President's Message

"Going beyond the 'swords vs. plowshares' angle, at least two other complications should be considered in ascertaining the effects of war on the economy."

William Poole

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Putting War to the Cost/Benefit Test

Is war good for the economy? Some think so because, they argue, money spent by the federal government to buy weapons increases output and employment, which tends to boost the economy. (GDP jumped more than 15 percent in some years during World War II. Compare that to last year's anemic 2.4 percent growth!)

This simplistic answer belies several uncomfortable realities, however. Common sense tells us that war cannot be good for those who are killed or injured. If war is not good for people as individuals, it cannot be good for the economy that serves them. Nor can it be productive to devote scarce labor, capital and materials to building armaments that are destroyed.

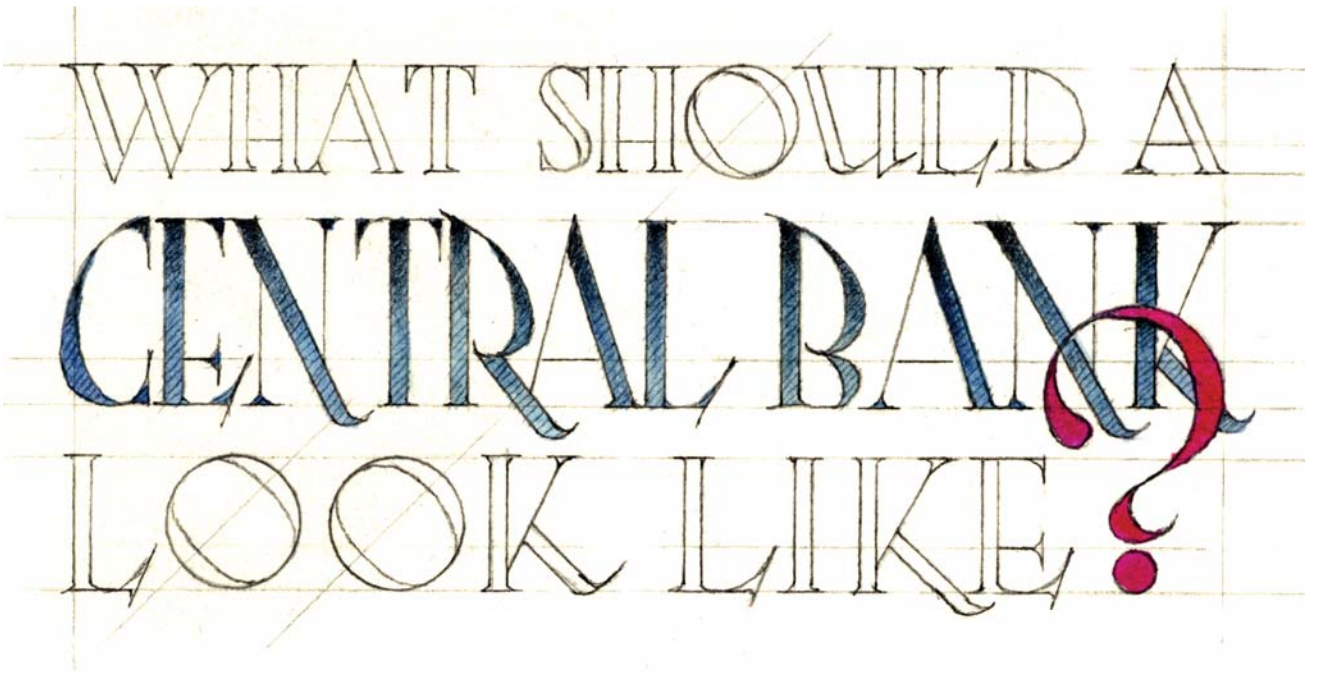
Going beyond the "swords vs. plowshares" angle, at least two other complications should be considered in ascertaining the effects of war on the economy. First, who pays the bill? The answer can affect the economy for years to come. World War II was financed largely by borrowing from the populace (war bonds and the like). Gross federal debt as a share of GDP surged from about 52.5 percent in 1940 to about 122 percent by 1946, even though at the same time taxes were being raised. Future generations continued to pay the bill. This financing contrasts sharply with payment for the first Persian Gulf War, in 1990-1991. Several foreign governments reimbursed the United States for the bulk of that bill.

A second complication is the coordination of monetary and fiscal policies. During the Vietnam War, U.S. policy-makers ran a swords *and* plowshares policy: Spending was increased on both defense and on social programs. The highly expansionary fiscal policy put upward pressure on demand for goods and services. Regrettably, monetary policy was too accommodative. The result was the Great Inflation of the 1970s and early 1980s. After averaging about 1.75 percent from 1965 to 1967, CPI inflation averaged about 7.5 percent from 1968 to 1981, peaking at 13.5 percent in 1980. It required dogged commitment by a generation of monetary policy-makers to rectify this mistake.

The latest war in Iraq has presented neither of these complications so far, largely because the cost has been relatively low. Even if the price tag hits $100 billion, that's only 1 percent of our roughly $10 trillion economy. Defense spending, in general, totals less than 5 percent of GDP these days, compared to more than 15 percent at the height of the Korean War and more than 40 percent at the peak of WWII.

But the final bill for the war in Iraq—and the related war on terrorism—has yet to be tallied. Among the unknowns is the price we'll pay to make Iraq (and Afghanistan) functional nations. We must also factor in future terrorist attacks and rising expenditures for domestic security.

Although defense spending is necessary for protection against threats to our safety and livelihood, we'd certainly be better off if we could devote our scarce resources to productive capital goods and useful consumption goods. Unfortunately, the history of our civilization suggests that turning all of our swords into plowshares rarely works for extended periods of time. War may sometimes be necessary, but we should never believe that "good for the economy" is a valid justification, or even a side benefit, for war.



By William T. Gavin and William Poole

The primary goal of a central bank is to develop and maintain an efficient monetary system whose primary goal is price stability, but it remains an open question as to what a central bank should look like. The answer to this question is important, but it would be a mistake to believe that there is one best way to organize a central bank. Most high-income countries, and many low- and middle-income countries, have achieved success in maintaining low inflation, even though there are substantial differences in the organization and structure of their central banks. We need to think rather abstractly about the design of the central bank and recognize that there are different ways to achieve the same end. Success in achieving low and stable inflation—price stability—is relatively recent. We may well discover that some institutional arrangements are more robust over time, as we observe how various arrangements stand up to stresses not yet observed.

An institution as important as a central bank cannot take a particular form without substantial public understanding of the reasons for that form. A century ago, most people believed that the only sound basis for a monetary system was for paper money to be convertible into gold. Yet, adherence to the gold standard during the early 1930s led to a large deflation that contributed to the Great Depression. Looking back today, we see that the countries that stayed with the gold standard the longest had the worst depressions. Throughout the Depression in the United States, a number of economists argued that central banks should not be constrained by a rigid link to gold, but the economists could not sway public opinion.

For some years after World War II, most observers believed that fixed exchange rates were essential to monetary stability. And, therefore, governments around the world were able to set up an international monetary system in which a central bank's primary job was to monitor and maintain a fixed exchange rate vis-à-vis the dollar. But, for an individual country, maintaining a fixed exchange rate vis-à-vis the dollar was tantamount to accepting the inflation consequences of U.S. monetary policy. This system failed because the United States followed a monetary policy that yielded an inflation rate considered unacceptably high by some important countries.

In both eras, economists lobbied for institutional changes long before they became politically feasible. Today, too, we see potential reforms that we believe would improve economic performance—reforms such as setting a target for inflation. But such changes are still difficult to make because popular opinion and understanding of economic ideas impose limits on our ability to transform the economy by changing laws.

Economic Background

The logical place to begin an analysis of how to design an optimal central bank law is with a simple statement of economic principles that should guide our thinking:

- Inflation—anticipated and especially unanticipated—above some threshold rate is costly. Deflation is also costly. The costs of departures are not symmetric; deflation of 5 percent per year is likely to be much more costly than inflation of 5 percent per year.
- There is no long-run tradeoff between inflation and unemployment, and the short-run tradeoff may be too unreliable to be useful for policy-makers.
- Market expectations about future monetary policy (and future economic policies generally) are extremely important in determining how well monetary policy will work.

Central Bank Law

Because inflation and deflation are costly, a central bank ought to have an explicit inflation target. We believe that the appropriate target is zero inflation, properly measured—that is, after accounting for measurement errors in price indexes. Others believe that a small, positive rate of inflation is appropriate. (See chart on Page 9.) The difference between 0 and, say, 2 percent inflation per year is a minor matter relative to other issues. In particular, reasonable stability in the rate of inflation and especially in the expected rate of inflation over the medium term are more important than whether the target is 0 or 2 percent per year. Whether the target is expressed as a point or a range is an interesting issue, but it is not fundamental.

