

# President's Message

On a light-rail tour of the East St. Louis area, President William Poole asks the guide a question about redevelopment along the train's route.



## The Fed Lends a Helping Hand—and Sometimes a Push

If you were to poll the citizenry about what the Fed does, most would probably say something about setting interest rates. Others might be familiar with our role in supervising banks. A smaller minority might have heard about our third main responsibility, that of providing financial institutions with check processing, electronic funds transfers and similar services—just like the “real” big banks do. I’m betting, however, that few would venture to say that the Fed is involved in revitalizing our inner cities.

But that was the goal of the St. Louis Fed in organizing a conference on this topic last fall in East St. Louis, Ill., long the poster child for cities in distress. More than 150 people from around the country gathered to talk about housing, jobs, financial education, reuse of abandoned industrial sites and similar needs in East St. Louis and other distressed urban areas. Similar efforts have been undertaken by other Federal Reserve banks, with the focus just as often being on the needs of rural areas.

When people find out that the Fed does such things as organize community investment fairs and research the credit needs of the Mississippi Delta, they sometimes ask why we don’t flex our muscle more where help is needed the most. Why don’t we create money just for cases like East St. Louis? Why don’t we lower interest rates for those willing to invest in such areas? But such approaches don’t work, as other central banks have learned. Relying on national monetary policy, we couldn’t stimulate the economy in East St. Louis without overheating it in surrounding

areas that are already better off. Even if the Fed pumped reserves into the banking system in the East St. Louis area to lower rates there, that money would quickly be gobbled up by bankers and brokers elsewhere, who would take advantage of the rate differential to make a profit. Rather than try such tactics, the Fed believes that if it sticks to its main goal—of keeping inflation low and stable—everybody’s boat will have a better chance of floating a bit higher.

This limited role doesn’t mean the Fed has little interest in community development. As the recent conference demonstrates, the Fed brings lenders and investors together with neighborhood activists, foundations, government agencies and others to try to find ways to get needed projects off the ground. For leverage, the Fed has the Community Reinvestment Act of 1977. This law tells federally regulated financial institutions that if they want approval to buy, sell or expand, they must have a track record of providing credit access to all parts of their com-

munity, including low- and moderate-income areas. CRA doesn’t force banks to throw away money on such projects, but to find a way to make them profitable. It can be done—even in East St. Louis, as can be seen in the recent construction of a hotel, community center, strip shopping center and several hundred townhomes.

Through its Community Affairs Offices, the Fed provides a host of other assistance in this vein: from workshops on building wealth, to “how-to” manuals for community developers, to research by economists on what works and what doesn’t.

If you’ve got other ideas on how we can help foster development in your community, please contact us at [communityaffairs@stls.frb.org](mailto:communityaffairs@stls.frb.org).

William Poole, President and CEO,  
The Federal Reserve Bank of St. Louis





# BIG GOVERNMENT THE COMEBACK KID?

BY KEVIN L. KLISEN

**T**he 20th century saw a significant increase in the size and scope of government. Important factors behind this increase included two world wars, an economic depression in the 1930s, a significant expansion of the welfare state in the early 1960s and an upsurge in environmental regulation in the 1970s. But with the federal government in a deregulatory mode since the early 1980s and with the end of the Cold War in 1989, growth of government spending and of regulatory intervention was rolled back during the 1990s. This development, combined with stronger-than-expected economic growth, helped to produce relatively large budget surpluses from 1998 to 2001 and even larger projected budget surpluses for future years.

These surpluses gave policy-makers the impetus to boost spending in areas outside defense and entitlement programs. Then, in the aftermath of events of Sept. 11, 2001, spending on defense also jumped. But government is not just spending more, it is also regulating more—partly in response to corporate accounting scandals; partly because of the drubbing in the stock market, which sharply reduced the value of 401(k)s and household wealth; and partly in response to the war on terrorism.

Is big government staging a comeback?

## Rise of the Welfare State

Before the 20th century, government at all levels (federal, state and local) extracted a relatively small slice of national income, chiefly through taxes on economic activity that affected a small percentage of the population. These included taxes on imported goods (tariffs), excise taxes and property taxes. U.S. fiscal policy began to change during World War I and, especially, the Great Depression, when a significant expansion of the U.S. government occurred. Indeed, the foundation of the modern welfare state was laid during the 1930s, which saw social upheaval caused by financial market calamity and by a significant migration of the population from rural to urban areas.

With the unemployment rate rising to about 25 percent in 1933, and with more than 9,000 bank failures between the stock market crash in October 1929 and March 1933, the public sector began to regulate the private sector as never before. Industries that fell under closer government scrutiny, not surprisingly, included banking and finance. At the same time, individuals, families, retirees and small farmers were provided a measure of income security not seen heretofore. This activism, accordingly, required a considerable amount of resources.

## Rise of the Regulatory State

The government's expanding role in the economy can be measured in a couple of different ways. One way is to look at the level of regulation.



The transformation of the U.S. government from a largely *laissez faire* entity to one more actively engaged in the regulation of private commerce began, to a large extent, in response to the rise of the industrial and financial barons in the 19th century. For example, many of the large firms headed by these barons—firms like Carnegie Steel and Standard Oil—were essentially monopolies and able to exert control on production and market prices.

The first permanent regulatory agency to combat these forces was the Interstate Commerce Commission, created in 1887 to foster competition in the railroad industry.

Roughly 20 years later, the food and medicine

industry began to get closer scrutiny with the Pure Food and Drug Act of 1906 and the Meat Inspection Act of 1907. The Federal Trade Commission was created in 1914. A series of financial calamities and bank runs in the late 19th and early 20th centuries finally induced Congress and President Woodrow Wilson to create the Federal Reserve System in 1913, the same year that the modern personal income tax was permanently instituted.

The regulatory powers of the federal government were expanded further during the Depression, when segments of the public clamored for greater oversight of the nation's financial system following the stock market crash in 1929 and the numerous failures of banks that followed. Regulatory agencies that had their beginnings during the Roosevelt administration included the Federal Deposit Insurance Corp. and the Securities and Exchange Commission, both in 1934, and the National Labor Relations Board in 1935. The next big push in government regulation at the federal level occurred during the 1960s and 1970s. The Equal Employment Opportunity Commission (1965), the Environmental Protection Agency (1970) and the Occupational Safety and Health Administration (1970) were among the new agencies established to regulate private business activity. The implementation of temporary wage and price controls by the Nixon administration in 1973 represented an even more onerous level of regulation.

By the end of the 1970s, something was clearly awry. Ominously, productivity growth, which determines how fast the nation's living standard increases, had decelerated sharply. After growing by an average of 3 percent per year during the 1950s, living standards (real Gross Domestic Product per capita) grew by only 2.2 percent a year during the 1960s. The economy's performance deteriorated further between 1969 and 1982: After four recessions, a debilitating war and two major oil price shocks, growth of U.S. living standards slipped to a 1.4 percent annual rate.

Some economists and policy-makers came to believe that one additional factor sapping the nation's growth was the rapidly rising estimate of the cost of complying with new government regulations. According to one study, the cost of regulatory compliance totaled \$623 billion in 1979 (1995 dollars), roughly 13 percent of real GDP.<sup>1</sup> But those direct costs tell only part of the story: These costs do not account for the output lost by the disincentives that they impose on businesses and consumers.

In response, the pendulum began to swing modestly back toward less government intervention and freer markets in

the late 1970s. Sectors that saw active deregulatory efforts included the energy and transportation industries and the financial sector. This trend continued into the 1980s, as estimated real regulatory compliance costs fell about 10 percent, while real GDP rose a little more than 30 percent. By 2001, estimated real compliance costs totaled \$854 billion, or a little more than 9 percent of real GDP.<sup>2</sup>

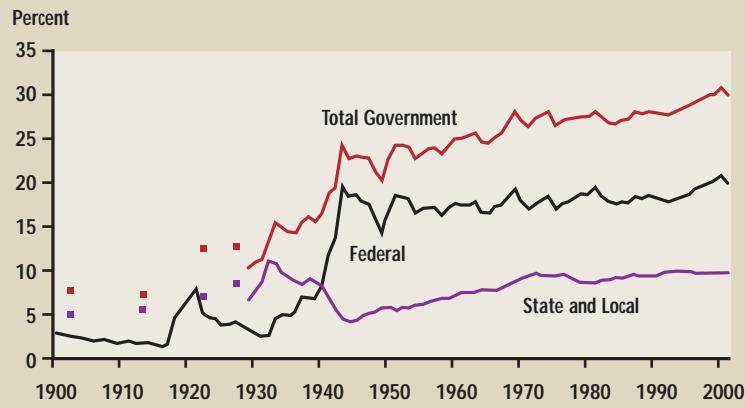
#### Trends in Government Taxation

The second way to measure the expanding size of the public sector in the 20th century is by the amount of private-sector resources that are claimed by all levels of government. Figure 1 shows that prior to World War I, federal government receipts as a share of GNP/GDP were steadily declining, from about 3 percent in 1900 to a little more than 1.5 percent by 1916. Over this period, receipts claimed by state and local governments were larger so that total government receipts remained roughly constant at about 7.5 percent of GNP from 1900 to 1913. (Only partial data exists for receipts for state and local governments and, hence, total government receipts, before 1929. Before then, we used Gross National Product.) The surge in federal government receipts associated with financing World War I was brief, as this share subsequently fell back to about 2.5 percent by 1931. Still, total government receipts remained near their post-World War I peak of nearly 13 percent because taxes collected by state and local governments remained high.

