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Monetary Policy

The Costs and Benefits of Low Interest Rates

Government Debt

European Sovereign Jitters Geographically Contained

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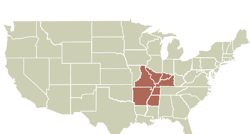

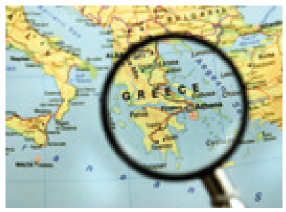

COVER ILLUSTRATION: HARRY CAMPBELL

James Bullard, President and CEO
Federal Reserve Bank of St. Louis

The European Debt Crisis: Lessons for the U.S.

Recently the key concern in world financial markets has been the extent to which the sovereign debt crisis in Europe portends a global shock, possibly strong enough to upset the global recovery.

There is no question that, in part as a response to the events of 2008 and 2009, many governments in Europe and elsewhere elected to increase deficit spending and thus to increase their debt as a percentage of GDP. For some countries, starting from weak economic conditions, the increase in borrowing was so large as to call into question their ability and willingness to repay in international financial markets. Confidence lost in such markets is difficult to regain, and for this reason I think we can expect market concerns to remain for months, possibly years, rather than just days or weeks. Governments must take aggressive action to earn credibility, and then sustain that effort over a long period of time. I think that a well-run fiscal consolidation can be a net plus for economic growth, as it was in the U.S. during the 1990s.

To be sure, sovereign debt crises are not at all unusual in the history of the global economy. Nations often have incentives to borrow internationally and are not always willing to repay. Over the past 200 years, there have been at least 250 cases of a government defaulting in whole or in part on its external debt. While sovereign debt restructuring or outright default is often associated with substantial market volatility—understandably, since some parties are not getting repaid—the events are not normally global recession triggers. A relatively recent and prominent example was the Russian default of 1998.

The agreement in Europe to provide funding if necessary through a Special Purpose Vehicle backed by government guarantees and through the IMF has provided time for the affected countries to enact fiscal retrenchment programs. Those programs have a good chance of success because the incentive for countries to keep unfettered access to international financial markets is substantial. Even if a fiscal consolidation program does not go well in a particular country, so that a restructuring of debt has to be attempted at some point in the future, restructuring is not unusual in global financial markets and can be accomplished without significant disruptions.

"Now that the U.S. economy is about to achieve recovery in GDP terms, it is time for fiscal consolidation in the U.S."

One of the persistent worries during this crisis has been that some of the largest financial institutions in the U.S. and Europe might be exposed to additional losses and that a type of financial contagion could occur should conditions worsen. I think this is a misreading of the events of the past two years. U.S. and European policymakers have essentially guaranteed the largest financial institutions. This has been the essence of the very controversial "too big to fail" policy. The policy has clear problems, including its inherent unfairness and the fact that economic incentives for institutions that are guaranteed can be badly distorted. But to argue that governments would now give up these guarantees in the face of a new shock that could threaten the global economy seems to me to be far-fetched.

One important lesson from the European sovereign debt crisis, well-known in emerging markets, is that borrowing on international markets is a delicate matter. There can be benefits of such borrowing in some circumstances, but too much can erode credibility and lead to a crisis in the borrowing country. In short, countries cannot expect to borrow internationally and use the proceeds to spend their way to prosperity.

The U.S. fiscal situation is difficult as well, with high deficits and a growing debt-to-GDP ratio. The U.S. has exemplary credibility in international financial markets, built up over many years. Now that the U.S. economy is about to achieve recovery in GDP terms, it is time for fiscal consolidation in the U.S. Irresponsibly high deficit and debt levels are not helping the U.S. economy and could damage future prospects through a loss of credibility internationally. Ω

CONTAGION RISK

European Sovereign Debt Remains Largely a European Problem

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By Amalia Estenssoro

European sovereign debt concerns took global policymakers by surprise early this year. The markets panicked, fearful of a financial contagion throughout the eurozone.[1] The pressure triggered a concerted policy action, culminating in an unprecedented European Union/International Monetary Fund pre-emptive financial aid package worth €750 billion ($975 billion), announced May 9.[2] The root source of the debt problem can be traced historically—to quote one of the main conclusions from the recent book by economists Carmen Reinhart and Kenneth Rogoff—to the rapid explosion of sovereign debt experienced by countries following a financial crisis that includes a banking crisis.[3]

> The countries with the most foreign claims to the PIIGS' debt were (in descending order) France, Germany, the United Kingdom and the Netherlands. The European banking sector held 89 percent of the total direct exposure.

Roots of the Crisis

After the members of the EU entered into a monetary union (common currency) in 1999, yields on government (sovereign) debt issued by the individual countries began to converge.[4] This development was viewed positively by the EU members since it meant that financial markets perceived the risk of lending to individual countries like Greece (never known in modern times as an economic powerhouse) as nearly the same as lending to Germany (which has had that reputation for decades).[5] By 2007, though, it was becoming clear that some countries had used this financial market credibility to greatly expand their borrowing.[6] This directly led to the development of sovereign debt concerns in several countries that had to rescue their banking sector in the aftermath of the 2008 and 2009 global financial crises.[7]

In the eurozone economies, government budget deficits moved from 2 percent of GDP in 2008 to 6.3 percent of GDP last year. This deterioration is responsible for increasing the gross debt-to-GDP ratio from 69.4 percent in 2008 to an estimated 84.7 percent this year, a trajectory that has yet to stabilize. Although these numbers are smaller than the deterioration seen in some other advanced economies—the U.S. gross federal debt to GDP increased from 69.2 percent in 2008 to an estimated 90.9 percent this year—they still pose particular challenges to countries inside a monetary union; that's because such countries don't have their own currencies to devalue, and any competitive gains require wage cuts and deflation in order to export their way out of a recession.[8]

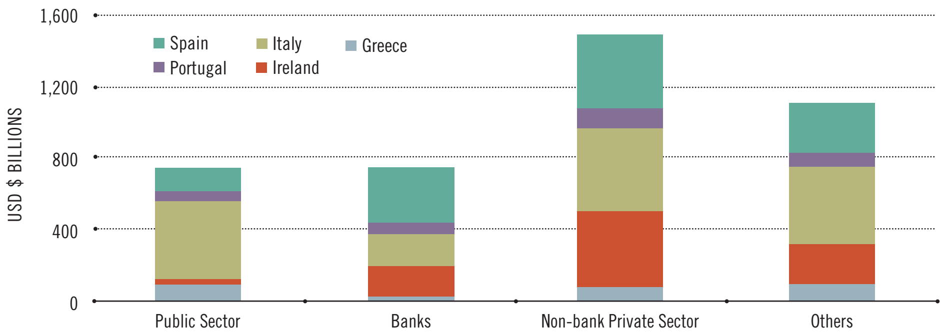
These numbers also mask strong differences among EU countries. While nearly all eurozone economies were in violation of the union's own deficit-to-GDP requirement at some point, some of the countries, such as Portugal, Ireland, Greece and Spain (the so-called PIGS), lacked credibility with the financial markets to correct the problem on their own.[9] In response, yields on debt issued by the PIGS rose sharply against the yield on German debt (perceived by markets as a benchmark for fiscal credibility), which not only made financing the PIGS' existing budget deficits more expensive, but limited their ability to issue new debt. The European sovereign debt scare, to a large extent, was triggered when the Greek government could no longer find investors to purchase its debt, forcing Greece to ask for emergency financial assistance from the IMF on April 23, 2010.

