank Performance Ratios

U.S., District and State

	All U.S.	U.S. <\$15B <sup>1</sup>	District	AR	IL	IN	KY	MS	MO	TN
<b>Return on Average Assets (Annualized)</b>										
3rd quarter 1995	1.20%	1.33%	1.30%	1.28%	1.17%	1.28%	1.22%	1.46%	1.31%	1.45%
2nd quarter 1995	1.13	1.29	1.28	1.24	1.23	1.23	1.22	1.41	1.29	1.41
3rd quarter 1994	1.18	1.31	1.26	1.32	1.24	1.10	1.14	1.27	1.31	1.34
<b>Return on Average Equity (Annualized)</b>										
3rd quarter 1995	15.12%	15.11%	14.87%	13.75%	11.85%	13.90%	14.05%	15.97%	16.03%	17.83%
2nd quarter 1995	14.37	14.88	14.74	13.43	12.58	13.20	13.94	15.63	15.92	17.55
3rd quarter 1994	14.98	15.22	14.66	14.37	12.88	11.83	13.13	13.74	16.52	16.98
<b>Net Interest Margin (Annualized)</b>										
3rd quarter 1995	4.02%	4.57%	4.12%	4.06%	4.20%	4.36%	4.07%	4.85%	4.00%	4.04%
2nd quarter 1995	3.91	4.46	4.01	3.90	4.13	4.18	3.95	4.67	3.91	3.95
3rd quarter 1994	4.06	4.57	4.18	4.12	4.15	4.15	4.25	4.59	4.11	4.16
<b>Nonperforming Loans<sup>2</sup> ÷ Total Loans</b>										
3rd quarter 1995	1.22%	1.08%	0.71%	0.68%	1.01%	0.57%	0.82%	0.64%	0.61%	0.66%
2nd quarter 1995	1.26	1.07	0.70	0.68	1.04	0.53	0.83	0.64	0.57	0.62
3rd quarter 1994	1.45	1.27	0.74	0.69	1.03	0.58	0.87	0.66	0.65	0.65
<b>Net Loan Losses ÷ Average Total Loans (Annualized)</b>										
3rd quarter 1995	0.43%	0.48%	0.21%	0.13%	0.39%	0.15%	0.29%	0.23%	0.12%	0.25%
2nd quarter 1995	0.39	0.46	0.18	0.10	0.32	0.13	0.23	0.22	0.14	0.19
3rd quarter 1994	0.47	0.44	0.18	0.10	0.27	0.12	0.23	0.25	0.11	0.28
<b>Loan Loss Reserve ÷ Total Loans</b>										
3rd quarter 1995	2.05%	1.88%	1.56%	1.34%	1.54%	1.39%	1.57%	1.62%	1.70%	1.55%
2nd quarter 1995	2.11	1.88	1.57	1.37	1.61	1.43	1.59	1.65	1.67	1.57
3rd quarter 1994	2.29	2.06	1.71	1.46	1.68	1.48	1.73	1.67	1.87	1.72

NOTE: Data include only that portion of the state within Eighth District boundaries.

<sup>1</sup> U.S. banks with average assets of less than \$15 billion are shown separately to make comparisons with District banks more meaningful, as there are no District banks with average assets greater than \$15 billion.