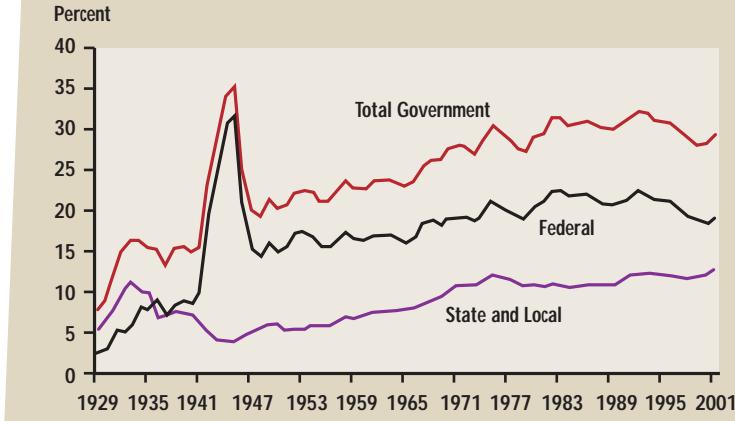
Two key developments occurred during the 1930s. First, the size and scope of the federal government began to rise rapidly, which displaced many of the activities that state and local governments were accustomed to providing. Accordingly, federal receipts as a share of GDP jumped roughly three-fold between 1931 and 1940, while the share of state and local receipts fell back to just over 8 percent by 1940. The second key development was the financing of World War II. Although the government largely financed the war through the issuance of debt, federal receipts as a share of GDP nonetheless rose to an all-time high (up to that point) of almost 20 percent by 1943. The rising share of federal receipts displaced state and local governments' receipts further. By the end of the 20th century, state and local governments' take of private-sector income was about the same as it was at the beginning of the Great Depression, but rising federal receipts caused total government receipts to reach an all-time high in 2000.

The direct manifestation of government taxation is government spending.

**Figure 1**  
**Government Receipts as a Share of GNP/GDP**



**Figure 2**  
**Government Expenditures as a Share of GDP**



As seen in Figure 2, government spending at all levels trended steadily higher, reaching a little more than 32 percent of GDP by 1992. A goodly part of this increase was at the state and local level, as expenditures on Medicaid and education began to rise sharply. Since then, government expenditures have drifted lower, paced by reductions at the federal level.

FIGURE 1 NOTE: Prior to 1929, series represented as shares of GNP. Receipts for state and local governments are incomplete between 1900 and 1929. SOURCE FOR BOTH FIGURES: U.S. Department of Commerce, Bureau of Economic Analysis. Data prior to 1929 are from the U.S. Department of the Census (1975).

#### Bigger and More Activist?

The latter half of the 1990s saw a tremendous change in the federal government's budget outlook. Specifically, large 10-year deficit projections were replaced by large prospective surpluses.<sup>3</sup> After running deficits that averaged almost \$200 billion a year from 1989 to 1997, the federal government recorded a budget surplus of \$69.2 billion in fiscal year 1998. This was the first surplus in more than 25 years. Over the next two years, as the economy strengthened, the federal surplus nearly quadrupled, rising to just under \$240 billion in fiscal year 2000, or 2.4 percent of GDP. Given reasonable assumptions about the underlying strength of the economy and



prospective trends in government expenditures, the Congressional Budget Office (CBO) projected in May 2001 that federal surpluses would total just over \$5.6 trillion between fiscal years 2002 and 2011.

**Table 1**  
**Changes in Budget Projections**

Percent of Nominal GDP	1999	2000	2001	Jan. 2002	Aug. 2002
<b>Revenues</b>					
Individual Income	9.6	9.8	10.2	9.2	8.9
Corporate Income	2.1	1.7	1.9	1.8	1.7
Social Insurance	6.9	6.8	6.6	6.8	6.8
Other	1.6	1.6	1.5	1.3	1.3
<b>Total</b>	<b>20.2</b>	<b>19.8</b>	<b>20.3</b>	<b>19.1</b>	<b>18.8</b>
<b>Outlays</b>					
Discretionary Spending	5.3	5.7	5.8	6.4	6.7
Mandatory Spending	12.1	11.2	10.9	11.3	10.6
Net Interest	1.2	1.1	0.8	1.4	1.6
<b>Total</b>	<b>17.7</b>	<b>17.2</b>	<b>16.5</b>	<b>18.2</b>	<b>18.9</b>
<b>Deficit (-) or Surplus</b>	<b>2.5</b>	<b>2.6</b>	<b>3.8</b>	<b>0.9</b>	<b>-0.1</b>

SOURCE: Congressional Budget Office (various years).

Each column shows the baseline projection made by the Congressional Budget Office in that year for the period 2003-09. The numbers in each column represent that category as a percent of nominal GDP.

The shift from deficits to surpluses arose for many reasons, but three stand out. First, with the end of the Cold War, government expenditures on defense were trimmed sharply. Second, the Budget Enforcement Act of 1990 restricted spending by instituting—among other budgetary rules—caps on discretionary spending and pay-as-you-go budget rules, which required that changes in mandatory spending or revenues be budget-neutral.<sup>4</sup> These two developments helped to slow the growth of total government expenditures appreciably. Finally, on the revenue side, the combination of above-trend economic growth beginning in 1997 and an exuberant stock market led to sharply higher government receipts. By 2000, total government receipts as a share of GDP measured 30.5 percent, an all-time high. (See Figure 1.)

The pendulum has now swung modestly in the opposite direction. In its August 2002 report, the CBO projected a cumulative budget surplus of just over \$1 trillion for fiscal years 2003-12, about \$1.4 trillion less than the March 2002 projection and several trillion less than the May 2001 projection.<sup>5</sup> The change in the budget outlook suggests that the three positive budgetary developments mentioned earlier were temporary aberrations.<sup>6</sup> If so, the debate over when, or whether, the federal government will ever post another unified budget surplus may be moot. That is, there is significant probability that the size and scope of the federal government are poised to expand.

## Post-Sept. 11 Fiscal Policy

Gauging the future size of government is difficult during a period when the government is actively trying to jump-start the economy. In particular, the levers of both monetary and fiscal policy were engaged quite strongly during the 2001 recession—both before and after Sept. 11. Moreover, because the recovery was not proceeding at the vigorous pace that typically occurs following a recession, policy-makers undertook additional stimulative monetary and fiscal actions in 2002. But with the myriad of new challenges faced by public policy-makers and private businesses in the post-Sept. 11 environment, there is concern that the period of minimalist government and of freer markets that has prevailed over the past 20 years or so may be ending. This view is by no means universal, though. According to a recent survey of business economists conducted by the National Association for Business Economics, roughly three out of four disagreed with the assertion that the United States had “entered an activist policy regime.”<sup>7</sup>

If, however, we have entered a more activist policy regime, there is some evidence that the public is more amenable to such a development than in years past. According to a recent Gallup Poll, the public’s confidence in the executive and legislative branches of government has been on the upswing over the past five years and, in the case of the executive branch, rivals the confidence levels seen in 1972 (pre-Watergate).<sup>8</sup> In this regard, probably the single-most important event that has galvanized the public’s confidence in government was the public policy response to the Sept. 11 terrorist attacks.

According to the Office of Management and Budget (OMB), the federal government has implemented 41 “significant” federal regulations in the six months following the Sept. 11 attacks.<sup>9</sup> These included rules pertaining to domestic security, immigration control, airline safety, financial disclosures and economic assistance to businesses harmed by the direct effects of the attacks.

In light of the government’s response to Sept. 11, the public might also be more inclined to look for activist policy actions in other areas. Financial and corporate accounting scandals over the past year, and the stock market meltdown, put emphasis on renewed regulation in private pensions and corporate governance. In response, Congress passed and President Bush signed the Sarbanes-Oxley Act, which may be the most encompassing overhaul of federal securities regulation since the SEC Act of 1934. Among other things, the Sarbanes-Oxley Act establishes a Public Company Accounting Oversight

Board and a new set of mandates for CEOs and CFOs that potentially exposes them to increased liability for corporate financial misconduct.<sup>10</sup>

But even before Sept. 11, 2001, federal regulatory spending was on the upswing. According to a recent study, real federal spending on regulatory activity posted average annual increases of about 2 percent per year during the 1980s and the first half of the 1990s and then a bit less than 4 percent per year from 1995 to 2000. Then, real federal regulatory expenditures jumped 8 percent in 2001; they are estimated to have surged 14.5 percent in 2002.<sup>11</sup> Although they are only over two years, these increases rival the roughly 9 percent rates of growth seen during the 1960s and 1970s.

Increased spending on new regulations is one reason why government outlays are on the rise. Another reason is that policy-makers viewed the large budget surpluses that were being projected in 2001 as an opportunity to ramp up the path of federal spending. This can be seen in Table 1, which depicts, as a percent of nominal GDP, projected cumulative total federal outlays, discretionary and mandatory outlays, net interest payments and the unified budget deficit for fiscal years 2003 to 2009. For example, in 1999, CBO projected that cumulative—that is, the sum for each of the years—federal government outlays for the years 2003 through 2009 would average 17.7 percent of GDP. At the same time, projected revenues were expected to average 20.2 percent of GDP from 2003–09. The projected path of revenues and outlays was thus expected to produce a surplus that averaged 2.5 percent of GDP. By the time the CBO's 2001 report was published, the agency was projecting that this average surplus (for years 2003–09) would increase to about 3.8 percent of GDP.