The weight of public opinion must be behind the idea of an inflation target, whether it is legislated or not. If the public doesn't support the target, the target will not be effective, even if it is legislated. The United States does not have a legislated target, but since the mid-1990s the Federal Reserve has been successful in achieving and maintaining a low average rate of inflation. What is needed is not so much a legislated inflation target but a target framework that the public regards as having constitutional force. A law or practice has constitutional force if it cannot be changed without resort to lengthy discussion and, in the case of a law, by a super majority or its equivalent. For example, in the United States, the gold standard once had constitutional force even though it was never written into the Constitution explicitly.

In many countries, debate over a legislated inflation target has been extremely valuable in helping to create a consensus of constitutional force. In this debate, central bankers and others must constantly explain the reasons for a legislated target to ensure that it is not simply absorbed into the immense mass of legislation that is widely ignored and largely forgotten.

Not only must central bankers continually explain such a need, they must be consistent in this explanation—and in all of their policy explanations. Such consistent policies build credibility and market confidence over time. If credibility is lost, regaining it takes time and a willingness

to endure short-run pain where the short run may be measured in years. Maintaining credibility over time requires institutional strength that transcends current leadership. Absent crisis conditions, policy should evolve relatively slowly over time, with each change studied carefully and then explained fully. Otherwise, the predictability upon which credibility depends may be incomplete. The purpose of sustained low inflation is to minimize price level shocks that upset business planning and that redistribute income and wealth arbitrarily. For the same reason, the central bank should strive to avoid surprises in its own policy procedures.

One of the most difficult and hotly debated issues is whether monetary policy should be confined to an inflation objective or should also have an employment or growth objective. It does not make economic sense for the central bank to have objectives stated in terms of the level of employment or the rate of growth of real GDP. It is within the power of the central bank to achieve a long-run inflation objective, but not to achieve an objective for the level of employment or the real GDP growth rate. In the long run, the level of employment and economic growth are determined by non-monetary factors such as capital accumulation, advances in science and technology, well-defined property rights and other regulations that allow markets to work well. No organization should be assigned an objective that it cannot achieve or, at best, can achieve only temporarily.

The central bank does have the power, however, to contribute to employment stability. Historically, the largest spells of high unemployment have followed periods in which the central bank lost control of inflation and had to raise interest rates very high to regain control. Preventing these bouts of high inflation is the best way to avoid having bouts of high unemployment. Provided that the central bank's short-run policy decisions do not shake confidence in the long-run policy, it can direct short-run policy to help cushion employment fluctuations. It is reasonable to interpret a number of episodes in the United States since 1982 in this way; most recently, it appears that the Fed's rapid reduction in its federal funds rate target in 2001 helped to soften the extent of the recession. Of course, we cannot judge the success of a policy by one incomplete episode.

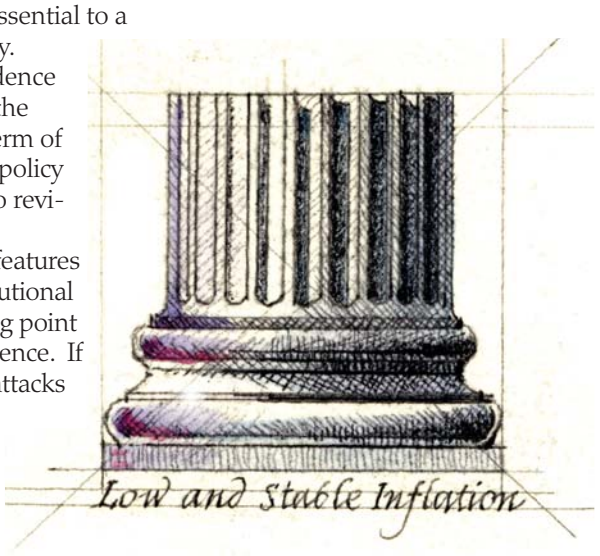
The point to emphasize is that success on the inflation front is necessary if the Fed is to stabilize short-run fluctuations in real economic activity. Thus, it makes sense to assign a central bank an objective of contributing to real economic stability as long as it does not jeopardize the inflation objective. The Federal Reserve operates under a vague legislated instruction—vague in the sense that no numerical targets are specified—to contribute to achieving high employment and price stability. If the statutory language is interpreted as suggested above, then such objectives make perfectly good sense.

A legislated employment stabilization objective complicates the relationship between the elected government and the central bank because the central bank must maintain a long horizon. That horizon is typically considerably longer than the horizon of elected officials, who quite naturally and understandably have an intense focus on the next election. Because of the way the economy works, a central bank must be willing to back away from efforts to stabilize income and employment when such efforts threaten the inflation objective. Failing to maintain the primacy of the inflation objective only puts economic stability at risk over the longer run. The United States and many other countries had ample experience with this scenario in the 1970s; excesses in short-run recession fighting created higher inflation over the longer run and deeper recessions later on.

Central Bank Independence

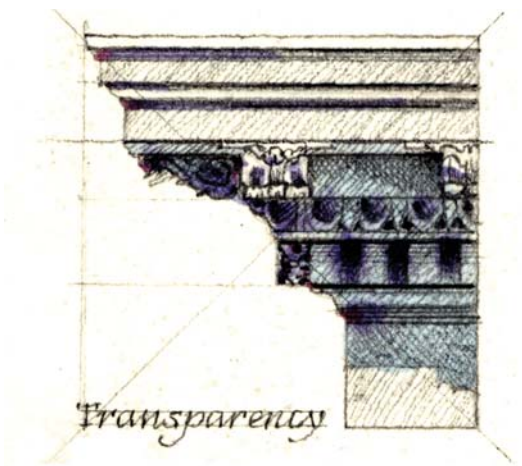
There is widespread agreement that central bank independence leads to better monetary policy. The logic of independence can be seen by looking at the different horizons of elected officials and of central banks. Democratic leaders compete for office promising change and improvement rather than continuity and stability, whereas an incoming head of a central bank will almost certainly want to continue the policies of a successful predecessor and will emphasize his or her commitment to do so. Political independence and non-partisan monetary policy provide the promise of policy stability over time, which in turn stabilizes expectations in asset markets. Such stability and continuity are essential to a successful monetary policy.

Central bank independence requires that the head of the bank have a substantial term of office and that individual policy decisions not be subject to revision by the government. However, such structural features of the central bank's institutional design are only the starting point for central bank independence. If the government publicly attacks the central bank's policies, then independence will certainly be incomplete. This subject is a



very difficult one for a democratic society: How can an important area of public policy be off limits for comment and criticism by elected officials? Yet, such criticism clearly unsettles markets and damages the effectiveness of monetary policy.

One way around this problem is for the government to exercise great forbearance and confine criticism to internal discussions with the central bank. That has come to be the practice in the United States, but it has not been established long enough that it can be regarded as institutionalized. Consideration of this issue makes clear that optimal central bank design goes far beyond legal issues, per se; it is ludicrous to consider the possibility of passing a law saying that the government is not allowed to comment on central bank policy! Clearly, though, if the government does not retain confidence in the central bank, the country is in substantial trouble. In this situation, the government must be prepared to replace a failing central bank leadership when terms expire.



Although central banks are governmental functions, the most successful banks are those with the fewest political overtones. The organization of the Federal Reserve System fits this perspective very nicely. Members of its Board of Governors are appointed by the president of the United States and confirmed by the Senate. However, presidents of the Reserve banks are appointed by the directors of the Reserve banks, subject to approval by the Fed's Board of Governors. Directors of Reserve banks have powers and responsibilities that are closer to those of a private company than those of a government agency. At each Reserve bank, six of the nine directors are elected by the commercial banks that are members of the Reserve bank; the other three directors are appointed by the Board of Governors on the recommendation of the Reserve bank. The directors are explicitly nonpolitical; they are drawn from the local community and are not permitted to hold partisan political office or participate in political activity, such as heading campaign committees or leading political fund-raising efforts. The directors, in turn, select the bank president and first vice president, subject to approval by the Board of Governors.

This institutional arrangement clearly involves ultimate control of the Federal Reserve System through the political process centered on the Board of Governors. Yet, a considerable part of the System's leadership obtains office through what is essentially a private-sector process. What this private-sector process does is to reinforce the non-political nature of the Federal Reserve System. The process also involves the Reserve bank directors in an important way. The Federal Reserve pays the bank directors very little; what they get out of service as director is the opportunity for public service that includes an intense education in monetary policy. Over their years of service, and for years thereafter, the directors spread knowledge of monetary policy processes and challenges throughout their communities. Having community leaders from many different professions serving as directors builds support for sound monetary policy. Consider, for example, the breadth of experience on the current St. Louis board. It includes CEOs of commercial banks, the managing partner of a major law firm, CEOs of both large and small businesses, a university professor who also manages a family farm, an expert in the venture capital industry and the CEO of a nonprofit community organization. Taking the 12 Federal Reserve banks together, directors are drawn from every sector of the economy and every geographic region.