<sup>2</sup> Includes loans 90 days or more past due and nonaccrual loans

SOURCE: FFIEC Reports of Condition and Income for Insured Commercial Banks

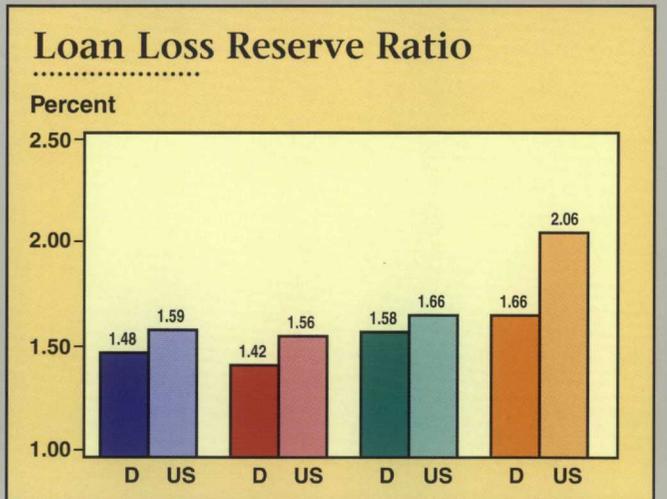
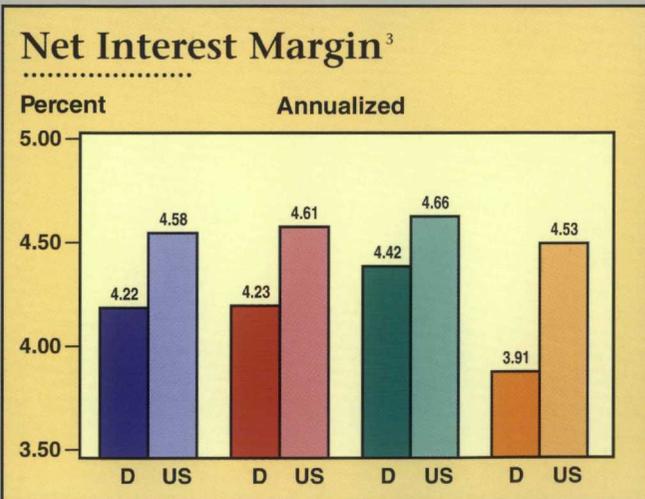
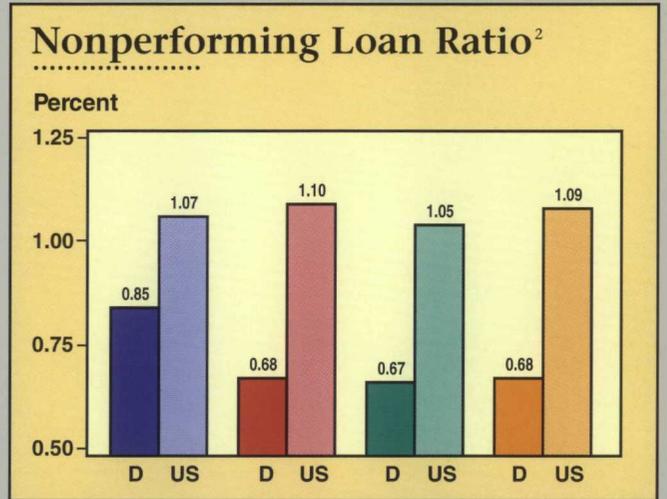
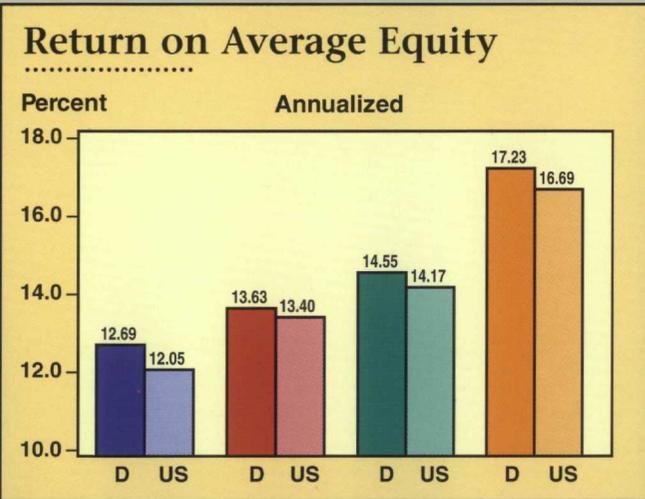
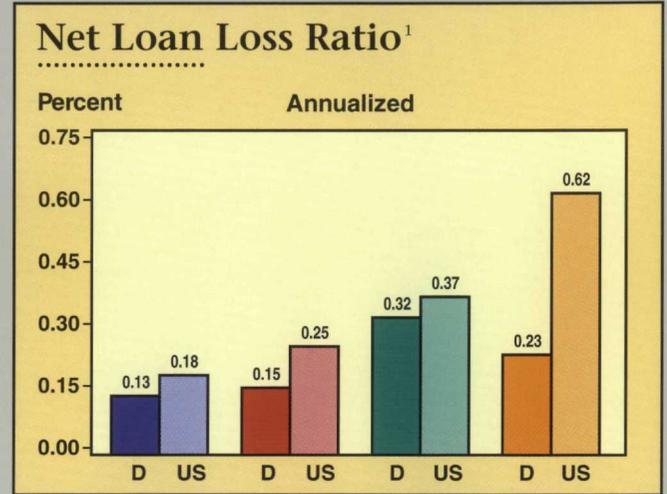
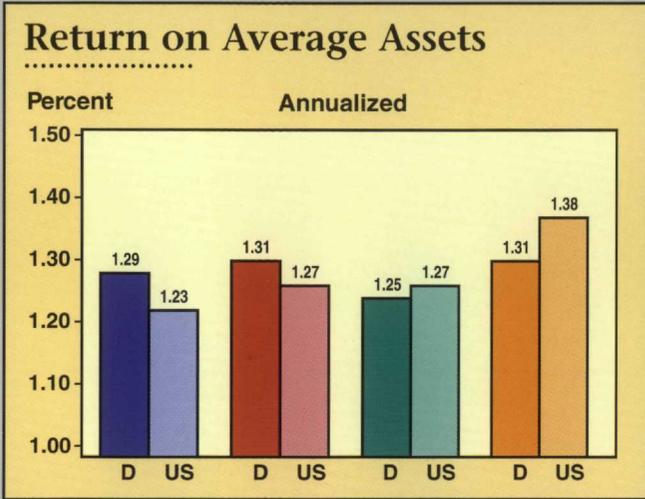
# Commercial Bank Performance Ratios