But as the latest projections (August 2002) show, the CBO now estimates that the federal government will spend an amount over the 2003–09 period totaling almost 19 percent. All of this upsurge in future spending is with discretionary spending, such as defense, the 2002 Farm Security and Rural Investment Act (Farm Bill) and net interest. But yet another reason why spending is on the upswing is the war on terrorism, something policy-makers and CBO forecasters could not have predicted in 1999 or 2001.

Although the CBO tends to use conservative economic assumptions when making its projections, the inability of forecasters to predict unforeseen events is one reason why this assessment might be understated. This helps to explain, as Kliesen and Thornton (2001) showed, why errors in projecting federal government

outlays five years into the future averaged roughly 2.25 percent of GDP from 1976 to 1999. But there are other reasons why the August 2002 projections for outlays for 2003–09 are probably understated. First, the CBO is required to assume a permanent renewal of the Budget Enforcement Act of 1990, which has helped to restrain expenditures. Second, the Balanced Budget and Emergency Deficit Control Act of 1985 requires the CBO to project annual increases in discretionary spending at the rate of inflation, roughly 3 percent per year from 2003 to 2012. But if discretionary spending grew at an average annual rate of 8.5 percent, which was the actual rate of growth from 1998 through 2002, then cumulative total outlays (discretionary spending plus net interest) from 2003 to 2009 would be nearly \$1.3 trillion higher, or about 1.5 percent of GDP.

Finally, the CBO's projections do not incorporate commitments that the federal government seems poised to make. These include outlays for future war-like hostilities (and subsequent rebuilding efforts), the homeland security legislation (passed in November 2002) and a Medicare prescription drug program, which CBO estimates would add another \$341 billion in outlays over the 2003–12 projection period. The latter is potentially very important since the retirement of the baby boom generation, by itself, will exert a huge drag on the resources of future workers (i.e., higher future taxes and government spending). Hence, we should not be so sanguine that, as projected, federal legislators will be slowing the growth of government discretionary spending after 2003.

### A Cautionary Note

Entering the 21st century, the U.S. economy is the strongest in the world, with fairly strong productivity growth and very low and stable inflation. Despite one of the mildest recessions on record, monetary and fiscal policy has been extremely expansionary over the past year. Few economists expect Federal Reserve policy-makers to allow inflation to become the problem that it was in the 1970s. On the fiscal side, however, the upswing in government spending, buttressed by a more activist regulatory policy, suggests public policy-makers want to rely less on market forces. If so, policy-makers should be wary about repeating past mistakes.

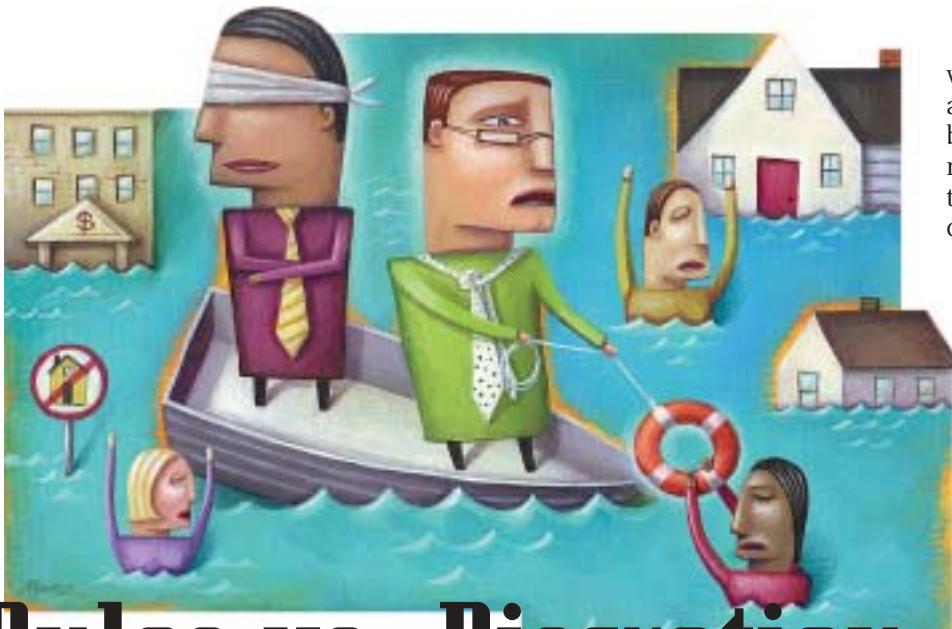
*Kevin L. Kliesen is an economist at the Federal Reserve Bank of St. Louis. Thomas A. Pollmann provided research assistance.*

### ENDNOTES

- <sup>1</sup> See Hopkins (1996).
- <sup>2</sup> Measured in 2000 dollars. See Crews (2002).
- <sup>3</sup> See Kliesen and Thornton (2001).
- <sup>4</sup> See Crippen (2001).
- <sup>5</sup> The CBO's projections place the cause of the decline in the surplus roughly equally split between falling revenue and rising expenditures. See Congressional Budget Office (2002).
- <sup>6</sup> The CBO could not have foreseen the events of Sept. 11, the subsequent war on terrorism, the 2001 recession and the plunge in equity values.
- <sup>7</sup> See NABE (2002).
- <sup>8</sup> <http://www.gallup.com/poll/releases/pr020902>.
- <sup>9</sup> See Executive Office of the President (2002).
- <sup>10</sup> See Blumenstein, Clowes, Holt Frankle and Stanton (2002).
- <sup>11</sup> See Dudley and Warren (2002).

### REFERENCES

- Blumenstein, Paul; Clowes, J. Howard; Holt Frankle, Diane; and Stanton, Scott. "President Signs Sarbanes-Oxley Act of 2002," GrayCary law firm. [http://www.gcwf.com/articles/interest\\_interest\\_55.html](http://www.gcwf.com/articles/interest_interest_55.html)
- Congressional Budget Office. "The Budget and Economic Outlook: An Update." Report to the Senate and House Committees on the Budget. Washington, D.C., August 2002.
- Crews, Clyde Wayne, Jr. "Ten Thousand Commandments: An Annual Snapshot of the Federal Regulatory State," Cato Institute, Washington, D.C., 2002.
- Crippen, Dan L. "Extending the Budget Enforcement Act." Statement before the Committee on the Budget, U.S. House of Representatives, June 27, 2001.
- Dudley, Susan and Warren, Melinda. "Regulatory Response: An Analysis of the Shifting Priorities of the U.S. Budget for Fiscal Years 2002 and 2003," 2002–2003 Annual Report, Regulatory Budget Report No. 24, June 2002. Weidenbaum Center on the Economy, Government, and Public Policy at Washington University in St. Louis; and the Mercatus Center at George Mason University in Arlington, Va.
- Executive Office of the President. "Draft Report to Congress on the Costs and Benefits of Federal Regulations," Office of Management and Budget, March 28, 2002. <http://www.whitehouse.gov/omb/inforeg/cbreport.pdf>.
- Hopkins, Thomas D. "Regulatory Costs in Profile," Center for the Study of American Business at Washington University in St. Louis, Policy Study No. 132, August 1996.
- Kliesen, Kevin L. and Thornton, Daniel L. "The Expected Federal Budget Surplus: How Much Confidence Should the Public and Policymakers Place in the Projections?" Federal Reserve Bank of St. Louis *Review*, March/April 2001, Vol. 83, No. 2, pp. 11–24.
- National Association for Business Economics News, *NABE Panel Gives Monetary Policy Rave Reviews But Fiscal Policy Mixed; Double-Dip Recession Unlikely*. March/April 2002, No. 150, p. 8.



# Rules vs. Discretion

## The Wrong Choice Could Open the Floodgates

By Jason J. Buol and Mark D. Vaughan

Policy-makers do not want people to build homes in floodplains. To discourage such building, they announce that anyone suffering flood damage is on his own—no disaster relief will be forthcoming. People ignore these warnings and build anyway. Then, the rain comes, the water rises and the homes flood.

The media carry heart-wrenching footage of rooftops poking out of roiling currents. Following a public clamor, policy-makers announce a bailout—100 percent compensation for flood-related damage. This result offers the worst of both worlds—homes are destroyed by floodwater, and victims who ignored warnings are indemnified with taxpayer funds. After the floodwater has receded and the disaster checks have gone out, the cycle starts all over again. How can policy-makers avoid this trap?

Economists Finn Kydland and Edward Prescott were the first to offer a way out.<sup>1</sup> In a classic 1977 article, they introduced a distinction between *time-inconsistent* and *time-consistent* policy. A time-inconsistent policy may make the public happy in the short run but will ultimately fail to produce the long-run policy goal. A time-consistent policy, in contrast, nails the long-run policy goal but does not make people unhappy in the short run. For example, the long-run goal of flood policy is to prevent building in floodplains. In the short run, however, compassion dictates bailing out victims—even those who failed to heed warnings. Bailouts

today are time-inconsistent—they implicitly encourage floodplain construction—because people learn to watch what policy-makers do (bail out victims) and ignore what policy-makers say (build at your own risk). If, somehow, threats of no relief could be made credible, people would think twice before tempting Mother Nature. And no floodplain construction today means no need for flood relief tomorrow—a time-consistent outcome.