Equally important to the Federal Reserve is the flow of information from Reserve bank directors to bank presidents, who in turn use this information to make decisions on monetary policy. Valuable information also comes from numerous advisory committees that meet from time to time at the Board of Governors and at the Reserve banks, and from contacts between Federal Reserve officials and their audiences as the officials travel to speak at various events and meet with business and community leaders. The Federal Reserve has what is known in the United States as grassroots contacts throughout the country and continuously over time. Although this organization of the Federal Reserve System did not prevent the monetary policy mistakes that contributed to the Great Depression and the Great Inflation of the 1970s and 1980s, we believe that the current process contributes greatly to the prospects for continued sound monetary policy in the years ahead.[1]

Transparency

In recent years, central banks have become more open in many different ways.[2] In the past, central bankers often discussed monetary policy in obscure ways and seemed to relish the mystique of central banking. Particularly given central bank independence, openness is essential to political accountability.

Whether by law or confirmed practice, good central bank design calls for central banks to make timely reports about policy actions, including the reasons for these changes.

Importantly, prompt disclosure of policy decisions and their rationale is necessary for markets to function efficiently. Monetary policy works through markets; if markets expect one policy direction when the central bank intends another, both the markets and the central bank are likely to be surprised at some point and disappointed by the results.

Conclusion

There is no uniquely optimal way to write a central bank law and to institutionalize central bank practices. Different countries have different histories and different preferences. Among those successful in promoting price stability and economic growth, there are three common elements.

First, the government should assign clear and obtainable objectives to the central bank. A legislated inflation target is a good idea, but more important than legislation is an understanding in the society that low and stable inflation is the central bank's responsibility and that the bank should be judged on how well it achieves that objective. A government may assign to the central bank a policy goal of contributing to stability in income and employment, provided there is a clear understanding that there can be no central bank target for the level of employment or the rate of growth of GDP.

Second, the central bank should operate independently within the government; the head of the bank should have a reasonably long term of office and should not be subject to removal by the elected head of government, except for cause through an impeachment process. The head of government should not be able to overturn individual monetary policy decisions and, ideally, should confine comment on those decisions to confidential communications with the central bank.

Third, the central bank should be transparent in the way it makes decisions and implements policy. Political accountability requires transparency, as does the efficient operation of the markets through which monetary policy affects the economy.

These three principles broadly characterize all major central banks today. We should not, however, take that fact as reason to assume that the issue is settled. We are bound to face stresses in the future when many will question these principles. Stating them now, defending them and explaining them represent our best hope for improving public understanding and maintaining the progress of recent years that is so evident to all central banks and students of central banking.

A sample of countries with inflation targets

Data as of end of year 2002.

Country	Price index that is targeted	Target for 2003
Australia	CPI (Consumer Price Index)	2-3%
Brazil	CPI	8.5% (5.5% for 2004)
Canada	CPI excluding indirect taxes, food and energy prices (operational exemption)	1-3%
Czech Republic	CPI	2.5-4.5%
European Union	HICP (Harmonized Index of Consumer Prices)	Maximum of 2%
Hungary	CPI	Maximum of 4.5%
Israel	CPI	1-3%
South Korea	CPI excluding non-cereal agricultural products and petroleum-based products	1-4%
New Zealand	CPI excluding credit services	1-3%
Poland	CPI	2.5%
Sweden	CPI excluding indirect taxes, subsidies and house mortgage interest expenditure	1-3%
Switzerland	CPI	Maximum of 2%
United Kingdom	Retail price index excluding mortgage interest payments	2.5%

The targeted price index is usually for a broad basket of consumer products that often excludes items or changes in prices that may obscure the link between monetary policy actions and the underlying inflation trend. The excluded items cover at least three categories: 1) prices in highly volatile sectors such as energy; (2) price changes that can be directly linked to changes in tax policy; and (3) price changes that depend on interest rate expenses. Generally, countries that have targeted low inflation rates have been successful in hitting targets and keeping them relatively stable. Many of the countries listed above had serious problems with inflation in the 1980s and early 1990s that appear to have been solved with the adoption of inflation targeting. The United States and Japan do not have inflation targets, partly reflecting the fact that they were able to get control over inflation in the early 1980s without actually adopting explicit inflation targets.

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ENDNOTES

1 For more on this point, see "Anecdotes Help Fed to Steer the Economy," by William Poole and Howard J. Wall on pp. 12-13 of the October 2002 issue of *The Regional Economist.*

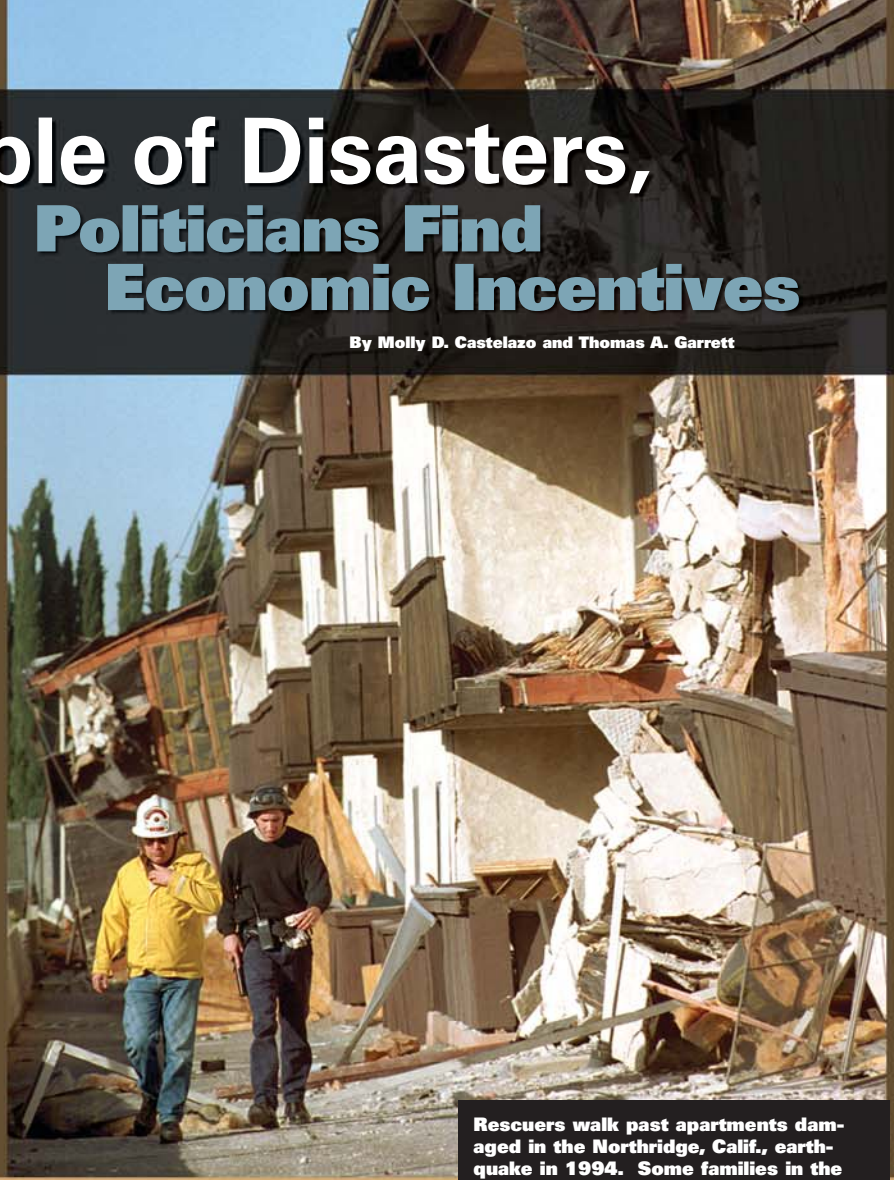
2 More information about the importance of central bank transparency can be found in two speeches by William Poole on the St. Louis Fed web site. They are "Central Bank Transparency: Why and How?" presented at the Federal Reserve Bank of Philadelphia on Nov. 30, 2001, and "Getting Markets in Synch with Monetary Policy," presented at the University of Missouri–Columbia on May 4, 2001. The speeches can be found at www.stlouisfed.org/news/speeches.html.

In the Rubble of Disasters, Politicians Find Economic Incentives

By Molly D. Castelazo and Thomas A. Garrett

Taxpayers spend an average of $3 billion each year to help victims of natural disasters rebuild their lives. The public expects that the money the federal government spends on disaster relief goes to those people who need it most and that the amount of disaster relief doesn't go beyond the actual cost imposed by the natural disaster. As with any compassionate public policy—such as food stamps, welfare and unemployment insurance—the public has the right to expect that elected officials carry out disaster relief policies to improve social welfare without regard to their own political agendas and self-interests.

However, public choice, a discipline that applies economic theory to political science, demonstrates that political agents behave just as private agents do; that is, they act in their self-interest and change their behavior in response to economic incentives. Recent studies applying this doctrine to disaster relief reveal that we may be paying for politicians to build their political capital as well as for families to rebuild their homes.