Markets Broaden Their Focus beyond Greece

Greece was not perceived to be an isolated case. Markets quickly focused on Portugal, Ireland, Spain and even Italy (now PIIGS), and the yields on these nations' sovereign bonds rose sharply. In some cases, the bonds' term structures inverted, meaning that short-term rates rose above their longer-term rates. Economists and financial market analysts often view this development as a clear sign of financial distress. Fear spread quickly throughout the bond market and then hit the European banking sector, which held large quantities of sovereign debt issued by the PIIGS on their balance sheets.

As the U.S. financial crisis demonstrated, concerns about the health of many large banks can rattle financial market participants. In Europe, this situation forced European fiscal and monetary policymakers to take concerted action to reduce current and prospective budget deficits (and hence stabilize debt-to-GDP by 2013). These actions also afforded the European banking sector some time to improve bank capital ratios—an important buttress against any future isolated debt restructurings.

Consolidated Cross-Border Exposure to PIIGS' Debt



This chart shows aggregate exposure from 24 reporting BIS member central banks to the debts of the PIIGS countries—Portugal, Ireland, Italy, Greece and Spain. Exposure to public sector debt (sovereign debt) is rather small compared with exposure to other kinds of debt.

SOURCE: Bank of International Settlements

During the European market scare, it became apparent that financial markets had underestimated two types of risk: (1) the sheer size of the sovereign debt problem of some European countries; and (2) the sizable exposure of the European banking system to this debt. These two factors (the latter reflecting a lack of accounting transparency) drove up counterparty risk, which increases as trust among financial market operators diminishes. Cross-border exposures to particular nations are reported in the Bank of International Settlements' (BIS) consolidated foreign claims data.[10] The BIS data ultimately explain why contagion risk, though serious, has been limited to the European banking sector and did not expand globally.

According to the BIS data, total global cross-border exposures to the five PIIGS countries totaled $4.1 trillion at the end of the first quarter of 2010. As seen in the chart, sovereign debt exposure (public sector) is rather small compared with the other categories of debt, such as nonbank private sector debt and other indirect exposures, including derivatives (financial insurance contracts), guarantees extended and credit commitments. Importantly, though, the European banking sector held 89 percent of the PIIGS' direct exposure ($2.7 trillion). However, the banking sector in some European countries is much more exposed than the banking sector in other European countries to debt issued by the PIIGS.

According to the BIS, the countries with the most total foreign claims to the PIIGS' debt were France ($843 billion) and Germany ($652 billion), followed by the United Kingdom ($380 billion), the Netherlands ($208 billion) and the U.S. ($195 billion) in absolute terms by the end of the first quarter in 2010. To get a better sense of the risks, economists often express these amounts as a percent of the creditor country's GDP. By this metric, French banks had the most exposure (32 percent), followed by Dutch banks (26 percent) and then German banks (20 percent). The exposure of U.K. banks was 17 percent, and the exposure of U.S. banks was only 1 percent. These data, thus, show why the contagion risk remained in Europe. Ω

Amalia Estenssoro is an economist at the Federal Reserve Bank of St. Louis.

ENDNOTES

1 There are currently 16 European countries using the euro as their national currency, bound into monetary union by European treaties. The countries are: Austria, Belgium, Cyprus, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Malta, the Netherlands, Portugal, Slovakia, Slovenia and Spain. Estonia will join in January.

2 Not to be confused with a separate €110 billion EU/IMF package to Greece alone, formally approved by the IMF executive board and Economic and Financial Affairs Council (ECOFIN, which is comprised of economic and financial ministers of the 27 European Union member countries) simultaneously on May 9.

3 See Reinhart and Rogoff, pp. 169-171.

4 The euro was introduced as an accounting unit in January 1999 and entered into circulation in January 2002.

5 The convergence of European bond markets in terms of interest rate levels mainly reflected the anchoring of long-term inflation expectations.

6 "The majority of countries (61 percent) register a higher propensity to experience a banking crisis around bonanza periods. … These findings on capital flow bonanzas are also consistent with other identified empirical regularities surrounding credit cycles." See Reinhart and Rogoff, p. 157.

7 One such example is Ireland, where debt-to-GDP jumped from 24.9 percent at the end of 2007 to 78.8 percent of GDP this year due to a banking crisis being mopped up by increasing sovereign debt.

8 This makes any fiscal adjustment far more painful to implement, as well as politically difficult to sustain.

9 The Maastricht Treaty allows for monetary union without fiscal union under an agreement called the Stability and Growth Pact. The pact restricts fiscal deficits to 3 percent of GDP and debt to 60 percent of GDP. Such rules have been systematically violated (even by Germany and France) without triggering any sanctions to the offending countries to date.

10 By contrast, individual bank exposure to debt issued by the PIIGS was addressed during the EU-wide banking sector stress test released by the Committee of European Banking Supervisors (CEBS) on July 23, 2010.

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Low Interest Rates
Have Benefits ... and Costs

By Kevin L. Kliesen

In late December 2007, most economists realized that the economy was slowing. However, very few predicted an outright recession. Like most professional forecasters, the Federal Open Market Committee (FOMC) initially underestimated the severity of the recession. In January 2008, the FOMC projected that the unemployment rate in the fourth quarter of 2010 would average 5 percent.[1] But by the end of 2008, with the economy in the midst of a deep recession, the unemployment rate had risen to about 7.5 percent; a year later, it reached 10 percent.

Some economists believe that banks and other financial institutions tend to take greater risks when rates are maintained at very low rates for a lengthy period of time.

The Fed employed a dual-track response to the recession and financial crisis. On the one hand, it adopted some unconventional policies, such as the purchase of $1.25 trillion of mortgage-backed securities.[2] On the other hand, the FOMC reduced its interest rate target to near zero in December 2008 and then signaled its intention to maintain a low-interest rate environment for an "extended period." This policy action is reminiscent of the 2003-2004 episode, when the FOMC kept its federal funds target rate at 1 percent from June 2003 to June 2004.