Kydland and Prescott emphasized the importance of pondering not only the desirable policy for a given set of circumstances but also the framework likely to produce the best policy over time. They went on to argue that rules produce time-consistent outcomes because they make policy-makers' pronouncements credible. Kydland and Prescott's emphasis on the importance of the framework—and the value of credible rules—has profoundly influenced the way other economists think about policy. Indeed, even economists who dislike rules couch their arguments in the Kydland-Prescott framework.

Economists broadly categorize policy-making frameworks as either rules or discretion. In a rules frame-

work, policy responses must follow a pre-specified plan. The plan can be non-activist in nature—the rule may force policy-makers to pursue the same course of action in all circumstances. Or the plan can be activist in nature—the rule may direct policy-makers to respond to different circumstances in different pre-determined ways. The common denominator is that rules are supposed to constrain policy-makers' actions in advance. In the flooding example, a non-activist rule might say: “no flood relief, period.” An activist rule might limit flood relief per victim to 10 percent of the pre-flood value of damaged property—no matter where it is located (floodplain or no floodplain). This rule allows a policy response to the flood, thereby making it activist in nature, but that response is pre-defined.

In a discretionary framework, policy-makers have wide latitude to design the best policy response for the given circumstances. In the flooding example, discretion means that policy-makers are free to craft disaster-relief policy anew in each period. Today, before flooding has occurred, they can try to discourage floodplain construction by forswearing disaster relief. Tomorrow, if flooding occurs, they can renege and provide generous compensation for damages. Proponents of discretionary policy note that such flexibility allows policy-makers to respond to unforeseen scenarios. Suppose, for example, a river that seldom floods rises above its banks and sweeps away homes. Under a discretionary regime, policy-makers would have the flexibility to bail out innocent victims. Under a “no bailout, period” rule, all flood victims would be on their own.

### Why Does a Rule Matter?

Rules are valuable, Kydland and Prescott noted, because the public observes policy-makers and forms expectations of their likely actions. Policy-makers with discretion can renege on today's pronouncements tomorrow; so, the public may come to discount such pronouncements as cheap talk. In the flood example, bailing out victims is desirable once the water has receded. The public knows this from studying the past behavior of policy-makers. As a consequence, promises that this time will be different—that this time no bailouts will be forthcoming—may not be credible. Only a binding rule that keeps policy-

makers from reneging will convince the public that homes are at genuine risk and, thereby, discourage floodplain construction. Such a rule could be made binding—and therefore credible—in a number of ways, say, by passing a constitutional amendment against flood relief.

Kydland and Prescott were not the first to comment on the value of policy rules. Indeed, economists debated the value of rules in monetary policy for most of the 20th century. In the 1930s, Henry Simons argued that monetary rules reduce uncertainty about the price level and, thereby, facilitate private-sector planning.<sup>2</sup> Later, Milton Friedman extended the argument, noting that real-world policy-makers have imperfect information and imperfect tools; so, even the best-intentioned attempts to combat fluctuations could end up destabilizing the economy. A rule permitting the money supply to grow at  $k$ -percent, he reasoned, would at least keep monetary policy from doing economic harm.<sup>3</sup> More recently, Geoffrey Brennan and James Buchanan have justified monetary rules on political grounds—discretion, they contend, permits the central bank to generate a higher-than-socially-optimal inflation rate so that it can enjoy the revenue from money creation.<sup>4</sup> Kydland and Prescott's contribution to the rules vs. discretion debate was to show that discretionary policy can produce undesirable long-run outcomes—in the monetary-policy case, higher inflation with no reduction in unemployment—even in a world with little uncertainty, good policy tools and public-spirited policy-makers.<sup>5</sup>

### Must It Be a Rule?

This is not to say that discretionary policy is never desirable, even in the Kydland-Prescott framework. As noted, discretion allows policy-makers to respond innovatively to unforeseen problems. This latitude is particularly valuable in an uncertain environment—say when policy-makers don't have a clue about the volume of rain likely to fall or about the rivers likely to flood. And discretion can yield time-consistent outcomes under certain circumstances. If policy-makers are relatively independent from the political process, then they can resist pressure from undeserving flood victims—those who ignored warnings—to renege on threats of no relief. A reputation for following through on commitments might further persuade the public to take such threats seriously. If the director of flood policy is perceived as a person of his word, for example, he could renege on pronouncements of no relief following once-every-millennium floods

without unleashing a torrent of floodplain construction.<sup>6</sup>

The rules vs. discretion framework is valuable for analyzing a host of problems, not just flood-relief policy. For example, should bank supervisors be given absolute discretion over bank closings? Supervisors have traditionally closed banks whenever the owners' stake (capital) got dangerously low. If given absolute discretion, supervisors might announce an informal policy of closing banks whenever capital-to-asset ratios fall below, say, 5 percent. But when a ratio does fall below that threshold, supervisors—if they had absolute discretion—could allow the bank to remain open to avoid the costs of liquidating the institution. If bankers believed that closure rules would be loosely enforced, they would be more likely to allow capital ratios to fall in the first place—leading to lower overall capital ratios and higher closure costs. A trigger mechanism forcing supervisors to act whenever capital ratios dipped below 5 percent would spur bankers to maintain high ratios. On the other hand, if the banking environment were volatile, and the informal closure policy were credible—perhaps because supervisory agencies were well-funded and insulated from politics—supervisors might be able to deal with troubled banks on a case-by-case basis without undermining the overall incentive to keep capital ratios high.<sup>7</sup>

### Conclusion

Policy can be conducted by rules or discretion. Rules offer time consistency—the outcome demanded by the public in the short run is consistent with the outcome desired in the long run. Discretion may better serve the public interest when the environment is uncertain and policy-maker pronouncements are believable. Modern research on rules and discretion has helped illuminate the tradeoffs inherent in a range of policy questions. The legacy of the Kydland-Prescott work is the recognition that policy-makers must face up to these tradeoffs. Put another way, wise policy-makers must think through the public's likely responses to their responses—just as the public is playing the same game with policy-makers. Only this type of analysis can produce consistently sound policy.

*Jason J. Buol is a graduate student in economics at the University of Missouri at St. Louis. Mark D. Vaughan is the supervisory policy officer in the Banking Supervision and Regulation Department of the Federal Reserve Bank of St. Louis. The authors would like to thank John Block, Jim Bullard, Bill Emmons, Tom King, Julie Stackhouse and Tim Yeager for helpful comments.*

### ENDNOTES

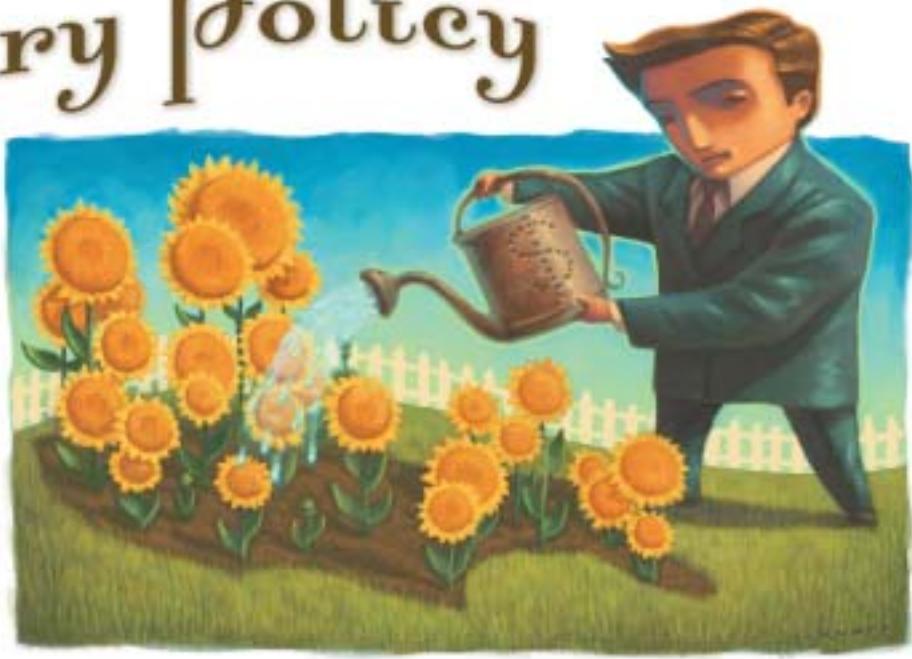
- 1 They also used a floodplain example. See page 477 of Kydland and Prescott (1977).
- 2 See Simons (1936).
- 3 See Friedman (1960). He argued specifically for a rule restricting growth of the M2 measure of the money supply to 3 to 5 percent per year. Friedman did concede, however, that constraints on policy were more important than the numerical target range; so, this policy prescription is often characterized as a  $k$ -percent rule.
- 4 See Brennan and Buchanan (1981).
- 5 They noted that central banks with discretion have an incentive to renege on commitments to price stability. After the public has formed expectations of inflation, the central bank can increase monetary growth to reduce unemployment. The public will anticipate this possibility; so, in the end, inflation will be higher but unemployment will be no lower. Only a binding rule, Kydland and Prescott reasoned, can make the central bank's commitment to price stability credible.
- 6 See Blinder (1998) for a discussion of the value of discretionary monetary policy expressed in the Kydland-Prescott framework.
- 7 Before the Federal Deposit Insurance Corp. Improvement Act of 1991 (FDICIA), bank supervisors had almost complete discretion over bank closings. Currently, supervisors have discretion over closings as long as capital ratios are above the prompt-correction-action thresholds set by FDICIA. When capital ratios fall below these thresholds, however, explicit supervisory responses are required. See Hall, King, Meyer and Vaughan (2002) for more details.