Rescuers walk past apartments damaged in the Northridge, Calif., earthquake in 1994. Some families in the area received federal aid they didn't request. Others got payments for damage too minor to be covered. (AP Photo)

Private vs. Public Self-Interest

The private sector consists of firms and consumers. A firm's self-interested goal is to maximize profit, and a consumer's goal is to maximize well-being. A firm will produce the level of output that maximizes its profit. Any change in input prices or product demand gives a firm an incentive to change production levels. Consumers, faced with certain prices and a fixed budget, purchase various quantities of goods and services that maximize consumers' well-being. Price or income changes provide consumers the incentive to change their bundle of consumption goods.

Elected officials in the public sector are also motivated by self-interests. These include maximizing political support, campaign contributions and, ultimately, votes. As with private agents, the fact that public actors are motivated by self-interest does not imply that they are not altruistic—self-interested behavior is different from selfish behavior. A firm that earns profit provides a benefit to society because the firm is producing what society wants at the lowest cost possible. For consumers, self-interest can take shape as charity, concern for others and a desire to increase public welfare. Public actors often promote policies such as unemployment compensation, minimum wage legislation and food stamps. These policies are designed to improve people's lives, while at the same time the policies increase the support that politicians receive from those people who benefit from such policies.

Private vs. Public Cost

Public officials can enact policies that are in their self-interest without regard to the social cost of such policy. The primary reason political agents can conduct such policy is that, unlike private agents, political agents often do not incur the cost of their decisions. A firm will affect its profit when it changes production levels or input mix. Consumers who choose to consume one good over another will incur the opportunity cost of foregone consumption. The actions of political agents, however, are often hidden from the public, thus allowing a disconnect between the cost and benefit of any policy. In addition, the cost of any policy is often spread across thousands or millions of taxpayers, making it unlikely that the cost per taxpayer is high enough to incite taxpayers to come together and oppose the policy. These facts provide political agents an incentive to conduct policy that provides benefits to them, but generates excessive cost to society as a whole.

Such politically motivated decisions are especially common where regulation and strict guidelines are absent. In support of this idea, one public choice model suggests that the executive branch behaves as an electoral vote maximizer and that congressional oversight committees make sure that bureaucrats implement the policy preferences of legislators on these oversight committees. The idea is relatively simple: Because legislators and the president have budget and regulatory power over bureaus, these bureaus will implement policies that are beneficial to legislators and to the president. Several studies have examined the relationship between bureaus and their overseers. One study shows that IRS audit rates are lowest in states

that are politically important in the next presidential election, as well as in the states whose congressional members serve on IRS oversight committees.[1] Another study finds that Federal Trade Commission (FTC) case rulings are more favorable in congressional districts having representation on FTC oversight committees.[2] By highlighting the motivation behind public decisions, these studies show that economic incentives affect public decision-makers just as they affect private actors.

Incentives and Disaster Relief

The Federal Emergency Management Agency (FEMA) spent nearly $22 billion on disaster relief between 1991 and 1999. Sometimes, aid disbursement is not motivated by need, however. For example, on Feb. 3, 1994, the *Los Angeles Times* reported that after the Northridge earthquake, FEMA had made thousands of payments for $3,450 each to homeowners who had not even requested the aid.[3] *Forbes* later reported that FEMA distributed 6,590 payments to "families whose homes were not even damaged enough to be covered."[4]

Recent research has applied the public choice model to disaster declaration and aid allocation.[5] The process of disaster declaration and aid disbursement is most vulnerable to political motivation at two points: presidential disaster declaration and FEMA appropriation of disaster aid.

First, the researchers tested whether the electoral importance of the state and whether it was an election year motivated presidential disaster declarations in a state. Of course, the largest amount of aid was given to states like California and Florida, with large numbers of people and a disproportionately large incidence of natural disasters. In order to isolate the political impacts of disaster declaration and relief, the researchers controlled for disaster size, private insurance disaster payments, state population and other state effects. As shown in the table, the studies found that those states with a higher measure of electoral importance had a higher rate of presidential disaster declaration. The studies also found that the mean rate of disaster declaration was higher in election years compared to non-election years.

The second question is whether states having representation on FEMA oversight committees receive larger relief payments than states without representation. Researchers concluded that for each legislator a state had on a FEMA oversight committee, that state received an additional $31 million in disaster aid each year. As a result, the researchers calculated that nearly 45 percent of all FEMA disaster payments were motivated by political incentives rather than by need.

This type of behavior is consistent with current models of congressional behavior and public choice theory, which claim that congressional members, like firms and consumers in the private sector, are guided by incentives. As in the case of presidential disaster declarations, aid disbursement is only very loosely guided by the Stafford Act, which stipulates that disaster aid should be granted in cases where the disaster "is of such severity and magnitude that effective response is beyond the capabilities of the state and the affected local governments and that federal assistance is necessary." And the act itself is loose—in fact, it specifically prohibits using mathematical formulas to determine appropriate aid amounts and provides the president no strict criteria for declaring a disaster.

Given the loose guidelines regarding disaster declaration and appropriations, these decisions are left to the discretion of the president and FEMA officials, respectively. The passage of the Stafford Act was followed by nearly double the rate of disaster declarations. They jumped from 25 a year between 1983 and 1988 to 41 a year between 1989 and 1994.

Because of this connection between the absence of strict guidelines directing presidential disaster declarations and excessive FEMA aid disbursement, it makes sense that by strengthening the guidelines for disaster declaration and aid disbursement, we can alter the incentives that the president and FEMA officials face. As a result, we can better ensure that tax dollars are used only in the public's best interest.

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State Electoral Importance and Presidential Disaster Declaration

TOP 10 STATES	Electoral Importance	Disasters Declared 1991-1999	BOTTOM 10 STATES	Electoral Importance	Disasters Declared 1991-1999
California	309.4	18	Vermont	17.2	9
New York	283.5	19	Nebraska	16.1	8
Texas	274.6	14	Utah	16.1	3
Pennsylvania	205.9	12	Montana	15.4	6
Illinois	165.4	11	Idaho	12.9	3
Florida	158.1	25	Alaska	10.6	5
Ohio	157.9	6	South Dakota	9.7	12
Michigan	154.7	7	North Dakota	9.7	8
North Carolina	120.3	14	Wyoming	9.7	1
Georgia	116.4	12	Arizona	7.9	15
Average	**194.7**	**13.8**	**Average**	**12.5**	**7**

NOTE: Electoral importance is a function of each state's electoral votes and the degree to which the state has been a battle-ground state (presidential re-election chance of near 50% in the state) in the last 11 presidential elections. See Garrett and Sobel (2003) for a complete description. The largest amount of aid is given to states like California and Florida, with large numbers of people and a disproportionately large incidence of natural disasters. To establish a causal relationship between electoral importance and disaster declaration, the impact of electoral importance on disaster declaration was evaluated by controlling for disaster size, private insurance payments, population and other state effects.

ENDNOTES

1 Young, Reksulak and Shughart II (2001)

2 Faith, Leavens and Tollison (1982)

3 Rivera (1994)

4 Darlin (1995)

5 Downton and Pielke (2001) and Garrett and Sobel (2003)

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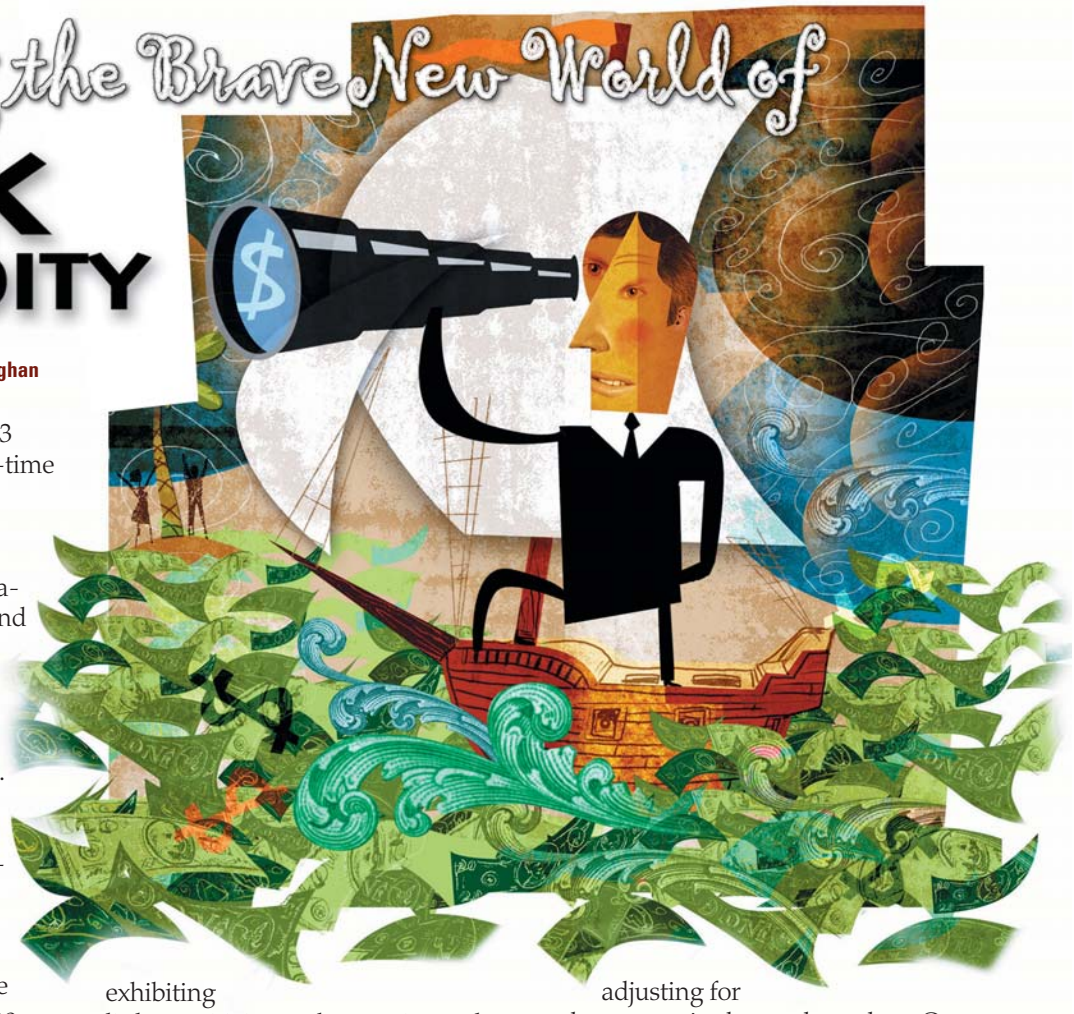
Navigating the Brave New World of BANK LIQUIDITY