Recently, some economists have begun to discuss the costs and benefits of maintaining extremely low short-term interest rates for an extended period.[3]

Benefits of Low Interest Rates

In a market economy, resources tend to flow to activities that maximize their returns for the risks borne by the lender. Interest rates (adjusted for expected inflation and other risks) serve as market signals of these rates of return. Although returns will differ across industries, the economy also has a natural rate of interest that depends on those factors that help to determine its long-run average rate of growth, such as the nation's saving and investment rates.[4] During times when economic activity weakens, monetary policy can push its interest rate target (adjusted for inflation) temporarily below the economy's natural rate, which lowers the real cost of borrowing. This is sometimes known as "leaning against the wind."[5]

To most economists, the primary benefit of low interest rates is its stimulative effect on economic activity. By reducing interest rates, the Fed can help spur business spending on capital goods—which also helps the economy's long-term performance—and can help spur household expenditures on homes or consumer durables like automobiles.[6] For example, home sales are generally higher when mortgage rates are 5 percent than if they are 10 percent.

A second benefit of low interest rates is improving bank balance sheets and banks' capacity to lend. During the financial crisis, many banks, particularly some of the largest banks, were found to be undercapitalized, which limited their ability to make loans during the initial stages of the recovery. By keeping short-term interest rates low, the Fed helps recapitalize the banking system by helping to raise the industry's net interest margin (NIM), which boosts its retained earnings and, thus, its capital.[7] Between the fourth quarter of 2008, when the FOMC reduced its federal funds target rate to virtually zero, and the first quarter of 2010, the NIM increased by 21 percent, its highest level in more than seven years. Yet, the amount of commercial and industrial loans on bank balance sheets declined by nearly 25 percent from its peak in October 2008 to June 2010. This suggests that perhaps other factors are helping to restrain bank lending.

A third benefit of low interest rates is that they can raise asset prices. When the Fed increases the money supply, the public finds itself with more money balances than it wants to hold. In response, people use these excess balances to increase their purchase of goods and services, as well as of assets like houses or corporate equities. Increased demand for these assets, all else equal, raises their price.[8]

The lowering of interest rates to raise asset prices can be a double-edged sword. On the one hand, higher asset prices increase the wealth of households (which can boost spending) and lowers the cost of financing capital purchases for business. On the other hand, low interest rates encourage excess borrowing and higher debt levels.

Costs of Low Interest Rates

Just as there are benefits, there are costs associated with keeping interest rates below this natural level for an extended period of time. Some argue that the extended period of low interest rates (below its natural rate) from June 2003 to June 2004 was a key contributor to the housing boom and the marked increase in the household debt relative to after-tax incomes.[9] Without a strong commitment to control inflation over the long run, the risk of higher inflation is one potential cost of the Fed's keeping the real federal funds rate below the economy's natural interest rate. For example, some point to the 1970s, when the Fed did not raise interest rates fast enough or high enough to prevent what became known as the Great Inflation.

Other costs are associated with very low interest rates. First, low interest rates provide a powerful incentive to spend rather than save. In the short-term, this may not matter much, but over a longer period of time, low interest rates penalize savers and those who rely heavily on interest income. Since peaking at $1.33 trillion in the third quarter of 2008, personal interest income has declined by $128 billion, or 9.6 percent.

A second cost of very low interest rates flows from the first. In a world of very low real returns, individuals and investors begin to seek out higher yielding assets. Since the FOMC moved to a near-zero federal funds target rate, yields on 10-year Treasury securities have fallen, on net, to less than 3 percent, while money market rates have fallen below 1 percent. Of course, existing bondholders have seen significant capital appreciation over this period. However, those desiring higher nominal rates might instead be tempted to seek out more speculative, higher-yielding investments.

In 2003-2004, many investors, facing similar choices, chose to invest heavily in subprime mortgage-backed securities since they were perceived at the time to offer relatively high risk-adjusted returns. When economic resources finance more speculative activities, the risk of a financial crisis increases—particularly if excess amounts of leverage are used in the process. In this vein, some economists believe that banks and other financial institutions tend to take greater risks when rates are maintained at very low levels for a lengthy period of time.[10]

Economists have identified a few other costs associated with very low interest rates. First, if short-term interest rates are low relative to long-term rates, banks and other financial institutions may overinvest in long-term assets, such as Treasury securities. If interest rates rise unexpectedly, the value of those assets will fall (bond prices and yields move in opposite directions), exposing banks to substantial losses. Second, low short-term interest rates reduce the profitability of money market funds, which are key providers of short-term credit for many large firms. (An example is the commercial paper market.) From early January 2009 to early August 2010, total assets of money market mutual funds declined from a little more than $3.9 trillion to about $2.8 trillion.

Finally, St. Louis Fed President James Bullard has argued that the Fed's promise to keep interest rates low for an "extended period" may lead to a Japanese-style deflationary economy.[11] This might occur in the event of a shock that pushes inflation down to extremely low levels—maybe below zero. With the Fed unable to lower rates below zero, actual and expected deflation might persist, which, all else equal, would increase the real cost of servicing debt (that is, incomes fall relative to debt). Ω

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ENDNOTES

1 These projections are the mid-point (average) of the central tendency of the FOMC's economic projections. The central tendency excludes the three highest and three lowest projections.
2 The purchase of mortgage-backed securities (MBS) was a key factor in the more than doubling of the value of assets on the Fed's balance sheet. This action is sometimes referred to as quantitative easing.
3 See the Bank for International Settlements (BIS) 2010 *Annual Report* and Rajan.
4 In this case, investment refers to expenditures by businesses on equipment, software and structures. This excludes human capital, which economists also consider to be of key importance in generating long-term economic growth.
5 See Gavin for a nontechnical discussion of the theory linking the real interest rate and consumption spending. In this framework, the real rate should be negative if consumption is falling.
6 By lowering short-term interest rates, the Fed tends to reduce long-term interest rates, such as mortgage rates or long-term corporate bond rates. However, this effect can be offset if markets perceive that the FOMC's actions increase the expected long-term inflation rate.
7 The net interest margin (NIM) is the difference between the interest expense a bank pays (its cost of funds) and the interest income a bank receives on the loans it makes.
8 This is the standard monetarist explanation, but there are other explanations. See Mishkin for a summary.
9 See Taylor, as well as Bernanke's rebuttal.
10 See Jimenez, Ongena and Peydro.
11 See Bullard.

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In Some Cases, a Sick Economy Can Be a Prescription for Good Health

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By Rubén Hernández-Murillo and Christopher J. Martinek

Conventional wisdom suggests that health improves during good economic times and worsens during tough economic times. When the economy is in recession, stress arising from negative economic outcomes—such as potential job loss, stagnating wages and falling home values—can lead to harmful health outcomes. Similarly, health can be expected to improve when incomes rise and social and psychological hardships diminish. Despite this intuition, recent economic studies suggest the opposite—a recession, as long as it's not too deep or too long, may be good for your health.