### REFERENCES

- Blinder, Alan S. *Central Banking in Theory and Practice*. Cambridge, Mass.: The MIT Press, 1998.
- Brennan, H. Geoffrey and Buchanan, James M. *Monopoly in Money and Inflation*. London: Institute for International Affairs, 1981.
- Friedman, Milton. *A Program for Monetary Stability*. New York: Fordham University Press, 1960.
- Hall, John R.; King, Thomas B.; Meyer, Andrew P.; and Vaughan, Mark D. "Jumbo CDs Play Tiny Role in Policing Risky Banks—So Far." Federal Reserve Bank of St. Louis *The Regional Economist*, July 2002, pp.12-13.
- Kydland, Finn E. and Prescott, Edward C. "Rules Rather than Discretion: The Inconsistency of Optimal Plans." *Journal of Political Economy*, Vol. 85, 1977, pp. 473-91.
- Simons, Henry C. "Rules versus Authorities in Monetary Policy." *Journal of Political Economy*, Vol. 44, 1936, pp. 1-30.

# Monetary Policy

*The Whole Country Gets the Same Treatment, but Results Vary*



By Abigail J. Chiodo and Michael T. Owyang

Every six weeks or so, the Federal Open Market Committee (FOMC) meets to set the federal funds rate target, the Fed's most commonly used monetary policy instrument. The federal funds rate is the overnight interest rate at which banks borrow from one another to cover shortfalls in reserves. Although the funds rate is a short-term rate, it is thought to affect longer rates such as mortgage rates and lines of credit used by firms to invest in plants and machinery. By adjusting the federal funds target and affecting these interest rates, the Fed tries to smooth the bumps in the economy.

For the most part, when analysts inside and outside the Fed consider the effects of changes in the federal funds rate, they look only at the aggregate national economy. But should the effects of changes in interest rates be considered regionally rather than nationally? Recent studies show that the impact of monetary policy varies across states. In other words, a single change in the federal funds rate affects individual states differently.

What causes the effect of monetary policy actions to vary across states? One possibility suggested and examined in a pair of studies by economists Gerald Carlino and Robert DeFina is that regional variation exists because states differ in their shares of interest-sensitive industries.

## Which Industries Are Sensitive?

Some sectors of the economy, such as construction and manufacturing, are much more sensitive to changes

in the interest rate than other sectors, such as services and retail. To understand why, ask yourself what you think of first when you hear that interest rates have fallen. Buying a house? A car? Why? Because the cost of the loan falls. The same is true for manufacturing firms. With lower interest rates, firms will initiate big projects (such as building or buying factories and equipment or purchasing land) that they had been considering; lower rates reduce the cost associated with undertaking projects and, thereby, increase overall investment in capital. This is not true for the retail and services sectors because these industries typically do not undertake the kind of long-term projects that are sensitive to interest rate changes. (However, interest rates can affect inventory decisions.) Although a change in policy does affect these less-sensitive sectors, the effect on these sectors tends to be slower and less pronounced than in construction and manufacturing.

Another reason sectors such as construction and manufacturing are more sensitive to interest rate changes is because the demand for their products depends more on consumers' borrowing to buy them. The cost of a car loan or a house loan, for example, goes down when interest rates fall, causing an increase in the number of such loans. If more people are buying cars, automobile manufacturers will experience an increase in orders and production. On the other hand, interest rates do not dramatically alter the demand for services and for most products sold in the retail sector—for example, the

cost of a shirt or a lamp is usually unaffected by a change in interest rates. The end result is that adjustments to interest rates have a relatively bigger impact in certain sectors.

Industry composition varies quite a bit from state to state. In 2000, for example, manufacturing accounted for approximately 28 percent of real gross state product (GSP) in Michigan, compared to about 7 percent in Wyoming. Overall, the state average for manufacturing share of GSP was about 18 percent for the 48 contiguous states.

Each state's contribution of retail and service firms also varies, as one might expect. Several states in the Southwest and Rocky Mountain regions had a higher contribution of retail and service to GSP in 2000 than the U.S. average, which was 28.7 percent.

## Monetary Policy and the U.S.

Carlino and DeFina use real personal income to measure state-level and region-level economic activity and test the effect of a hypothetical change in monetary policy.<sup>1</sup> Their goal was to determine to what extent real personal income reacts to contractionary monetary policy—in this case, an increase of one percentage point in the federal funds rate—with all other things being held equal.

On average, they find that, after a small initial rise, the level of real personal income declines substantially, reaching its maximum response approximately two years after an increase in the funds rate. For the most part, each of the 48 contiguous

states follows this pattern. However, the magnitude of the decline in income and the speed of the adjustment varies across states. This indicates that the transmission of monetary policy may depend on individual state characteristics, especially industry composition.

For example, Michigan appears to be the state that is most sensitive to monetary policy. This makes sense, of course, because such a large percentage, relatively, of Michigan's GSP is made up by manufacturing. Similarly, Wyoming's response is smaller than the national average. Overall, Carlino and DeFina find that the contractionary monetary policy has the greatest effect on the Great Lakes region, a region that is dependent on the manufacturing sector of its economy. The regions that are least sensitive to an

reaction almost identical to that of the United States, as does Kentucky. Arkansas, Mississippi, Missouri and Tennessee, however, are slightly more sensitive to monetary policy than the national average, while Indiana appears to react the most.

### Conclusion

The effects of monetary policy in the United States are typically thought of only at the national level. Recent studies suggest, however, that some states, especially those for which manufacturing represents a large portion of the economy, are more sensitive to changes in interest rates than the country as a whole. Because there are large differences across states and regions in the relative importance

### ENDNOTES

<sup>1</sup> Regions are defined by the Bureau of Economic Analysis (BEA). There are eight BEA regions: New England, Mideast, Great Lakes, Plains, Southeast, Southwest, Rocky Mountains and Far West.

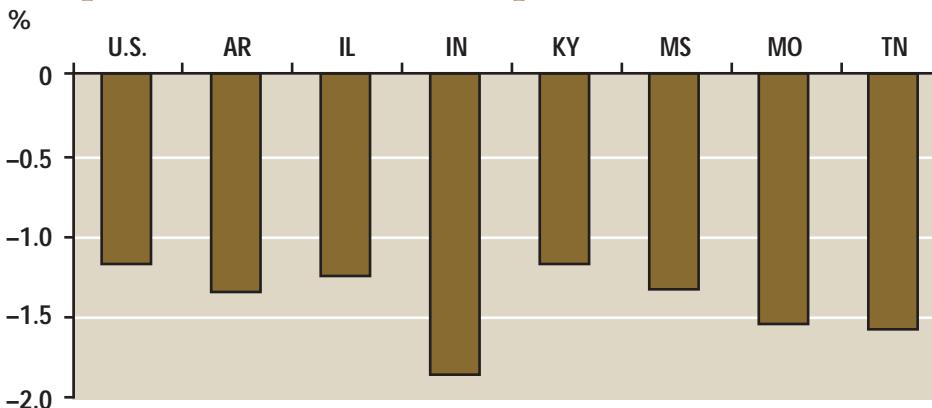
<sup>2</sup> The percent of manufacturing for the remaining District states in 2000 were: Arkansas, 23 percent; Kentucky, 26 percent; Mississippi, 21 percent; Missouri, 19 percent; and Tennessee, 22 percent.

<sup>3</sup> Note that the Eighth District is made up of a portion of most of these states, not the entire state. See the back cover of this publication for a map of the Eighth District.

### REFERENCES

- Carlino, Gerald and DeFina, Robert. "The Differential Regional Effects of Monetary Policy: Evidence from the U.S. States," *Journal of Regional Science*, May 1999, Vol. 39, No. 2, pp. 339-58.  
 \_\_\_\_\_ and \_\_\_\_\_. "The Differential Regional Effects of Monetary Policy," *The Review of Economics and Statistics*, November 1998, Vol. 80, No. 4, pp. 572-87.

## Responses to Monetary Policy Shocks



An increase of one percentage point in the federal funds rate affects real personal income in each of the District's states differently over a two-year period. While Illinois and Kentucky react similarly to the United States, Arkansas, Mississippi, Missouri and Tennessee are slightly more sensitive than the national average. Indiana has the most dramatic reaction.

SOURCE: Carlino and DeFina (1999).

increase in interest rates are the Southwest and Rocky Mountain regions, which have a more diverse combination of industries. The other five regions respond more closely to the U.S. average.