By Julie L. Stackhouse and Mark D. Vaughan

The third week of April 2003 offered a rare sight—an old-time bank run. The target was Abacus Federal Savings Bank, a thrift institution with assets of $282 million spread across operations in New York, New Jersey and Pennsylvania. Abacus Federal saw $30 million, or 13 percent, of deposits walk out the door in a four-day run on branches in New York City and Philadelphia. The run followed an announcement that Carol Lim, a branch manager, had been fired on suspicion of embezzlement.[1] In the end, Abacus Federal—from all accounts safe and sound—weathered the run, though there were a few tense moments as the thrift faced the possibility that a short-term funding squeeze could escalate into a solvency problem.

Although runs have been rare since the 1930s, the balancing of sources and uses of funds is an important daily challenge for bankers. A large, sudden need for liquidity—as Abacus Federal faced in the extreme—can force an institution to sell choice assets at fire-sale prices or pay hefty interest charges in the short-term funding market. Scrambling for funds matters because it can seriously impair a bank's earnings and capital.

By some traditional balance-sheet measures, U.S. commercial banks face more liquidity risk now than 10 years ago.[2] What accounts for recent trends in these liquidity measures? Do they point to deterioration in bank liquidity? Finally, what steps have supervisors taken to foster bank safety and soundness in this brave new world of bank liquidity?

A Liquidity Tempest?

Once upon a time, bankers and examiners leaned on the core-deposit-to-total-loan ratio to assess liquidity. The logic was simple: Core deposits—such as checking accounts, passbook savings accounts and small time deposits (under $100,000)—stay put, exhibiting little sensitivity to changes in market rates or bank condition. Other things equal, the higher a bank's stock of core deposits—or, put another way, the lower its loan-to-core-deposit ratio—the lower the liquidity risk.

Over the past 10 years, the aggregate loan-to-core-deposit ratio has "deteriorated" markedly. At year-end 1992, the ratio for U.S. banks stood at 92.9 percent, meaning that there was 92.9 cents in loans for every $1 in core deposits. By year-end 2002, the ratio was up to 121.2, meaning there was $1.21 in loans for every $1 in core deposits.[3] Both cyclical and structural factors account for this trend. On the cyclical side, between 1992 and 1999 annual loan growth at U.S. commercial banks averaged 7.9 percent, compared with average annual growth of 5.4 percent between 1984 and 1990. The pickup reflected the record length and strength of the 1990s economic expansion. On the structural side, between 1992 and 1999 core deposits grew at an average annual rate of 3.1 percent, down sharply from the average annual growth of 6.5 percent between 1984 and 1990. The slowdown reflected heightened consumer interest in non-deposit investment alternatives. For example, stock and bond mutual funds grew at an average annual rate of 10.7 percent between 1992 and 1999—even after adjusting for the run-up in the stock market. Over the same interval, money-market mutual funds grew at a 15.2 percent annual clip.

Or a Tempest in a Teapot?

Though stark, these balance-sheet trends really point to a "difference" in bank liquidity rather than a "deterioration." In the past 10 years, U.S. banks have tapped an impressive array of funding sources to operate with fewer core deposits. At the same time, maintaining safety and soundness with fewer core deposits requires a more sophisticated approach to measuring and managing liquidity. More sophistication means greater emphasis on overall systems for managing risk and less emphasis on static liquidity ratios drawn from balance sheet data.

For example, to plug the gap between loan and deposit growth, U.S. banks have turned in part to jumbo certificates of deposit—that is, time deposits with balances above the $100,000 deposit-insurance ceiling. At year-end 2002, commercial banks on average funded 12.7 percent of assets with jumbo CDs, up from 7.5 percent at year-end 1992. At one time, most jumbo CDs were purchased in the local community by depositors with strong ties to the

bank; in other words, they behaved much like core deposits. Then, the same factors that produced the slowdown in core-deposit growth reshaped the jumbo-CD market.[4] Now, banks sell a large portion of their jumbo CDs in national markets to depositors who will move their funds at the slightest prospect of a better yield or the slightest hint of a solvency problem. Relying heavily on jumbo-CD funding requires careful contingency planning: What will the bank do if market concerns about safety and soundness cause funds to vanish? It also requires careful thought about attendant risks like interest-rate risk: What will the bank do if holding onto funds means offering a much higher yield?[5]

Banks have also turned to the Federal Home Loan Bank (FHLB) System, another funding source that dictates sophisticated liquidity management. This system is a government-sponsored enterprise (GSE)— a government-chartered but privately owned entity charged with promoting home ownership.[6] It advances funds to member institutions, taking mortgage and other real-estate-backed loans as collateral. The borrowing bank can then use the advanced funds to make new loans and investments. Originally, Home Loan Banks were a funding source for thrift institutions, but Congress opened membership to commercial banks in 1989. Between year-end 1992 and year-end 2002, the number of commercial banks in the FHLB System grew from 1,284 to 5,886, and advances climbed from 0.1 percent of banking assets to 3.3 percent. Now, at any given time, about 50 percent of commercial banks have advances outstanding. To obtain advances, bankers must enter explicit contracts with the FHLB. Because of these contracts, advances can be more stable than core deposits. But there is a trade-off—getting out of the contracts can involve significant pre-payment penalties. Successfully managing this trade-off requires careful liquidity planning.

Liquidity challenges can also come from "off" the balance sheet—as with loan commitments, for example. A loan commitment is a promise to lend up to a pre-specified sum at pre-specified terms over a pre-specified time period; a commitment is considered off balance sheet because it does not show up on the balance sheet until funds are drawn—or "taken down," in banker jargon. The liquidity risk is clear in the difference between a spot loan of $1 million and a 60-day loan commitment for $1 million. With a spot loan, the customer takes all of the money now; the bank knows it needs exactly $1 million in funding. With a loan commitment, the bank could be forced to come up with any or all of the unused line any time before the agreement expires.

Because of this funding uncertainty, the bank must anticipate all likely scenarios to ensure that the necessary cash will be available. The bank must also have a contingency plan in case of an unlikely scenario. The importance of planning for take-down risk is more important than ever. In December 1992, loan commitments averaged 36.5 percent of U.S. banking assets; by December 2002, that number had reached 73.9 percent.

Liquidity Bedfellows

Assessing liquidity risk is a challenge for bank supervisors as well as bank managers. Just like bank managers, federal and state supervisors have begun putting more emphasis on the integrity of risk-management systems and less emphasis on traditional financial-statement analysis when evaluating bank liquidity. At the Federal Reserve, tools have been developed to help examiners assess liquidity dynamically—that is, to look comprehensively at a bank's asset growth, funding diversification and contingency planning, rather than focusing on the core-deposit ratio. The Fed has also introduced explicit training in advanced liquidity-risk measurement and management into the examiner-training curriculum. This training is designed to help examiners determine whether a bank's liquidity-risk management is in sync with its liquidity-risk exposure. Finally, several Reserve banks, including the Federal Reserve Bank of St. Louis, are experimenting with new statistical models for flagging banks headed for liquidity problems between scheduled examinations.

What's Past Is Prologue

In short, U.S. commercial banks are not facing a liquidity crisis, just a brave new world of liquidity. This new world offers more funding options than ever before but requires more sophisticated risk-management than ever before. The record-high earnings and record-low failures of the 1990s suggest that bank managers and supervisors have partnered successfully to meet the challenge—at least to date. Continued success is important to ensure that stories of Abacus Federal-type bank runs appear only in history books and not in the daily press.