Individuals opt for healthier lifestyles during temporary downturns because the cost of leisure time decreases. For example, individuals have more time to prepare healthier meals at home, to engage in physical activity and to visit the doctor.

Unemployment and Mortality

Economist Christopher J. Ruhm analyzed the relationship between unemployment and mortality rates in the United States over the past few decades. His research shows that when unemployment rates increase, total mortality rates decrease. The effect is economically significant: An increase of one percentage point in the unemployment rate reduces annual fatalities by about 11,000. Why does mortality fall? Ruhm argues that the main reason is that individuals opt for healthier lifestyles during temporary downturns because the cost of leisure time decreases. For example, individuals have more time to prepare healthier meals at home, to engage in physical activity and to visit the doctor. Alcohol and tobacco use is reduced, too, because individuals reduce discretionary spending in periods of unemployment.

On the flip side, fatalities during expansions can increase because of not only lifestyle changes but factors outside of individual behavior. In particular, Ruhm argues that work-related accidents are more likely to occur during periods of expansion, as individuals work longer hours, and that more-hazardous conditions, such as increased stress, may be more prevalent. Finally, motor vehicle accidents may also be more common during an economic upturn because improved economic conditions may lead to more traffic on highways and to higher alcohol consumption.

Economists Douglas Miller, Marianne Page, Ann Huff Stevens and Mateusz Filipski took a closer look at the data and analyzed different groups of individuals in terms of age and causes of death. Their results suggest that the most plausible explanation for the negative correlation between unemployment and mortality is not lifestyle changes resulting from reduced work time, nor is it a reduction in work-related stress. The authors find that, among working age individuals, the changes in mortality are related to motor vehicle accidents—there are more accidents (and deaths) during economic upturns, and vice versa. The authors say that their results do not invalidate Ruhm's research; rather, the results help to better understand the mechanisms behind the interaction between unemployment and mortality.

In any case, the strong negative correlation between unemployment and the mortality rate is not in dispute. This phenomenon is not unique to the United States. A similar association has been found in Spain, Germany and other developed countries. However, it is important to emphasize that only temporary downturns or expansions exhibit this behavior. The negative correlation between unemployment and mortality does not seem to hold during periods of sustained or pronounced economic downturns. The current economic downturn, which has been unusually severe by historical standards, may be an example of this. The chart indicates that rising unemployment since 2007 has been accompanied by a recent spike in mortality rates.[1]

Mass Layoffs and Mortality

Job loss typically has lasting economic effects, such as decreases in lifetime earnings and persistent job instability. So, what about the effects of mass layoffs on long-term health outcomes?

Economists Daniel Sullivan and Till von Wachter analyzed a group of workers in Pennsylvania during the 1970s and 1980s and estimated that, for high-seniority male workers, the rate of mortality increased between 50 and 100 percent following a job loss in periods where the employer reduced at least 30 percent of its work force. For example, the authors found that for workers displaced at age 40, the effect over the long term is a decrease of 1 to 1.5 years in life expectancy.[2] Across various age groups, workers experienced smaller losses in life expectancy if they were displaced near the retirement age.

The explanation for the higher mortality rate after displacement is that a job loss resulting from mass layoffs produces a decline in lifetime resources, which may lead to reduced investment in health or to chronic stress. A displacement during mass layoffs may also increase the risk of decreased future earnings.

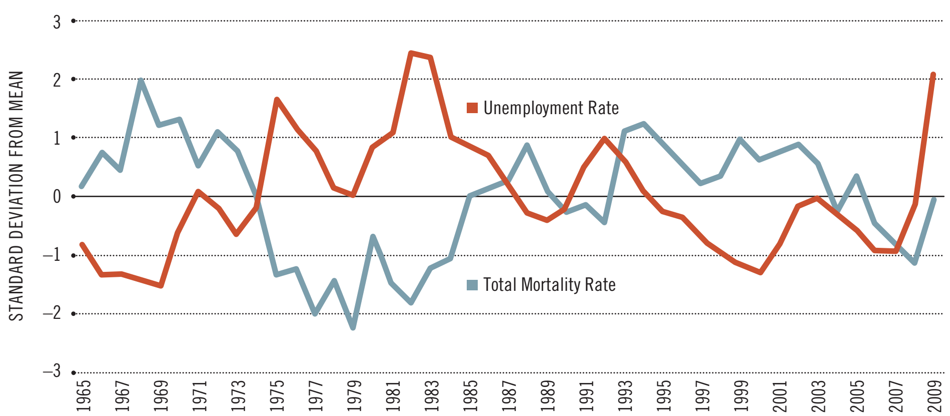
Sullivan and von Wachter note that their results do not necessarily contradict those of Ruhm because high-tenure workers displaced during mass layoffs are different from the average worker who is let go during a recession. For the average worker, temporary declines in economic activity may increase available leisure time for healthy activities, as Ruhm argues, without significantly affecting lifetime resources. But for high-tenure workers, a job loss during a mass layoff entails a significant long-term reduction in earnings, which offsets any benefits from increased leisure time.

The Recent Recession and Medical Care Usage

In contrast to Ruhm's predictions about increasing routine visits to the doctor because of time availability during recessions, another line of research suggests that during the recent economic crisis the effect from the reduced value of time may have been offset by the severe decline in wealth that was observed around the world. Economists Annamaria Lusardi, Daniel Schneider and Peter Tufano document a reduction in individuals' use of routine medical care during the recent crisis in a group of five developed countries: the United States, Great Britain, Canada, France and Germany. They found that the declines were proportional to the out-of-pocket costs that individuals had to bear.[3] Lusardi, Schneider and Tufano found that the ranking of countries in terms of privately borne costs for routine care matched the ranking of observed reductions in the use of care. These observations suggest that tighter financial constraints during the recent crisis were the main factor behind the decline in use of medical care. Ω

Rubén Hernández-Murillo is an economist and Christopher J. Martinek is a research associate at the Federal Reserve Bank of St. Louis. Go to http://research.stlouisfed.org/econ/hernandez/ for more on Hernández-Murillo's work.

Relationship between Unemployment Rates and Mortality Rates



NOTE: Mortality rate data for 2007, 2008 and 2009 are preliminary estimates. The series are de-trended using a linear trend and normalized to have matching scales.

SOURCES: Mortality data are from the Census Bureau's Statistical Abstract of the United States and the National Center for Health Statistics' National Vital Statistics publication. The unemployment data are from the Bureau of Labor Statistics.

ENDNOTES

1. It is important to note that the mortality rates for 2007, 2008 and 2009 in the chart are preliminary estimates.
2. In the study, the authors selected firms that experienced mass layoffs that were not connected to the employees' own health status. In other words, workers were not displaced because they had poor health that made them less productive. This is to isolate the causal effect of displacement on mortality.
3. The United States is the only country in the group without universal health care coverage. But even in the countries with national health care systems (Great Britain, Canada, France and Germany), individuals incur out-of-pocket costs.