### The Eighth District States

The percent of GSP accounted for by manufacturing in the Eighth Federal Reserve District states in 2000 ranged from 17 percent in Illinois to 33 percent in Indiana.<sup>2</sup> The District states' average ratio of manufacturing to GSP was about 23 percent in 2000, slightly higher than the national average of 18 percent. It follows, then, that responses to monetary policy shifts in the Eighth District were more dramatic than the national average. Individually, the states that make up the Eighth District vary in their own right.<sup>3</sup> The accompanying chart illustrates the effect of a hypothetical tightening of monetary policy across the states in the District. One can see that Illinois has a

of interest-sensitive industries, our understanding of the effects of monetary policy can be improved by considering state and regional data. For example, several economists have argued that the most recent recession was concentrated in the manufacturing sector. If so, it may be useful for monetary policy-makers to observe the response to changes in the fed funds target in states like Michigan and Indiana to get a better idea of whether or not monetary policy is having its desired effects.

*Abigail J. Chiodo is a senior research associate, and Michael T. Owyang is an economist, both at the Federal Reserve Bank of St. Louis.*

# Community Profile

By Stephen Greene



Marion's landmark clock tower graces the center of downtown.

Inmates at Marion have committed serious crimes. They are sent here after exhibiting destructive behavior at other federal institutions. Prisoners are confined to their solitary cells for more than 20 hours each day and spend an average of three to five years in Marion. Before being allowed to transfer to another prison, they must display a pattern of good behavior.

As part of the \$21 million expansion, 252 cells are under construction. Murphy says the new hires will add \$3 million in payroll to the existing \$25 million in staff salaries.

While studying the topic of prisons' effects on communities, one local labor market economist learned that many small towns in southern Illinois have lobbied hard to attract state correctional facilities in recent years.

Mike Vessel of the Illinois Department of Employment

In addition, we make a concerted effort to do most of our purchasing for day-to-day operations from local businesses."

If there are any drawbacks to having some of society's most hardened criminals living in Marion, you won't hear about them from the town's longtime mayor, Robert L. Butler, who took office the year before the prison opened.

"I tell people that we've never had any negative aspects, even when we had John Gotti here," Butler says. "People would call me and ask, 'What do you think of having the Godfather there in your city?' I'd tell them, 'Look, he's in a maximum-security operation. He's not going anywhere.'"

## Lucky 13

It's not difficult to notice where the lion's share of Marion's growth is occurring—it's along Route 13,

# BREAKING

## Marion's Success

Usually when people hear about Marion, Ill., it has less to do with good news and more to do with bad dudes. This town is, after all, home turf of the federal penitentiary that in 1963 replaced the notorious Alcatraz prison. Today, the Marion prison remains one of two super maximum facilities in the federal system.

But beyond the forbidding—and expanding—walls of the prison is a community that, thanks to several recent successes, is flush with confidence in what it can achieve. The town has carved out its own economic identity and become more than just the exit off Interstate 57 that Southern Illinois University students take on their way to Carbondale. If the new collaborative approach that area officials have taken continues to bear fruit, outsiders may have little reason to ask the kind of question once posed by a Canadian financier, who on a business trip here turned to a local developer and asked, "Could you please tell me where in the hell I am?"

### "A Growth Industry"

The Marion penitentiary houses 484 inmates, with an additional 330 serving time at a minimum-security camp elsewhere on the grounds. More than 350 employees work at the prison, with an additional 70 expected to be hired by July, when an expansion to the maximum-security area is completed.

"It's unfortunate, but this is a growth industry," says Kevin Murphy, executive assistant at the prison. "It's a sad commentary, but it's a fact of life."



The federal penitentiary in Marion is undergoing a \$21 million expansion (right) that will add 252 cells by July.

Security says that in counties south of Interstate 70, employment at prisons has increased by more than 2,200 over the past decade as civic leaders try to fill the gap caused by manufacturing slowdowns.

"The virtue of a prison or a university or a seat of government is that it generates employment with very little unemployment," Vessel says. "Not many politicians get laid off, and not many prison guards get laid off. So what you have is a very stable workforce and a solid floor underneath your economy."

Vessel adds that the jobs at prisons generally pay well and offer good benefit and retirement plans.

E.A. Stepp, warden at the Marion prison, says: "I think our economic impact to the community is huge.



particularly the stretch west of I-57 that ultimately connects to Carbondale 15 miles down the road.

"Virtually all of the significant expansion has been along this corridor because it really is the umbilical cord for the area," says Dutch Doelitzsch, chairman and CEO of the Regional Economic Development Corp. (REDCO).

A drive down this main artery reveals the following:

- a new hospital, Heartland Regional Medical Center, which opened its doors in December;

- the Robert L. Butler Industrial Park, home of a 20-acre Circuit City distribution center, as well as two medical insurance processing centers, including a new Blue Cross/Blue Shield office that will open in March and employ about 500;
- the new REDCO Industrial Park, whose first tenant—Aisin, a Japanese auto parts supplier—opened in July and employs 200;
- the Williamson County airport, which is currently undergoing a runway expansion;
- the 900,000 square-foot Illinois Centre Mall, built in the early 1990s; and
- a new Home Depot, just opened in November.

Thomas Wimberly, executive director of REDCO, says the area's ability to land Circuit City nearly two years ago was crucial: "It all started with Circuit City. When they plopped down a \$34 million, 1 million square-foot facility

ment department, reports that the number of coal miners in the county peaked at around 800 in the early 1980s. Today, that figure is down to about 50. And the number of coal mines operating in or near Marion has dropped from four to one small active strip mine.

Coal is plentiful throughout southern Illinois, but the area's supply is high in sulfur, which is associated with acid rain. The high cost of removing sulfur in order to comply with environmental regulations has lowered demand. But a \$103 million project by the Southern Illinois Power Cooperative (SIPC) at its Marion generating station will provide a boost to the state's coal producers while also burning coal more cleanly.

SIPC, which supplies power to six other rural cooperatives for a total of 80,000 accounts, is in the final stages of completing a new fluidized bed boiler that will use the latest coal-cleaning technologies. The new boiler, which will be in operation by mid-year, will replace three older boilers at the plant.

The cooperative buys nearly all of its coal from mines within 50 miles of its plant. Dick Myott, Planning and Environmental Department manager at the plant, says the new boiler will increase SIPC's con-



# OUT is Not Confined to Prison

in a southern Illinois cornfield, it gained a lot of attention."

Formed nearly four years ago, REDCO represents all of Williamson County, which also includes the city of Herrin. Doeplitzsch credits REDCO for channeling the interests of disparate groups into one united approach.

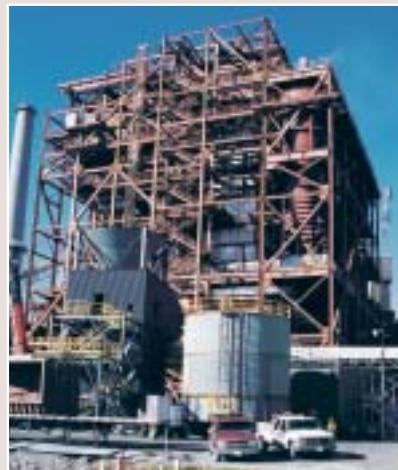
"We have a number of communities that for years competed with each other," he says. "We have been able to put that aside and look at things with a broader focus. When we deal with an incoming industry considering us as a potential site, it comes across early and clearly that this is not a single-community effort; it's a multi-community effort."

Wimberly says: "Once you start the momentum in industrial growth, it feeds on itself. The minute you complete one project, you've got to start on another. You have to keep the momentum going or it will die on its feet."

While some of the construction around here results from companies like Circuit City and Aisin coming to town, other structures, like the new hospital and Blue Cross building, provide homes for employers already part of Marion's business landscape. Effort will be required to fill the vacancies at their old locations. The city owns the old hospital property near downtown, and Mayor Butler says he is exploring redevelopment opportunities.

## Digging Up Coal

There was a time when Williamson County residents were less concerned with what was on top of the ground than underneath it: coal. Vessel, of the Illinois employ-



**When completed in mid-2003, the Southern Illinois Power Cooperative's new bed boiler will enable the co-op to increase its consumption of Illinois coal by as much as 50 percent.**

sumption of Illinois coal by as much as 50 percent to 1.2 million tons annually.

"The biggest benefit," Myott says, "is that we're going to continue to have reliable, low-cost power for our members in the future. That allows industries to come in because they know that energy is going to be available."