by Asset Size

3rd Quarter 1995

## Earnings

## Asset Quality



D = District  
US = United States

< \$100 Million  

 \$100 Million - \$300 Million  

 \$300 Million - \$1 Billion  

 \$1 Billion - \$15 Billion

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

<sup>1</sup> Loan losses are adjusted for recoveries

<sup>2</sup> Includes loans 90 days or more past due and nonaccrual loans

<sup>3</sup> Interest income less interest expense as a percent of average earning assets

SOURCE: FFIEC Reports of Condition and Income for Insured Commercial Banks

## Agricultural Bank Performance Ratios

	U.S.	AR	IL	IN	KY	MS	MO	TN
<b>Return on average assets (annualized)</b>								
3rd quarter 1995	1.28%	1.30%	1.28%	1.26%	1.49%	1.71%	1.28%	1.22%
2nd quarter 1995	1.23	1.23	1.22	1.20	1.44	1.54	1.26	1.19
3rd quarter 1994	1.26	1.24	1.20	1.16	1.40	1.52	1.32	1.21
<b>Return on average equity (annualized)</b>								
3rd quarter 1995	12.37%	12.35%	11.73%	12.78%	14.75%	19.11%	12.50%	12.79%
2nd quarter 1995	12.02	11.86	11.27	12.24	14.37	16.41	12.35	12.40
3rd quarter 1994	12.48	11.84	11.55	11.29	14.25	15.44	13.21	12.60
<b>Net interest margin (annualized)</b>								
3rd quarter 1995	4.32%	4.11%	4.00%	4.48%	4.42%	5.21%	4.18%	4.12%
2nd quarter 1995	4.18	3.92	3.76	4.39	4.32	4.85	4.15	3.98
3rd quarter 1994	4.29	4.05	3.91	4.38	4.30	4.70	4.28	4.21
<b>Ag loan losses ÷ average ag loans (annualized)</b>								
3rd quarter 1995	0.17%	-0.01%	-0.01%	0.07%	0.16%	0.26%	-0.04%	0.08%
2nd quarter 1995	0.14	-0.06	-0.07	-0.05	0.09	0.39	-0.10	0.10
3rd quarter 1994	0.12	0.37	-0.06	-0.12	0.02	0.23	0.16	0.26
<b>Ag nonperforming loans<sup>1</sup> ÷ total ag loans</b>								
3rd quarter 1995	1.29%	0.29%	1.26%	0.29%	1.37%	0.88%	1.00%	0.35%
2nd quarter 1995	1.43	0.62	1.57	0.67	1.73	1.96	1.05	0.32
3rd quarter 1994	1.23	0.63	1.17	1.40	1.49	1.69	0.91	0.14