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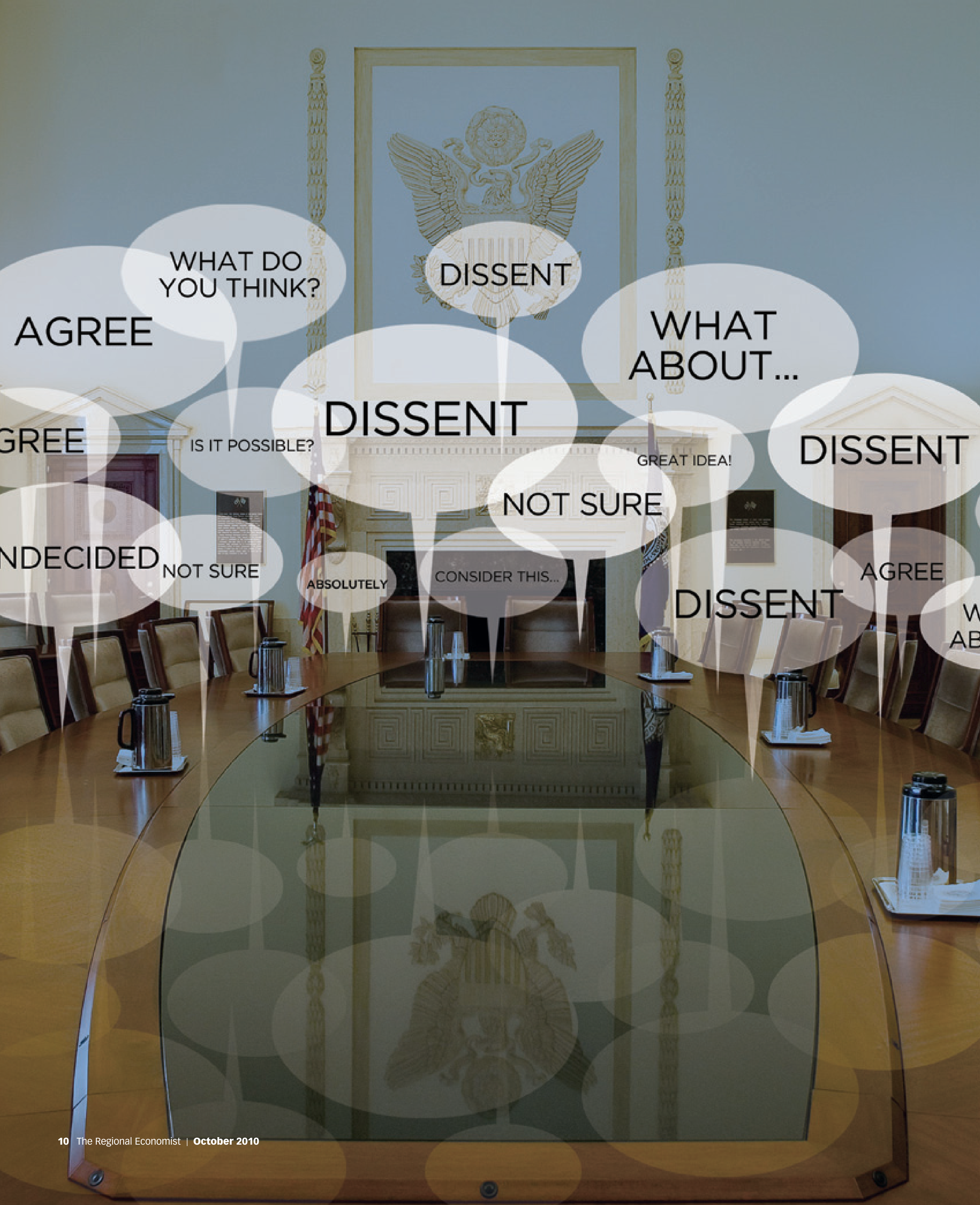
WHAT DO YOU THINK?
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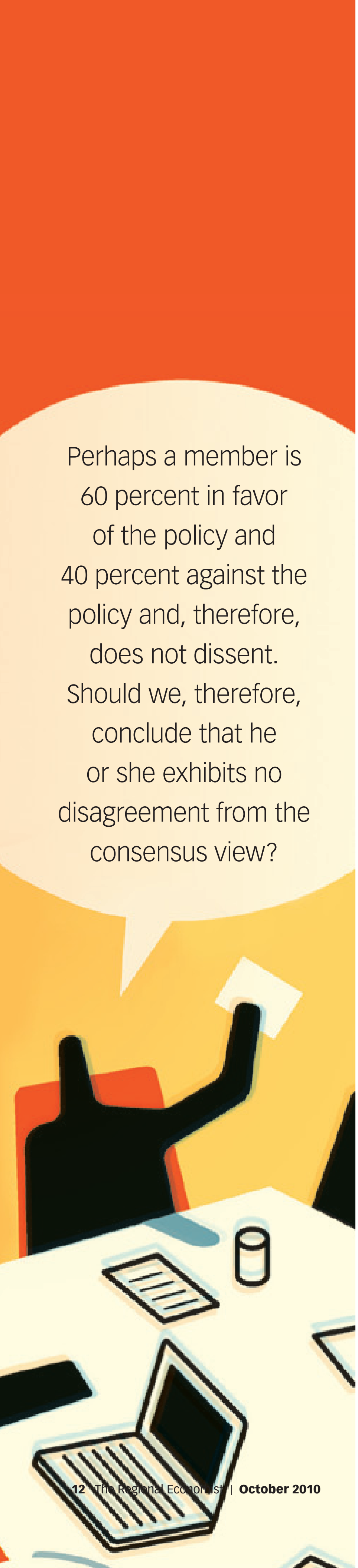
Disagreement at the FOMC

The Dissenting Votes Are Just Part of the Story

By Michael W. McCracken

It's safe to say that the past few years have been interesting for the Federal Reserve System, particularly for the members of the Federal Open Market Committee (FOMC). Difficult decisions have been made: The federal funds rate has been lowered to basically zero, and money has been distributed to various financial institutions in order to keep them solvent.

Such dramatic actions have drawn unprecedented levels of attention to the members of the FOMC and to the Federal Reserve System more generally. Some of this attention might have been good for the Fed. Fed Chairman Ben Bernanke was even named *Time* magazine's "Person of the Year" in 2009 because "he didn't just reshape U.S. monetary policy; he led an effort to save the world economy." That's some pretty good press.



Most Fed watchers, however, believe that the attention was unwanted. Recall that in the spring of 2010—when the financial reform act was being put together—those who felt the Federal Reserve System was responsible for the financial crisis were calling for a reshuffling of the Federal Reserve's structure and responsibilities. One proposal was to eliminate the supervisory role of the regional Fed banks over the commercial banks within their districts. Another option was to make the regional bank presidents, who are now appointed by their districts' board of directors, political appointees instead. Both of these options were publicly criticized by the regional bank presidents and ultimately did not become part of the new law.