*Stephen Greene is a senior editor at the Federal Reserve Bank of St. Louis.*

## Marion, Illinois By the Numbers

Population	16,035
Labor Force	28,839
Unemployment Rate	4.3%
Per Capita Personal Income	\$22,641
Top Five Employers:	
School District.....	750
U.S. Veterans Administration.....	583
Marion Pepsi-Cola Bottling.....	450
General Dynamics.....	420
Verizon North.....	400

*NOTES: Statistics for labor force, unemployment rate and per capita personal income include all of Williamson County. Labor force is from 2001. Unemployment rate is from October 2002. Per capita personal income is from 2000.*

# National and District Data

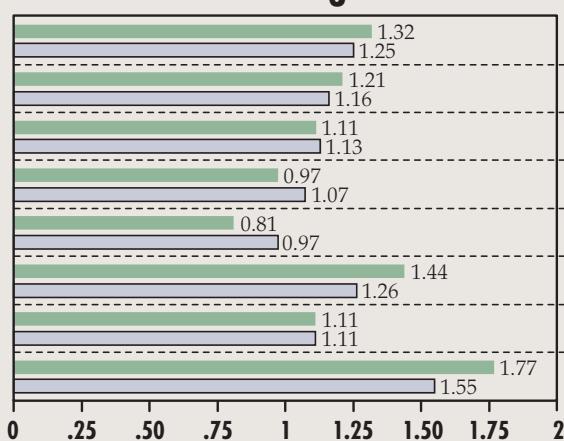
SELECTED INDICATORS OF THE NATIONAL ECONOMY  
AND BANKING, AGRICULTURAL AND BUSINESS CONDI-  
TIONS IN THE EIGHTH FEDERAL RESERVE DISTRICT

## Commercial Bank Performance Ratios

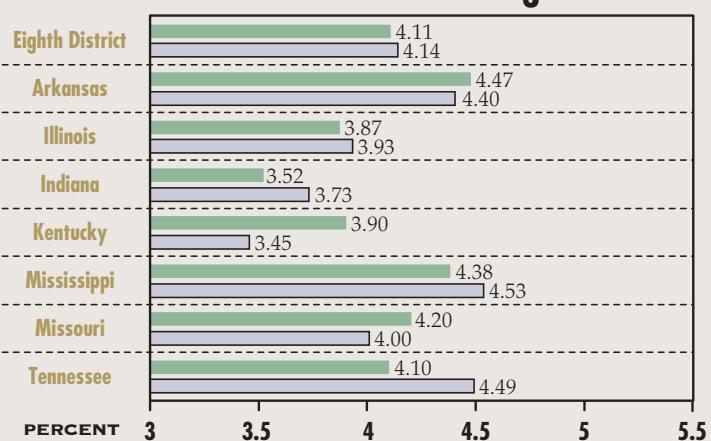
FIRST QUARTER 2003

<b>U.S. Banks by Asset Size</b>	<b>ALL</b>	<b>\$100 MILLION- \$300 MILLION</b>	<b>LESS THAN \$300 MILLION</b>	<b>\$300 MILLION- \$1 BILLION</b>	<b>LESS THAN \$1 BILLION</b>	<b>\$1 BILLION- \$15 BILLION</b>	<b>LESS THAN \$15 BILLION</b>	<b>MORE THAN \$15 BILLION</b>
<b>Return on Average Assets*</b>	1.39	1.23	1.16	1.32	1.23	1.34	1.28	1.44
<b>Net Interest Margin*</b>	3.98	4.49	4.50	4.35	4.44	4.11	4.27	3.84
<b>Nonperforming Loan Ratio</b>	1.41	1.01	1.09	0.98	1.04	1.09	1.07	1.58
<b>Loan Loss Reserve Ratio</b>	1.86	1.41	1.43	1.48	1.45	1.78	1.61	1.98

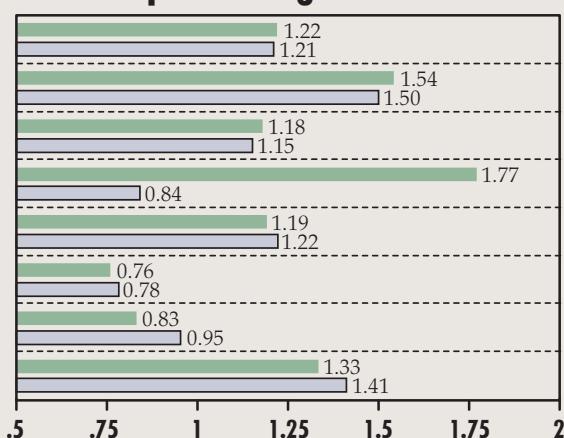
### Return on Average Assets\*



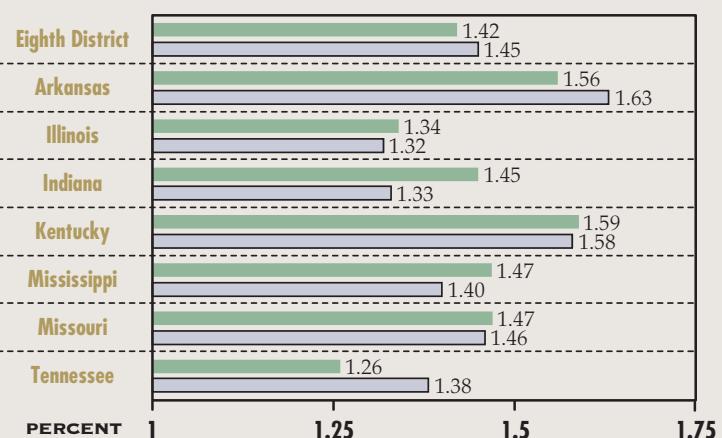
### Net Interest Margin\*



### Nonperforming Loan Ratio



### Loan Loss Reserve Ratio



● First Quarter 2003

○ First Quarter 2002

NOTE: Data include only that portion of the state within Eighth District boundaries.  
SOURCE: FFIEC Reports of Condition and Income for all Insured U.S. Commercial Banks  
\*Annualized data

For additional banking and regional data, visit our web site at:  
[www.research.stlouisfed.org/fred/data/regional.html](http://www.research.stlouisfed.org/fred/data/regional.html).

# Regional Economic Indicators

## Nonfarm Employment Growth\*

YEAR-OVER-YEAR PERCENT CHANGE

	FIRST QUARTER 2003								
	UNITED STATES	EIGHTH DISTRICT	ARKANSAS	ILLINOIS	INDIANA	KENTUCKY	MISSISSIPPI	MISSOURI	TENNESSEE
Total Nonagricultural	-0.2%	-0.3%	0.5%	-0.1%	-0.2%	0.0%	0.4%	-2.2%	0.4%
Natural Resources/Mining	-4.4	-3.8	1.0	-3.1	-1.0	-7.0	1.9	-12.6	-4.5
Construction	-0.7	-2.2	0.6	1.4	-6.8	0.2	-1.1	-5.2	-4.3
Manufacturing	-3.8	-2.5	-2.0	-3.1	-0.2	-2.3	-4.5	-3.9	-3.1
Trade/Transportation/Utilities	-0.9	-0.4	0.8	-0.3	-0.6	-1.6	2.0	-0.5	-0.9
Information	-4.6	-3.1	-3.4	-1.7	-2.8	-1.7	-3.0	-6.4	-3.7
Financial Activities	1.1	0.4	0.5	0.7	0.4	1.6	1.2	-0.9	0.2
Professional & Business Services	-0.1	0.1	1.5	1.4	-3.0	0.9	0.6	-5.4	4.3
Educational & Health Services	2.5	2.1	3.1	1.6	1.8	4.0	0.3	0.0	4.7
Leisure & Hospitality	1.0	1.0	2.3	0.9	-0.7	3.1	0.6	0.8	1.5
Other Services	-0.4	1.0	-0.5	0.5	3.2	-0.7	4.1	0.7	1.3
Government	0.7	-0.2	0.3	-0.8	1.7	-0.3	2.5	-3.9	1.1

\*NOTE: Nonfarm payroll employment series have been converted from the 1987 Standard Classification (SIC) system basis to a 2002 North American Industry Classification (NAICS) basis.

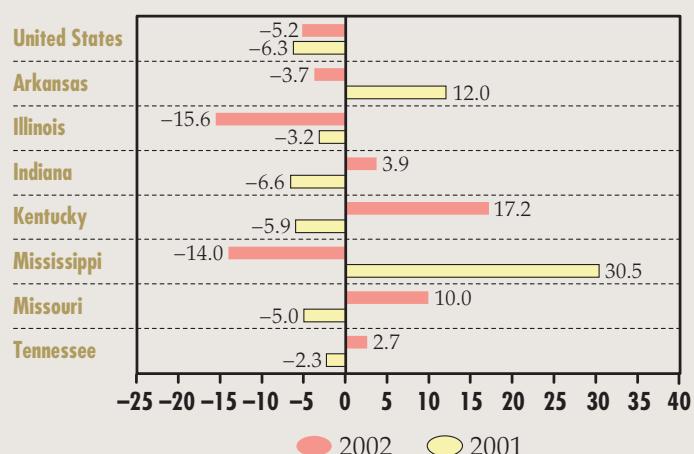
## Unemployment Rates

PERCENT

	I/2003	IV/2002	I/2002
United States	5.8%	5.9%	5.6%
Arkansas	4.9	5.4	5.4
Illinois	6.5	6.7	6.2
Indiana	4.8	5.0	5.3
Kentucky	5.6	5.5	5.7
Mississippi	6.2	7.0	6.6
Missouri	4.9	5.5	5.4
Tennessee	4.8	4.9	5.4