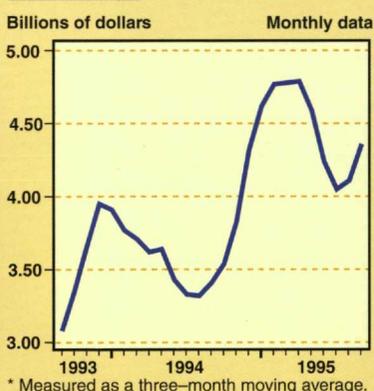
NOTE: Agricultural banks are defined as those banks with a greater than average share of agricultural loans to total loans.

Data include only that portion of the state within Eighth District boundaries.

<sup>1</sup> Includes loans 90 days or more past due and nonaccrual loans

SOURCE: FFIEC Reports of Condition and Income for Insured Commercial Banks

### U.S. Agricultural Exports\*



### U.S. Agricultural Exports by Commodity

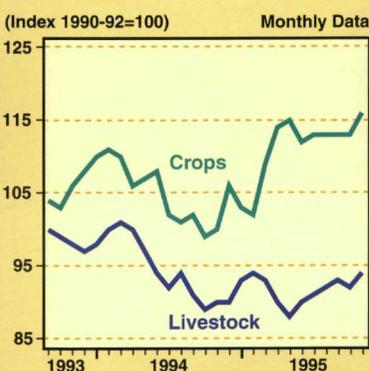
Dollar amounts in billions

Commodity	July	Aug	Sept	Year-to-date	Change from year ago
Livestock & products	.87	.92	.91	10.23	22.8%
Corn	.59	.67	.81	6.62	73.4
Cotton	.14	.14	.10	3.50	51.6
Rice	.07	.09	.07	1.05	18.0
Soybeans	.26	.30	.46	5.27	26.8
Tobacco	.07	.07	.08	1.33	5.5
Wheat	.38	.55	.61	4.95	23.0
<b>TOTAL<sup>1</sup></b>	<b>3.97</b>	<b>4.39</b>	<b>4.73</b>	<b>54.16</b>	<b>24.5</b>

NOTE: Year-to-date on a fiscal-year basis (Oct.-Sept.)

<sup>1</sup> Includes commodities not listed here

### U.S. Crop and Livestock Prices



### Indexes of Food and Agricultural Prices

	Level			Growth <sup>1</sup>	
	III/95	II/95	III/94	II/95-III/95	III/94-III/95
<b>Prices received by U.S. farmers<sup>2</sup></b>	102	100	97	9.7	5.5
<b>Prices received by District farmers<sup>3</sup></b>					
Arkansas	126	118	126	28.5	0.3
Illinois	102	94	90	38.6	12.9
Indiana	106	97	93	46.4	14.3
Missouri	129	122	128	25.0	0.5
Tennessee	133	130	134	7.4	-1.2
<b>Prices paid by U.S. farmers</b>					
Production items	107	107	105	0.0	1.9
Other items	108	108	106	0.0	1.9
<b>Consumer food prices</b>	149	148	145	2.3	2.7
<b>Consumer nonfood prices</b>	154	153	150	1.8	2.7

NOTE: Data not seasonally adjusted except for consumer food prices and nonfood prices.

<sup>1</sup> Compounded annual rates of change are computed from unrounded data.