One of the arguments against making the regional bank presidents political appointees was that such a move could ultimately reduce the range of ideas that are debated at each of the FOMC meetings. And since "thinking outside the box" is generally considered a good thing, reducing the range of voices in the FOMC meetings seems unlikely to improve monetary policy. In other words, disagreement among the FOMC members is something we might want to see more of and not less of.

But is there really that much disagreement among members of the FOMC? It certainly seems so. Read on for a simple decomposition of where some of this disagreement might be coming from.

Measuring Disagreement

From the perspective of the public, it may appear that there is little-to-no disagreement among FOMC members. Because it is relatively uncommon for a voting member to dissent, one might conclude that the members are in agreement about the relevant policy actions discussed at that FOMC meeting.

While dissenting votes are an indication of disagreement, they are a very coarse metric for evaluating how much an individual member of the FOMC disagrees with the proposed policy actions. By their nature, dissenting votes are either "yes" or "no." There is no gray area. As such, characterizing FOMC disagreement by whether a member dissents provides very little information about the magnitude of disagreement that an individual member has about a given policy. Perhaps a member is 60 percent in favor of the policy and 40 percent against the policy and, therefore, does not dissent. Should we, therefore, conclude that he or she exhibits no disagreement from the consensus view? Also, at any given FOMC meeting, there are only four regional bank presidents who are able to vote and, thus, convey their opinion via a dissent. The remaining eight regional bank presidents may disagree with the policy, but since they don't have a vote, their disagreement cannot be observed by the public.

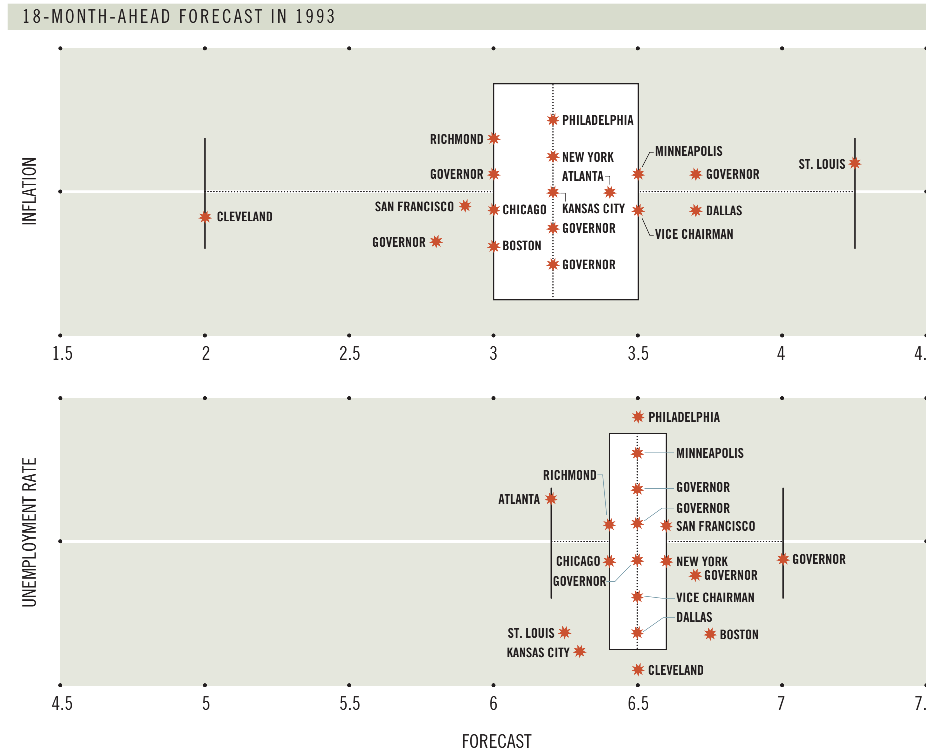
Therefore, we take a completely different approach to measuring disagreement—one that is not based on whether an individual casts a dissenting vote regarding a policy action. We measure disagreement using internal forecasts made by each individual FOMC member in preparation for a subset of the FOMC meetings that occurred from 1992 to 1998. By taking this approach, we are able to make much finer measurements about the degree to which a specific member of the FOMC disagrees with other members regarding the state of the economy and, potentially, how much each disagrees with a proposed policy action.

The data are based on those used for the semiannual monetary policy report to Congress, made in February and July of each year since 1979. Before each of these releases, each member of the FOMC makes a forecast of end-of-year nominal and real GDP growth, inflation and the unemployment rate. The February forecasts are for the current calendar year. In July, two sets of forecasts are given: an updated forecast for the current calendar year and a longer-horizon forecast for the next calendar year. Once these forecasts have been collected from each member of the FOMC, the maximum, minimum and a trimmed range (based on dropping the three highest and three lowest values) of each of the four variables are included in the monetary policy report to Congress.

Unfortunately, the individual forecasts are not provided in the report when it is released. However, a newly available data set, published last year by Berkeley economist David Romer, provides those forecasts made by individual members of the FOMC between February 1992 and July 1998.[1] Until early summer of 2009, the only

FIGURE 1

Forecast Disagreement among FOMC Members



These box-and-whisker plots show the forecasts made by the members of the FOMC at their July 1993 meeting. The forecasts are for inflation (top) and unemployment for 18 months out. The median forecast is indicated by the center line within the box, the first and third quartiles are indicated by the edges of the box, and the "whisker" that stretches to the left and right provides a visual of the entire range of data.

SOURCE: Economist David Romer's web site: http://elsa.berkeley.edu/~dromer/

publicly available information consisted of the aggregated information (that is, the maximum, minimum and the trimmed range) contained in the report to Congress. In contrast, this new data set provides not only the individual forecasts for each economic variable, but it also associates the forecasts with every member of the FOMC other than the chairman.

Although the data set is the richest source of information on the FOMC forecasts that is available to the public, the data set is limited in its duration. Although FOMC forecasts have been made since 1979, the documentation of the individual forecasts doesn't go back that far. Very recently, the Board of Governors constructed a complete series of the forecasts starting only as far back as February 1992. In addition, a 10-year release window has been enacted, limiting the most recent forecasts publicly available. Our data, therefore, consist of the individual forecasts for each of the four variables, over three distinct forecast horizons, over a seven-year span, made by each regional bank president and each governor other than the chairman.