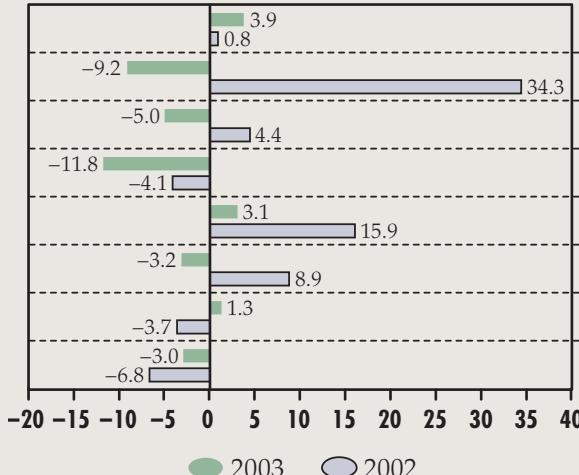
## Exports

YEAR-OVER-YEAR PERCENT CHANGE



FIRST QUARTER

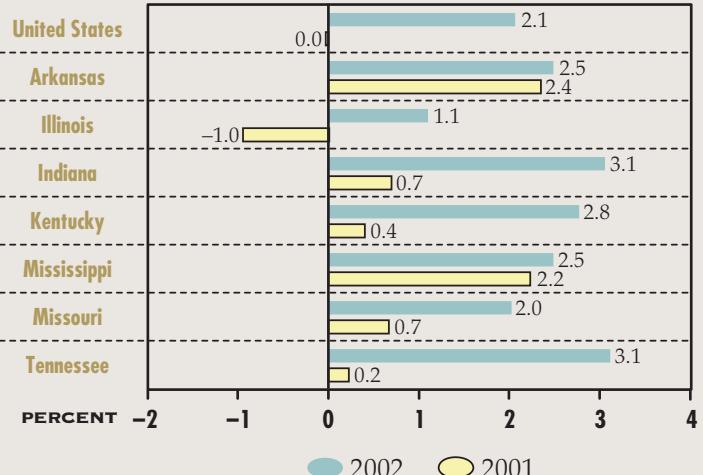
## Housing Permits

YEAR-OVER-YEAR PERCENT CHANGE  
IN YEAR-TO-DATE LEVELS

FOURTH QUARTER

## Real Personal Income\*

YEAR-OVER-YEAR PERCENT CHANGE

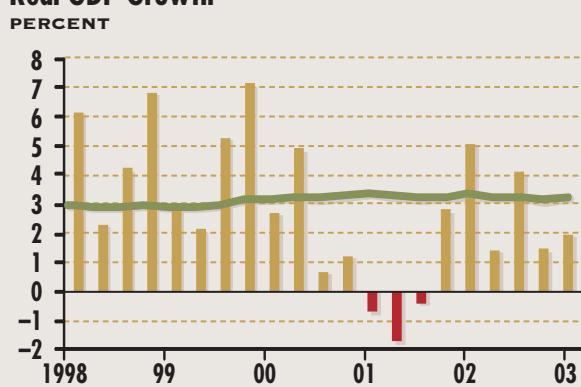


All data are seasonally adjusted unless otherwise noted.

\* NOTE: Real personal income is personal income divided by the PCE chained price index.

# Major Macroeconomic Indicators

## Real GDP Growth



NOTE: Each bar is a one-quarter growth rate (annualized); the green line is the 10-year growth rate.

## Civilian Unemployment Rate



NOTE: Beginning in January 2003, household data reflect revised population controls used in the Current Population Survey.

## Consumer Price Inflation



NOTE: Percent change from a year earlier

## Interest Rates



NOTE: Except for the fed funds target, which is end-of-period, data are monthly averages of daily data.

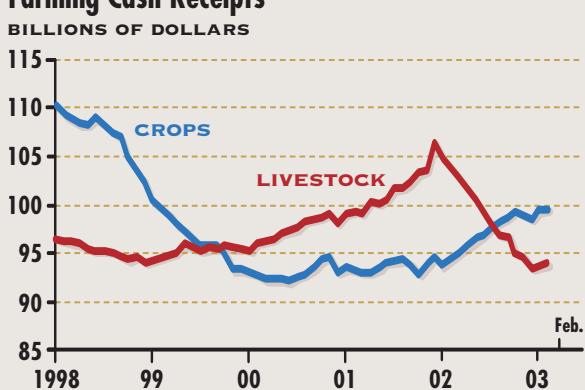
# Farm Sector Indicators

## U.S. Agricultural Trade



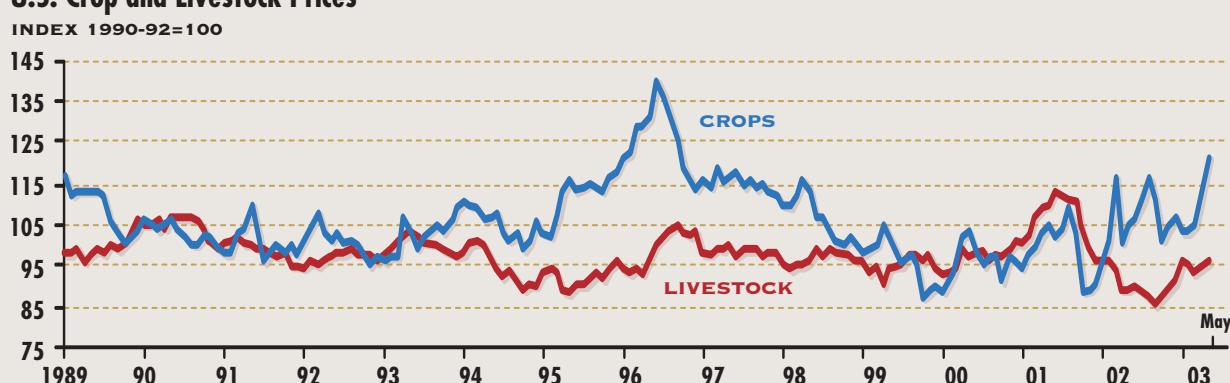
NOTE: Data are aggregated over the past 12 months. Beginning with December 1999 data, series are based on the new NAICS product codes.

## Farming Cash Receipts



NOTE: Data are aggregated over the past 12 months.

## U.S. Crop and Livestock Prices



## National and District Overview

The 2002 recovery has been one of the weakest in the post-World War II period. Indeed, the employment gains coming out of the 2001 recession have been unusually tepid, roughly parallel to the so-called jobless recovery in 1991-92. At the same time, inflation and inflation expectations have been mostly contained, affording Federal Reserve policy-makers the luxury of pushing their interest-rate target down to a level not seen since 1961. Why has the recovery been so weak?

### Feet Don't Fail Me Now

According to the preliminary estimate, real GDP grew at a 4 percent annual rate during the third quarter of 2002, measurably stronger than the 1.3 percent growth seen in the second quarter. Faster growth during the third quarter stemmed from another healthy



## RECOVERY HAS A CASE OF THE SLOWS

increase in consumer purchases of new motor vehicles, continued improvement in the growth of business expenditures on equipment and software, and modest increases in residential fixed investment, exports and government expenditures. Still, business investment in structures and buildings remained exceptionally weak, falling at a double-digit rate (20.6 percent) for the fourth consecutive quarter.

Through the first three quarters of 2002, real GDP grew at about a 3.5 percent annual rate. Although respectable, it is significantly weaker than the pace of growth typically seen when the economy is in transition from recession to expansion. Assuming that the 2001 recession ended in December 2001, the pace of growth during this recovery is less than half that seen during the first four quarters of the average recovery (7.4 percent). According to the Philadelphia Fed's Survey of Professional Forecasters, the economy was not expected to improve much during the fourth quarter: Real GDP growth was expected to slow to about 1.25 percent. Monthly data during October and November were generally consistent with this forecast, although the November employment report was clearly weaker than expected. The weaker tone of fourth-quarter data helped spur Federal

By Kevin L. Kliesen

Reserve policy-makers to trim their federal funds interest target 50 basis points to 1.25 percent at their Nov. 6 meeting. The Fed's interest rate target has not been this low since 1961.

A look at three of the key drivers of economic growth in an average post-World War II recovery indicates why the 2002 recovery has been unusually weak. Through the first three quarters of 2002, growth of real consumer expenditures on durable goods was 5.5 percent; for real business fixed investment, it was -3.0 percent; and for residential fixed investment, it was 6.2 percent. During the first four quarters of the average post-war recovery, these annualized gains have been, respectively, 16 percent, 8.1 percent and 25.8 percent.

Slower growth of consumer spending and declines in business fixed investment during the 2002 recovery may partly reflect the sharp declines in equity prices: Through the first 11 months of 2002, the S&P 500 was down by about 18.5 percent, whereas during the typical four-quarter recovery period the S&P 500 rises by about 19.75 percent. All else equal, rising stock prices increase consumer wealth, perhaps leading consumers to increase their purchases by more than planned.

For businesses, rising stock prices spur them to issue equity, which is used to finance investment in plant and equipment. Hence, when equity prices fall, the opposite effects arise. Another reason for the weak business investment performance in 2002 may have been some excess capital investment in high-tech equipment during the latter part of the 1991-2001 business expansion.

### Inflation Remains Low

One heartening aspect of U.S. economic performance in recent years has been the relatively low rate of inflation. After averaging about 4 percent per year from 1980 to 1995, the price index for personal consumption expenditures has risen by about 1.75 percent a year since then. It dipped even lower in early 2002, growing just 0.9 percent between the first quarter of 2001 to the first quarter of 2002. According to some Fed policy-makers, current inflation is in the "zone of price stability." Moreover, after its Nov. 6 meeting, the FOMC announced that inflation and inflation expectations "remain well-contained." For the most part, forecasters and financial markets expect this performance to persist into 2003.

*Kevin L. Kliesen is an economist at the Federal Reserve Bank of St. Louis. Thomas A. Pollmann provided research assistance.*