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ENDNOTES

1 Some Abacus depositors were alarmed by the announcement's suggestion that funds entrusted to Lim did not end up in accounts and, therefore, might not be insured. Others, particularly recent immigrants from China, feared losses because they did not understand the workings of the U.S. deposit-insurance system. For more on the run, see Blackwell in the *American Banker*.

2 Formally, liquidity risk is the risk that an institution will prove unable to meet its funding needs in a timely manner at a reasonable cost. For an excellent discussion of the modern approach to measuring and managing liquidity risk at financial institutions, see Chapter 17 of Saunders and Cornett.

3 With one exception, all data come from the reports of income and condition for U.S. commercial banks. Historical data on Federal Home Loan Bank (FHLB) advances come from the Federal Housing Finance Board—the safety and soundness regulator of the FHLB System. For several data comparisons, 1999 is used as the endpoint to eliminate the impact of the break in equity markets, which has temporarily eased bank liquidity positions.

4 After the break in equity markets in 2000, banks experienced a substantial deposit inflow as households sought a safe haven for their investment dollars. Most economists and bank supervisors expect these dollars to flow back into mutual funds when economic conditions improve.

5 Formally, interest-rate risk is the risk that a change in rates will impair a bank's earnings and capital. For an excellent discussion of the modern approach to measuring and managing interest-rate risk at financial institutions, see Chapters 8 and 9 of Saunders and Cornett.

6 Congress created the FHLB System in 1934 to address a perceived defect in the nation's capital markets. At the time, no secondary market was available for mortgages; so, any thrift making a home loan had to hold it until maturity. Because thrifts were often "loaned up," some good borrowers were denied mortgages. The FHLB System encouraged mortgage lending—and thus home ownership—by enabling thrifts to separate the "loan-making" decision from the "loan-holding" decision. For more on the FHLB System, see Stojanovic, Vaughan and Yeager.

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Despite Possible Plant Closure,

Paducah

Hopes for an Enriching Future

By Stephen Greene

Paducah

BY THE NUMBERS

Population	**26,307**
Labor Force	**11,021**
Unemployment Rate	**1.5%**
Per Capita Personal Income	**$18,417**

Top Five Employers

Ingram Barge Co.	2,400
Lourdes Hospital	1,600
Western Baptist Hospital	1,400
USEC	1,200
McCracken County Schools	1,000

Notes: Population is from 2000. Labor force and unemployment rate are from March 2003. Per capita personal income is from 1999. Employer list represents all of McCracken County.

Shops and restaurants line Broadway in downtown Paducah.

Nearly since the dawn of the nuclear age, Paducah, Ky., has laid claim to one of the nation's most strategic functions—uranium enrichment. The U.S. government opened the Paducah Gaseous Diffusion Plant in 1952 to manufacture enriched uranium to fuel military reactors and to produce nuclear weapons.

As nuclear power became a more widely used source of energy, the plant changed its mission in the 1960s and began to enrich uranium for commercial reactors to generate electricity.

The plant today is the only uranium enrichment facility in the United States. It employs more than 1,200 people locally. But a need for a new facility using a more efficient method of enrichment has put the future of the Paducah plant in jeopardy. Although one plant official says, "Paducah continues to be the heart of the company's business," the question has arisen, "For how much longer?" As community leaders rally to keep uranium enrichment in Paducah's economic arsenal, they also have begun to seek other prospects.

"It Ain't Over"

The Paducah Gaseous Diffusion Plant is owned by the U.S. Department of Energy and is leased and operated by the United States Enrichment Corp. (USEC). The plant, which competes with companies in other nations, sells nuclear fuel to about one-half the U.S. market and one-third of the world market. While USEC uses the older gaseous diffusion process, its international competitors employ a more efficient centrifuge process to enrich uranium. (See sidebar.)

USEC recently announced that it will switch to centrifuge technology, which will require building a new facility to replace the existing Paducah operation. That new $1.5 billion, 500-job plant will be located either in Paducah or near USEC's facility in Portsmouth, Ohio, where the company maintains certain operational and administrative functions. USEC will announce its decision next year. Some feel, however, that the handwriting is on the wall, based on the company's decision late last year to build a centrifuge demonstration facility near Portsmouth in the town of Piketon, about 30 miles north.

"The competition seemed more wide open before the test facility announcement," says Georgann Lookofsky, public affairs manager at the USEC plant. "Some people believe that at this point we may be out of the running. But I don't know that for sure. I think it's still a viable competition."

One of Paducah's handicaps is that it sits within the New Madrid seismic zone. The cost to build a new plant in Paducah would be substantially higher than to do so in Ohio because of the need to strengthen the infrastructure to withstand an earthquake.

"That is a hindrance, but it's not an immovable obstacle," Lookofsky says. "You can engineer a building that is seismically sound and adequate, but it does increase the costs and time that you need to deploy operations."

Paducah's economic development officials are not conceding anything yet.

"To borrow a phrase from Yogi Berra, 'It ain't over till it's over,'" says Mark Edwards, outgoing president of the Greater Paducah Economic Development Council. "The next round of proposals will be coming soon, and we intend to be very aggressive with respect to our bid for the full commercial plant," he says, referring to incentives that local, state and federal officials will present to the company.

Says Ken Wheeler, Edwards' successor as chair of the council and head of a local nuclear energy task force: "The Portsmouth announcement was a wake-up call for the community, but we didn't view it in a negative sense. I think it reinforced our efforts to still go after the full-scale centrifuge plant, and we have been doing that very diligently."

Whatever the final decision, the Paducah plant will remain open for at least another eight to 10 years. In fact, USEC in recent years has been consolidating some of its operations in Paducah. The company ceased enrichment operations in Portsmouth in 2001, making Paducah the only production site. Last year, USEC moved its transfer and shipping functions from Portsmouth to Paducah. In addition, the company has spent about $80 million in seismic and security upgrades at the Paducah plant since 1998.

Rivers, Ice Cream and ... Cars?

It seems fitting for a place nick-named "Quilt City, USA" (Paducah is home to the National Quilt Museum) to understand that it can't depend on just one company for its vitality, but rather on a patchwork of diverse industries. Although the USEC plant has an enormous economic impact in western Kentucky—by one estimate, second only to the Fort Campbell Army base—other companies maintain a strong presence in and around Paducah.

McCracken County's largest employer, Ingram Barge Co., is one of more than 20 towing companies based in Paducah, which rests on the banks of the confluence of the Ohio and Tennessee rivers.

One of Paducah's most unusual and fastest-growing companies is Dippin' Dots Inc. Its tiny, bead-shaped ice cream is sold at more than 2,000 outlets—including malls, festivals, theme parks and stadiums—in nearly 20 countries. The company is investing $6.5 million in an expansion that will double production capacity and triple storage capacity. With just a handful of employees, Dippin' Dots moved its headquarters and production facility from southern Illinois to Paducah in 1990. Now, the company employs 170 in town.

"Having our home plant in Paducah has certainly served us well over the years," says Terry Reeves, corporate communications director at Dippin' Dots. "The city and county have worked with us on financing construction projects and providing a good work force, utilities, services and transportation."

Economic developers want to attract large manufacturers, too. The region is hoping to join nearby areas like Georgetown, Ky., and Spring Hill, Tenn., in luring an auto manufacturer to town. To help turn that dream into reality, eight western Kentucky counties—which make up an area known as the Jackson Purchase—have combined to throw their support behind a 4,200-acre industrial park in Graves County, one county south of Paducah.

Bill Beasley, manager of the Purchase Area Regional Industrial Authority Inc., says the eight counties have agreed on a revenue-sharing plan from which they would all benefit if a large company moves to the park.

"When USEC made the announcement that it was going to build the pilot plant in Piketon, it pretty much made the regional industrial park the No. 1 priority for the area," Beasley says.

Beasley adds that the goal is to attract a company that would offer a minimum of 2,000 jobs. He says the industrial authority is in contact with consultants in the site selection business for automotive firms. Although Beasley would not comment on any specific company, the president of one automaker, Mitsubishi, announced in February that his company needs to build a new plant in North America to meet increased demand.

As the Paducah area prepares to embark on an uncertain economic course, the development council's Edwards says that the community is taking a "glass is half full" approach.

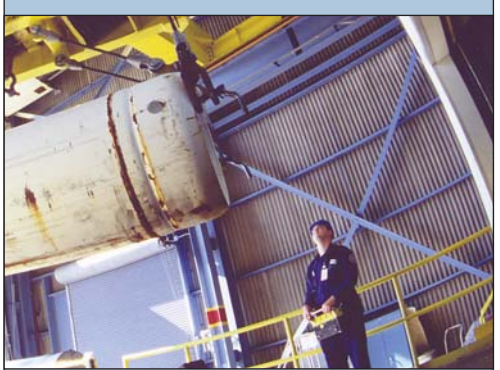
"I just can't see us wringing our hands for the next 10 years wondering, 'Oh my gosh, what's going to happen?'" he says. "We are concerned, but we're determined that we're going to overcome. Whether the USEC plant stays or goes, we're prepared for the future."