Before characterizing the magnitude of disagreement and attempting to explain why such disagreement exists, it is important to understand that the forecasts made by the FOMC members are not your typical forecasts. The FOMC forecasts are "conditional" forecasts.[2] Specifically, they are constructed conditional on a hypothetical future path of monetary policy (i.e., a future path of the federal funds rate or some other type of monetary policy). In contrast, the typical "unconditional" forecast makes no such assumption about the future path of monetary policy. Federal Reserve Bank of St. Louis President James Bullard made this distinction clear in a speech last year when he said, "The FOMC members' forecasts are made under appropriate monetary policy." In this framework, "appropriate monetary policy" is left to the discretion of the individual FOMC member constructing his or her own forecast. This induces disagreement among the members irrelevant of whether the members are forming their forecasts based upon the same information—such as developments in the economy as a whole. As such, our results on disagreement capture not only variation in the information and models the FOMC members are working with but also the variation in beliefs on what appropriate monetary policy should be, irrespective of those features.

With that caveat in mind, we define an individual's forecast disagreement as the difference between his or her forecast f_i and the median forecast M among all FOMC members. Consider Figure 1. Here, we provide two box-and-whisker plots of the 18-month-ahead forecasts made by the 18 members (six governors—one of whom is the vice chairman—and 12 regional bank presidents) of the FOMC at the July 1993 meeting: one for the inflation rate and one for the unemployment rate. The median forecast is indicated by the center line within the box, the first and third quartiles are indicated by the edges of the box, and the "whisker" that stretches to the left and right provides a visual of the entire range of data. Clearly, the inflation forecasts exhibit a much wider range of disagreement than that

Why do some members, such as the presidents of the St. Louis and Cleveland Feds, have forecasts that differ so drastically despite the fact that, by and large, these members have access to the same data?

associated with the unemployment forecasts, but why? And among the inflation forecasts, why do some members, such as the presidents of the St. Louis and Cleveland Feds, have forecasts that differ so drastically despite the fact that, by and large, these members have access to the same data?

In our analysis, we use straightforward regression techniques to try to parse some of the reasons why these differences exist. First, we ask whether the magnitude of the disagreement, measured as the absolute value of the difference between a forecast and the median forecast $|f_i - M|$, can be explained. Second, we ask whether the direction of the disagreement, measured as the sign (plus or minus) of the difference between a forecast and the median forecast, can be explained. In each of these decompositions, we consider four factors: (1) variations in regional information, (2) the state of the national economy, (3) voting status of the member and (4) permanent effects that are specific to the individual.[3]

We measure variations in regional information as the difference between the unemployment rate for the nation as a whole and the unemployment rate for the region associated with the FOMC member.[4] For those members who are governors, we treat the nation as their "region" and, hence, for them, this variable takes the value zero. With this measure, we hope to capture disagreement effects due to differences in region-specific information among the members. Given the number of meetings that regional presidents have with local business leaders, it would not be surprising if they held different views about the economy, based upon such region-specific information.

For ease of comparison, we measure the state of the national economy using the national unemployment rate.

We measure voting status using an indicator variable that takes the value one if the individual is a voting member at the time the forecast is constructed and zero otherwise. With this measure, we hope to capture strategic differences among the regional bank presidents who form their forecasts differently when they are a nonvoting member than when they are a voting member. The reason to consider this predictor is based on the observation that while the four voting regional bank presidents have the ability to express their disagreement by a dissenting vote, nonvoting members can only express their disagreement vocally at the FOMC meeting. And insofar as their forecasts express their views, these forecasts may exhibit more disagreement than when they vote.

Finally, we measure the permanent individual effect by defining 14 distinct indicators: one for each of the regional banks, one for the vice chairman and one for the remaining governors. With these indicators, we hope to capture those disagreement factors that are specific to the individual but not explained by observed economic data. In our decomposition of $|f_i - M|$, these indicators are designed to capture the individual specific "aggressiveness" of their disagreement irrespective of whether they are above or below the median. In the second decomposition, these indicators are designed to capture an effect that is akin to calling someone an inflation hawk (or dove): terms used to characterize whether an individual is seen as wary of increases in inflation (or decreases) at all times irrelevant of the flow of recent economic data.

For brevity, we focus exclusively on the 18-month-ahead forecasts of CPI-based inflation and of the unemployment rates. Results for nominal and real growth are similar in spirit.

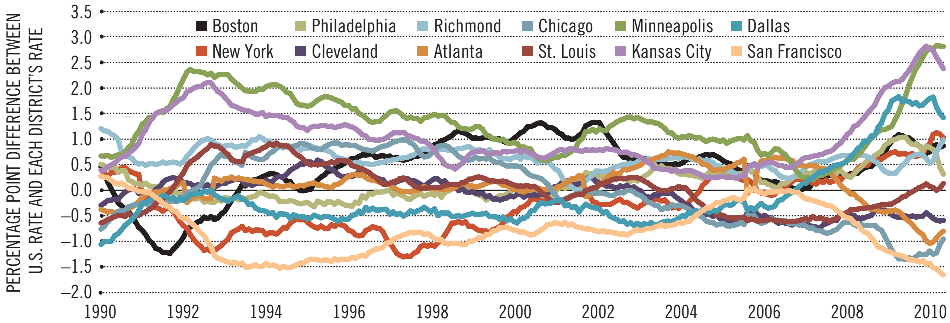
The Determinants of Disagreement

We begin by describing our results for predicting the magnitude—rather than the direction—of the disagreement. For the inflation forecasts, nearly all of the predictive content came from the individual-specific permanent effects. Apparently, those individuals who tend to be in greater—or lesser—disagreement with the consensus do so for individual-specific reasons. Voting status, and both the regional and national economic conditions, seemed to play no role in determining the magnitude of forecast disagreement.

Not surprisingly given Figure 1, we find that on average across the available data, the St. Louis, Cleveland and even the Dallas Feds tended to exhibit the largest levels of disagreement on inflation. Quite intuitively, we also find that the vice chairman tended to be one of the most consensus-oriented members of the FOMC.

FIGURE 2

Differences between Regional and National Unemployment



In the study of disagreement on the FOMC during the 1990s, a connection could be seen between a region's unemployment rate and a member's forecasts on the economy. For example, as a given region's unemployment rate rose above the national unemployment rate, the regional bank president tended to have a lower inflation rate forecast than the consensus while simultaneously having a higher unemployment rate forecast than the consensus. If that pattern still holds true today, disagreement among the FOMC members is probably high and on the rise, given that the range of the deviation in the rates across the country (as seen above) is larger than it's been for the past 20 years.