<sup>2</sup> Index of prices received for all farm products and prices paid (1990-92=100)

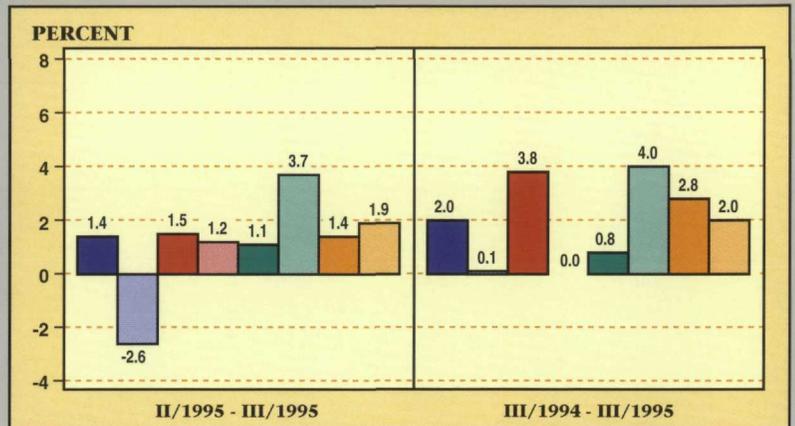
<sup>3</sup> Indexes for Kentucky and Mississippi are unavailable.

# Selected U.S. and State Business Indicators

## Compounded Annual Rates of Change in Nonagricultural Employment

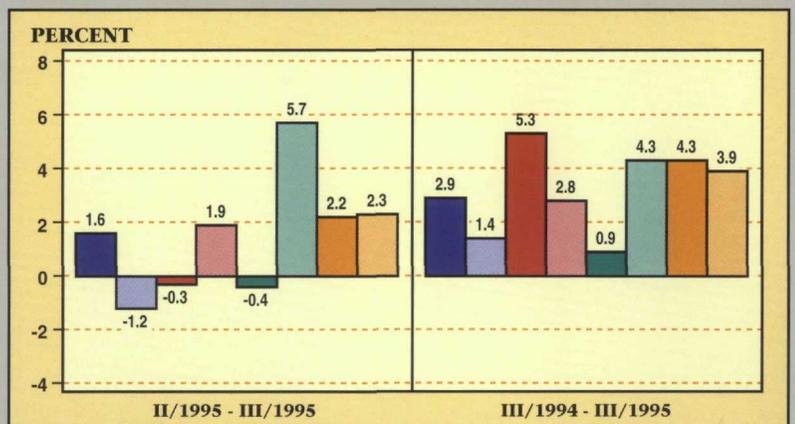
### United States

	III/1995	II/1995	III/1994
Labor force (in thousands)	132,440	132,139	131,050
Total nonagricultural employment (in thousands)	116,782	116,368	114,481
Unemployment rate	5.6%	5.7%	6.0%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$3,901.6	\$3,902.5	\$3,799.8



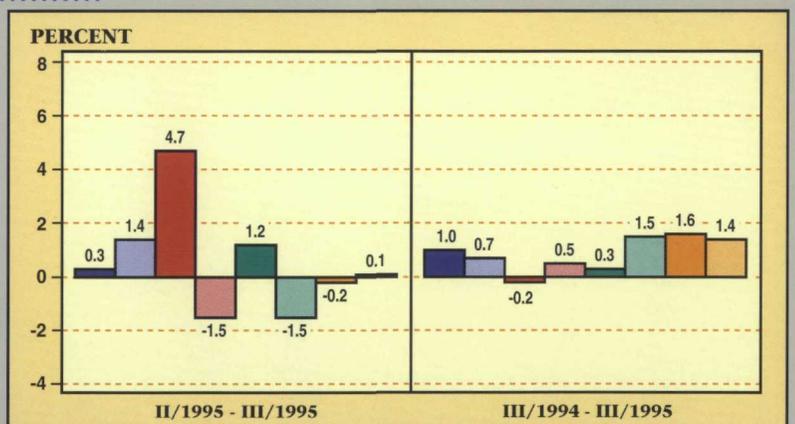
### Arkansas

	III/1995	II/1995	III/1994
Labor force (in thousands)	1,218.5	1,212.1	1,215.0
Total nonagricultural employment (in thousands)	1,073.2	1,068.9	1,043.1
Unemployment rate	4.9%	4.4%	5.4%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$28.5	\$28.6	\$27.7