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

Centrifuge vs. Gaseous Diffusion: Adding Some Spin

Uranium is a natural element found in the ground in certain parts of the world. It contains mostly U-235 and U-238 isotopes. Only the U-235 isotope is fissionable, or capable of being split in order to release large amounts of energy in the form of heat that a nuclear reactor can use for fuel. Enrichment is the process of increasing the concentration of U-235 and decreasing that of U-238. The amount of the U-235 isotope is normally enriched from 0.7 percent of the uranium mass up to about 5 percent.

Two methods are used to enrich uranium: gaseous diffusion and centrifugal force. In gaseous diffusion, natural uranium is heated to about 135 degrees Fahrenheit in order to form a gas. As this gas flows under pressure through a very fine filter, the lighter U-235 isotopes are separated from the heavier U-238. In centrifuge—a cheaper and more efficient process—the two isotopes are separated by weight through a spinning process. Significantly more U-235 enrichment can be obtained from a single unit gas centrifuge than from a single unit gaseous diffusion barrier.



A crane operator (above) unloads a cylinder filled with uranium hexafluoride at the Paducah plant. This stack of new cylinders (below) will eventually be filled with depleted uranium, a by-product of enrichment.

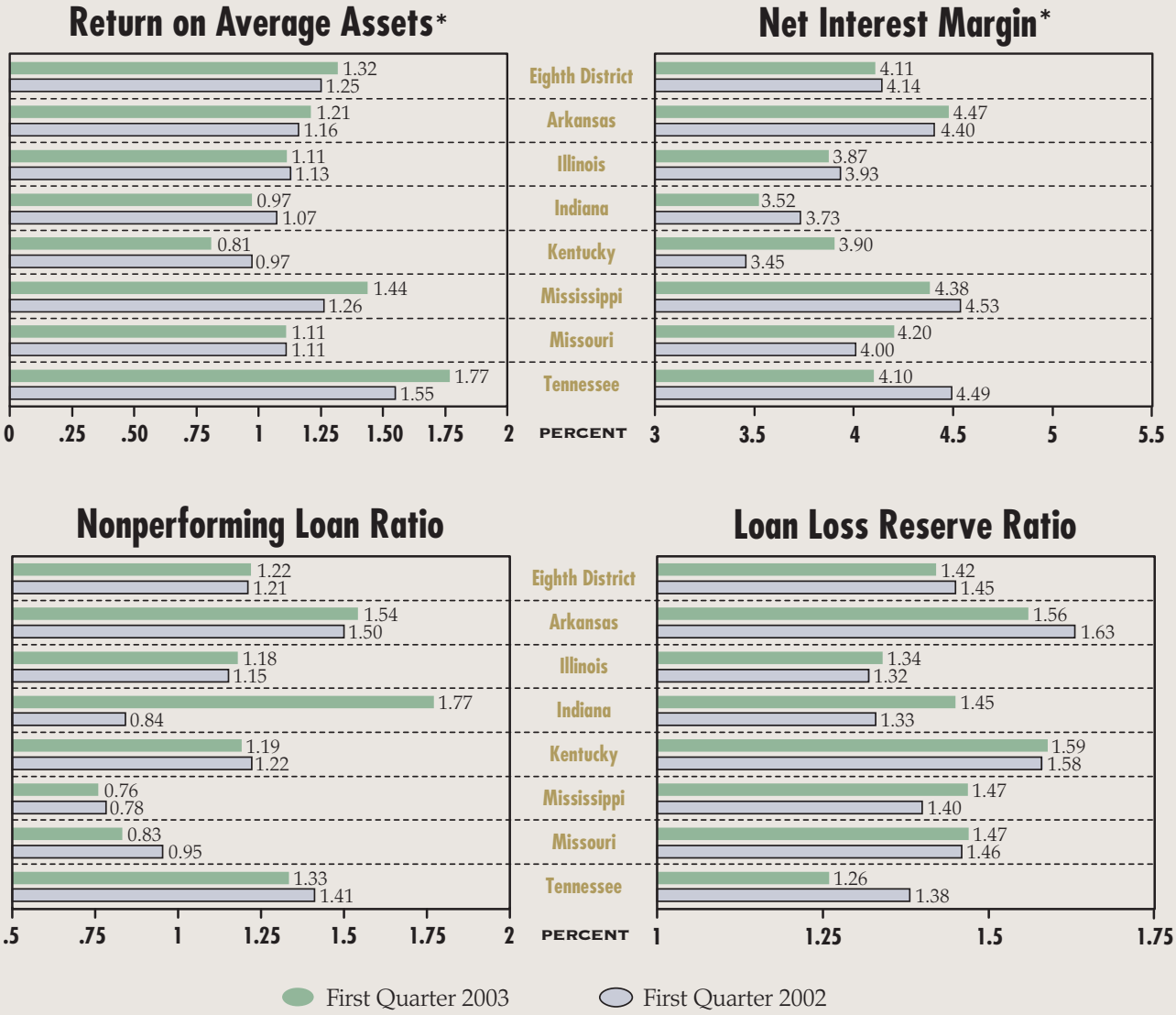
National and District Data

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

Commercial Bank Performance Ratios

FIRST QUARTER 2003

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



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.

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.

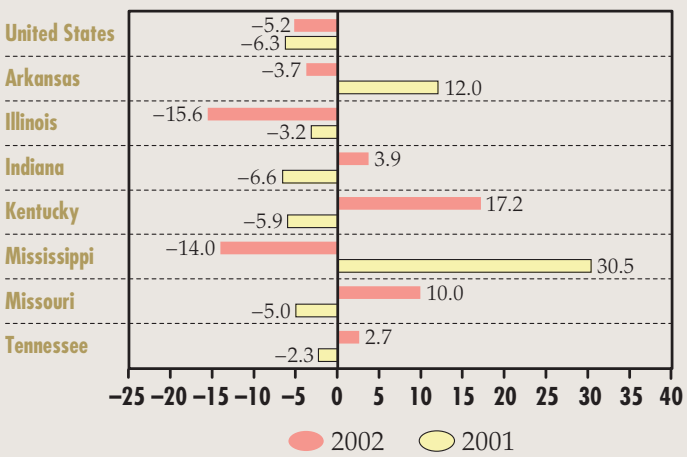
Unemployment Rates

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

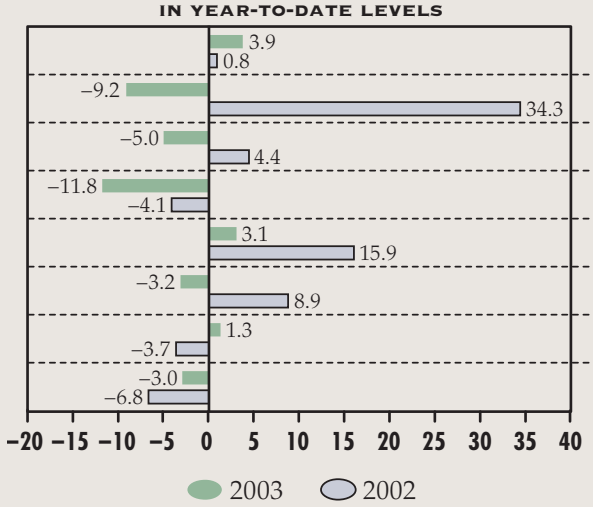
YEAR-OVER-YEAR PERCENT CHANGE



FIRST QUARTER

Housing Permits

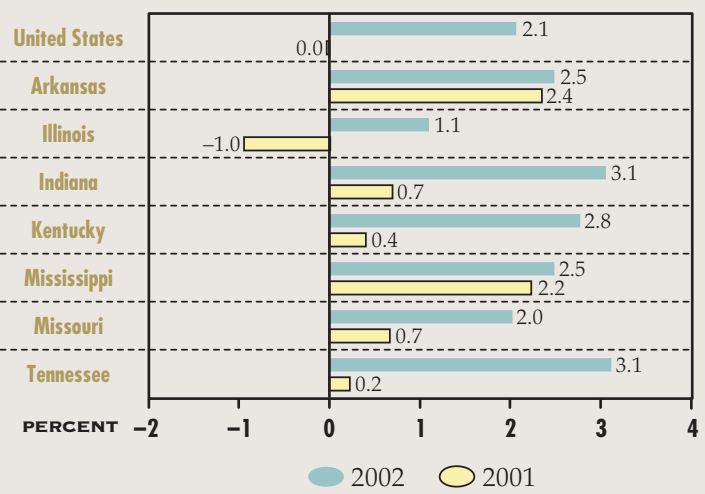
YEAR-OVER-YEAR PERCENT CHANGE IN YEAR-TO-DATE LEVELS



FOURTH QUARTER

Real Personal Income*

YEAR-OVER-YEAR PERCENT CHANGE



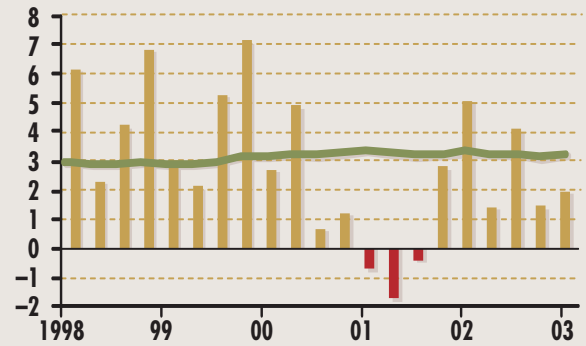
All data are seasonally adjusted unless otherwise noted.