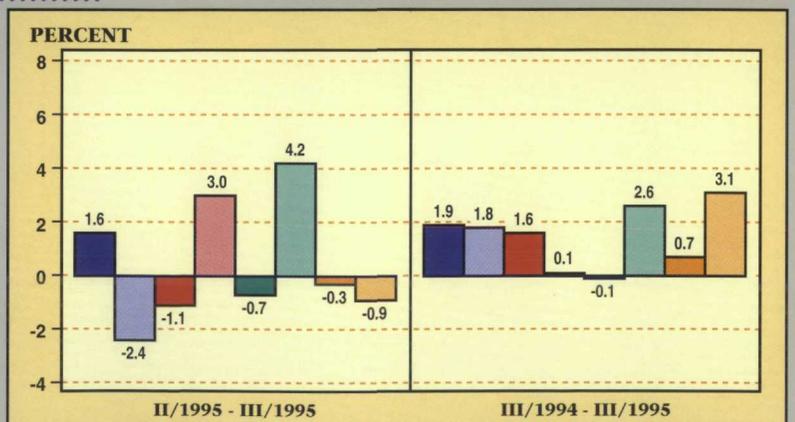
### Illinois

	III/1995	II/1995	III/1994
Labor force (in thousands)	6,066.5	6,115.4	5,961.2
Total nonagricultural employment (in thousands)	5,535.7	5,531.6	5,480.0
Unemployment rate	5.5%	5.1%	5.6%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$192.6	\$193.0	\$186.6



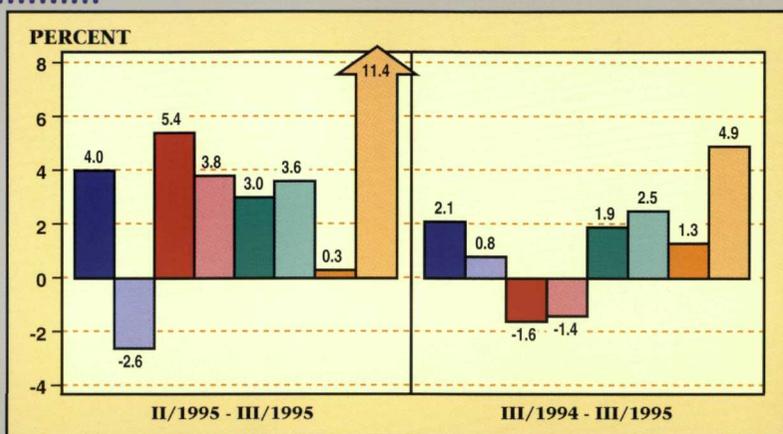
### Indiana

	III/1995	II/1995	III/1994
Labor force (in thousands)	3,138.0	3,137.6	3,049.4
Total nonagricultural employment (in thousands)	2,761.0	2,750.2	2,710.2
Unemployment rate	4.4%	4.7%	5.1%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$80.7	\$81.5	\$78.0



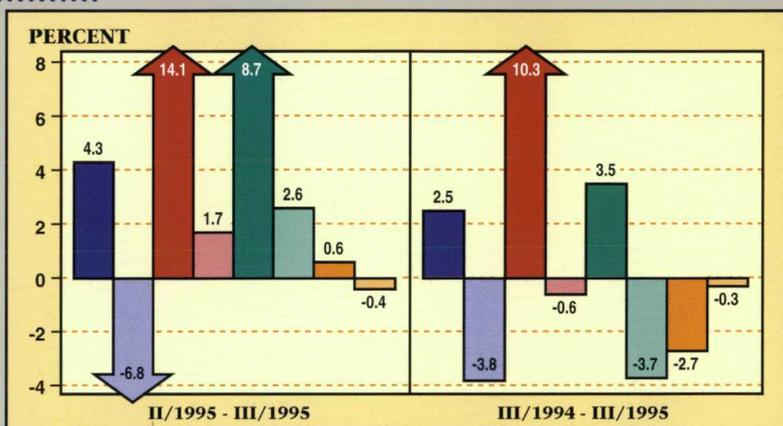
## Kentucky

	III/1995	II/1995	III/1994
Labor force (in thousands)	1,864.1	1,865.9	1,833.3
Total nonagricultural employment (in thousands)	1,642.8	1,626.8	1,609.3
Unemployment rate	5.4%	4.9%	5.4%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$46.9	\$46.8	\$45.7



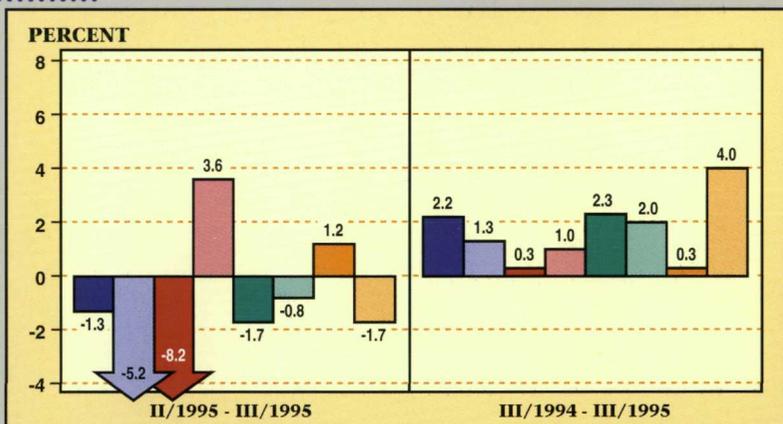
## Mississippi

	III/1995	II/1995	III/1994
Labor force (in thousands)	1,267.0	1,242.6	1,262.5
Total nonagricultural employment (in thousands)	1,078.1	1,066.8	1,051.7
Unemployment rate	6.4%	5.8%	6.5%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$29.0	\$29.2	\$28.3



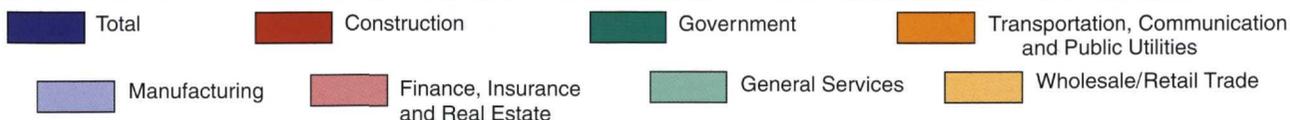
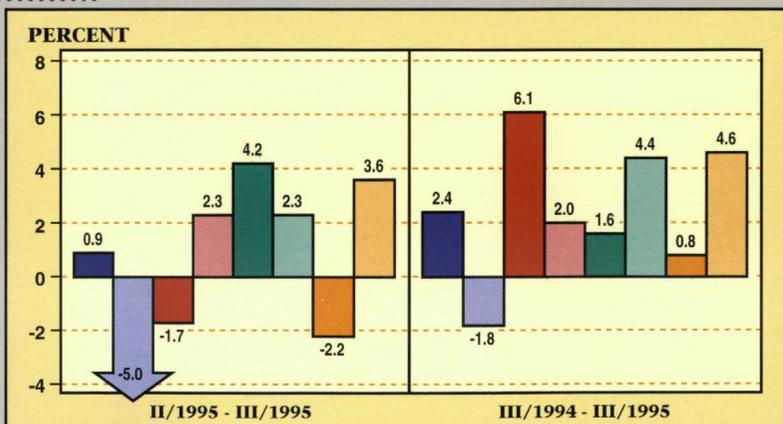
## Missouri

	III/1995	II/1995	III/1994
Labor force (in thousands)	2,816.1	2,841.7	2,701.1
Total nonagricultural employment (in thousands)	2,531.5	2,539.9	2,478.1
Unemployment rate	5.1%	4.8%	4.6%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$75.2	\$75.2	\$72.8



## Tennessee

	III/1995	II/1995	III/1994
Labor force (in thousands)	2,702.2	2,682.1	2,690.4
Total nonagricultural employment (in thousands)	2,492.0	2,486.1	2,432.4
Unemployment rate	5.3%	4.6%	4.7%
	II/1995	I/1995	II/1994
Real personal income* (in billions)	\$69.6	\$69.5	\$67.4



NOTE: All data are seasonally adjusted. The nonagricultural employment data reflect the 1994 benchmark revision.  
\* Annual rate. Data deflated by CPI, 1982-84=100.