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

Major Macroeconomic Indicators

Real GDP Growth

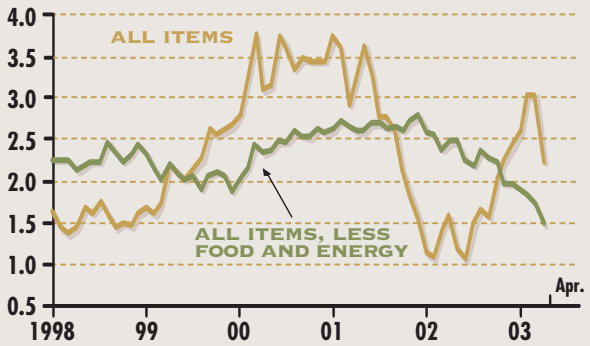
PERCENT



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

Consumer Price Inflation

PERCENT



NOTE: Percent change from a year earlier

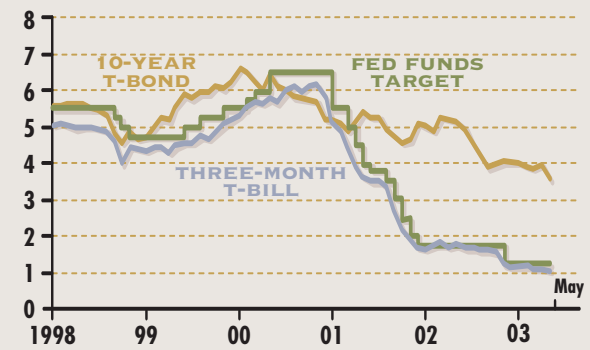
Civilian Unemployment Rate

PERCENT

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

Interest Rates

PERCENT

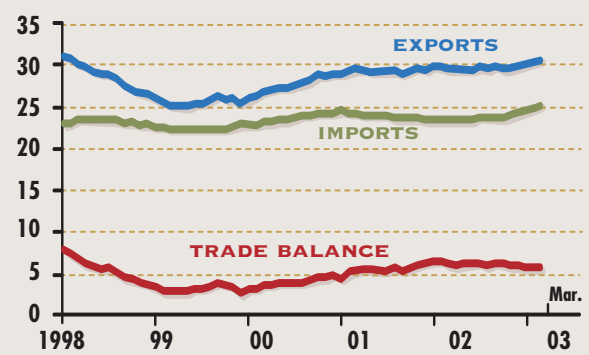


NOTE: Except for the fed funds target, which is end-of-period, data are monthly averages of daily data.

Farm Sector Indicators

U.S. Agricultural Trade

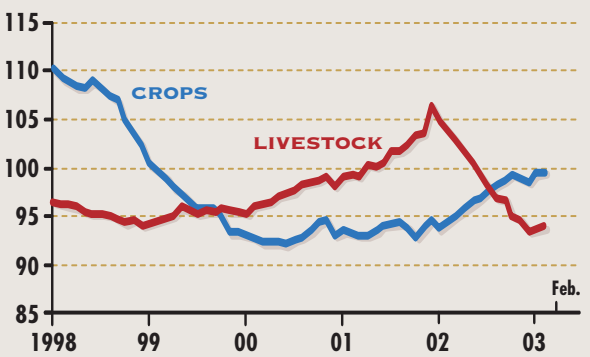
BILLIONS OF DOLLARS



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

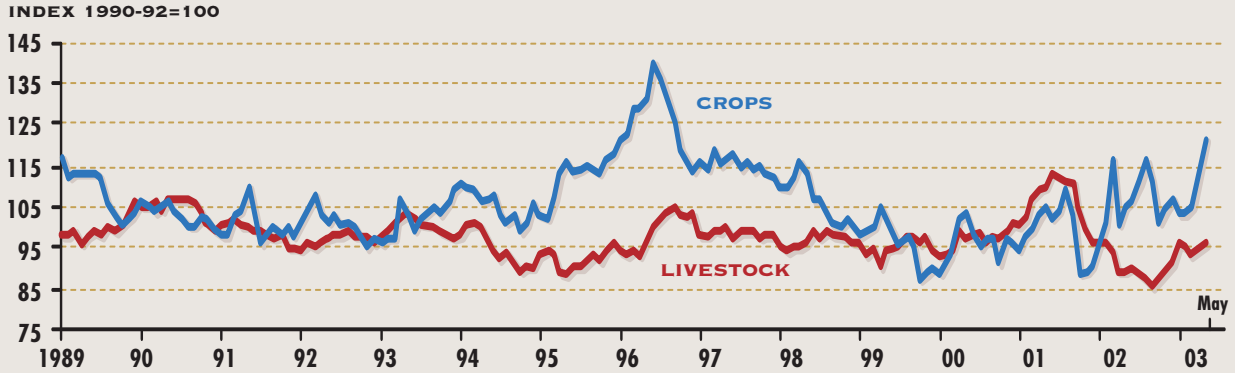
BILLIONS OF DOLLARS



NOTE: Data are aggregated over the past 12 months.

U.S. Crop and Livestock Prices

INDEX 1990-92=100



National and District Overview

Slow Recovery Remains Puzzling

By Kevin L. Kliesen

Despite low interest rates, tax cuts and low inflation, U.S. economic growth remains stubbornly below its long-run average, unable to generate any job growth. It's not often that the profile of the U.S. economy resembles Churchill's comment about Russia: "It is a riddle wrapped in a mystery inside an enigma." More than a year after the probable end of the 2001 recession in November 2001, the economy continues to offer up more puzzles than answers.

Another Jobless Recovery

Although the National Bureau of Economic Research (NBER) has yet to decide when the 2001 recession ended, some economists believe that its demise occurred during the final three months of 2001. If so, the economy's performance since then has been disappointing when benchmarked against previous economic recoveries. Granted, since the fourth quarter of 2001, the U.S. economy has grown continuously; real GDP has increased at a 2.7 percent annual rate. But since this growth trails the economy's potential rate of growth by about 0.25 to 0.75 percentage points, job growth has been nil. In fact, non-farm payroll employment declined by about 816,000 jobs (0.4 percent annualized) from November 2001 to April 2003. Over that same period, job growth in the seven states that comprise parts or all of the Eighth Federal Reserve District has declined more (0.8 percent annualized).

In some respects, the weak labor market resembles the jobless recovery that followed the 1990-91 recession. Then, payroll employment did not surpass its June 1990 peak until 32 months later (February 1993), 23 months after the recession's end in March 1991. Currently, we are 27 months removed from the 2001 peak of payroll employment (February 2001), and it's not yet clear that employment is poised to turn up. However, unlike the 1991-92 experience, when the unemployment rate continued to rise after the March 1991 trough, reaching 7.8 percent in June 1992, the unemployment rate in the current recovery has remained at about 6 percent since the fourth quarter of 2001. In the Eighth District states, the unemployment rate has averaged even lower—5.6 percent for April. One of the puzzles that has yet to be adequately resolved is why firms continue to trim jobs even though the economy continues to grow and the unemployment rate remains relatively stable.

Making the Pieces Fit?

In the November 2002 Survey of Professional Forecasters (SPF), published by the Federal Reserve Bank of Philadelphia, real GDP was projected to rise at a 2.6 percent annual rate in the first quarter of 2003 and then rise at 3.1 percent rate in the second quarter. In actuality, real GDP rose at a 1.9 percent rate in the first quarter, and now the SPF is projecting output growth of 1.8 percent in the second quarter. Output growth has remained below trend despite policy-makers' repeated actions designed to spur faster growth. The Fed has pushed its federal funds target rate down to a 41-year low and has kept it there since November 2002. For their part, the Bush administration and Congress have passed two tax cut measures and ramped up government spending.

Some economists believed that an end to the major hostilities in Iraq would also help trigger faster growth—chiefly through reduced risk premiums in corporate bond yields, lower oil prices and higher equity prices. But while oil prices and interest rates have retreated and stock prices have risen markedly, consumer spending and, especially, businesses investment remain unusually weak compared to previous recoveries. One area of resiliency has been the housing sector, which continues to benefit from exceptionally low mortgage rates.

There are a few factors that can help explain the economy's puzzling behavior since the end of the 2001 recession. First, slower-than-average growth is a worldwide phenomenon. Second, the economy has been buffeted by numerous shocks over the past couple of years (Sept. 11, corporate scandals and the Iraq war). Third, relatively brisk growth of labor productivity enables employers to meet the existing demand for their products without boosting their existing workforce. Finally, the bust that followed the boom in equity markets and in business fixed investment was sizable. Accordingly, the adjustment process by which consumers respond to reduced wealth and businesses to excess capacity takes time to successfully resolve.

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