SOURCE: Author's calculations

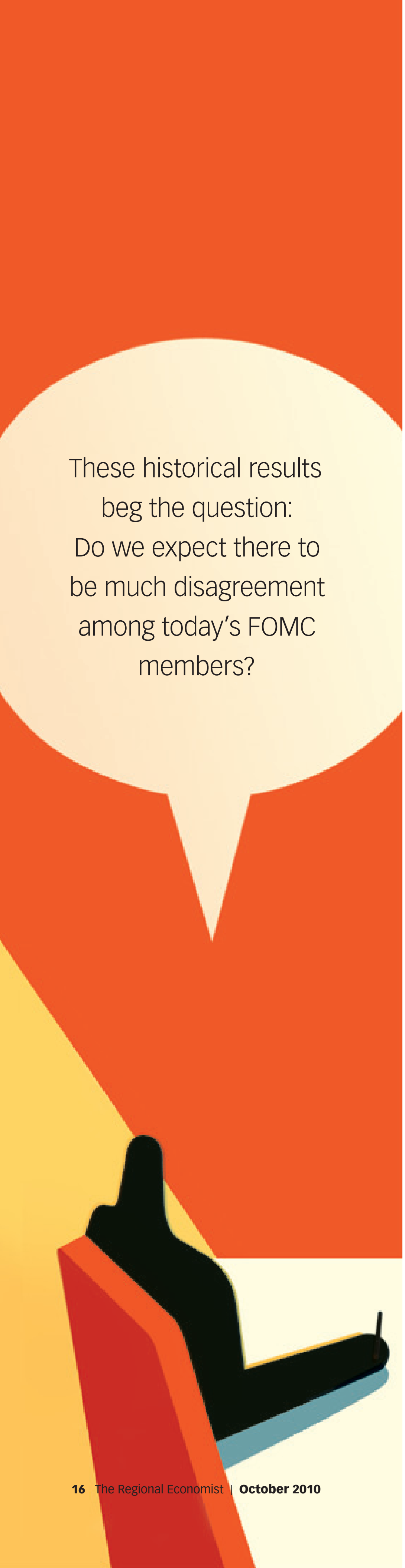
In contrast, for the unemployment forecasts, there does seem to be a significant effect due to the state of the national economy. As the national unemployment rate rises, the degree of disagreement among the members' unemployment forecasts increases just a bit. At some level, this makes sense. When unemployment is high, there tends to be a great deal of uncertainty in the economy. If there is a great deal of uncertainty in the economy, it is intuitive that there might be greater uncertainty about policy among the FOMC members and, thus, greater disagreement among their forecasts. In addition, as was the case for the inflation forecasts, the St. Louis Fed consistently tends to exhibit one of the largest levels of disagreement and the vice chairman tends to exhibit one of the smallest levels of disagreement.

The results for directional disagreement tend to be a bit more interesting. In particular, the results indicate a clear tendency of the FOMC members to treat their inflation and unemployment forecasts as trading off one another.

For example, those individuals who tended to forecast lower levels of inflation than the consensus also tended to forecast higher levels of the unemployment rate than the consensus. A good example of this is the Minneapolis Fed, which had a tendency to forecast lower inflation than the consensus while simultaneously having a tendency to forecast unemployment to be higher than the consensus.

This tradeoff can also be seen in the regional effects. Apparently, as a given region's unemployment rate rises above the national unemployment rate, the regional bank president tends to have a lower inflation rate forecast than the consensus while simultaneously having a higher unemployment rate forecast than the consensus. Again, the rationale for this regional effect is intuitive. If members observe particularly low unemployment in their region, they would naturally expect inflation pressures in the future as households spend more of their income. Similarly, if members observe higher unemployment in their region, one might conjecture spillover effects to the economy as a whole, implying that the future inflation rate will be lower.

And while not nearly as strong an effect as those already discussed, the tradeoff appears in both the national and the voting effects. As either the national unemployment rate rises or members switch from being nonvoting to voting, their inflation forecast tends to be lower than the consensus and their unemployment forecast tends to be higher than the consensus. Unfortunately, there does not seem to be an obvious reason for why such a tradeoff should exist between the inflation and unemployment forecasts due to voting status or the national unemployment rate.



Conclusion

These historical results beg the question: Do we expect there to be much disagreement among today's FOMC members?

Because most of today's FOMC members were not members in the mid-'90s, it's hard to say anything definitive. However, even though the individual effects might be very different now, one can conjecture that the regional effects remain similar. If so, then the results indicate that, as regional variation in the unemployment rates increases, one would expect an increase in the directional disagreement of the FOMC members. Specifically, one might expect those regional bank presidents with unemployment rates higher than the national rate may become increasingly dovish and those with rates below the national rate may become increasingly hawkish. As evidence of such, in Figure 2 we plot the deviation of each regional unemployment rate from the national unemployment rate. As of the June 2010 employment figures, the range of these deviations is the largest it has been for the past 20 years, suggesting that not only might there be considerable disagreement among today's FOMC members, it might be increasing.

Hopefully, that's a good thing. Ω

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For more on this subject, read the working paper "Forecast Disagreement among FOMC Members" by Michael McCracken and Chanont Banternghansa. See http://research.stlouisfed.org/wp/2009/2009-059.pdf

ENDNOTES

1. The data are available at David Romer's web site: http://elsa.berkeley.edu/~dromer/
2. See Faust and Wright.
3. For simplicity, we define an individual by his or her position and not by name. For example, we treat the St. Louis Fed Bank Presidents Thomas Melzer and William Poole as one "individual" because they were both presidents, during this time frame, of the St. Louis Fed.
4. There are no true measures of regional economic well-being where the region is defined by the Federal Reserve bank divisions. We follow Meade and Sheets and construct our own measure of regional unemployment by using population-based weights of state-level unemployment rates. For some regions, this is trivial because the region definition includes full states. For other regions, like St. Louis', the region includes several partial states. For these divisions, we use county-level population figures taken from the 1990 census.

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The Economy Looks for Its Second Wind

By Kevin L. Kliesen

Following a burst of activity late last year and early this year, the recovery hit the summer doldrums. The second-quarter slowdown was weaker than most forecasters were expecting, and many have since downgraded their assessment of growth over the second half of 2010. Still, forecasters generally do not expect a "double dip" recession, and few have significantly downgraded their assessment of the economy's growth prospects for next year. Still, many businesses remain hesitant to expand their productive capacity and hire additional workers.

To an important degree, this hesitancy stems from weak growth in consumer spending—despite solid growth of real after-tax income and labor productivity. On the one hand, lackluster consumer spending reflects weak job growth and a stubbornly high unemployment rate. On the other hand, it also reflects an upsurge in the personal saving rate and a downshift in the demand for credit (probably stemming from a desire by households to reduce their debt-to-income ratio).

At the same time, business expenditures on equipment and software have risen sharply since the third quarter of 2009. This upsurge reflects solid gains in manufacturing activity, which was bolstered by the inventory cycle and a rebound in exports. With the inventory restocking largely complete, the economy's dependence on exports and capital spending will increase in importance unless the pace of consumer spending picks up.

Traditionally, housing construction is a key driver of real GDP growth during the initial stages of the recovery. But that's not happening this time, as housing activity remains weak and appears unlikely to contribute much to near-term growth.

Businesses also remain reticent to expand because some stiff headwinds have produced higher-than-usual levels of uncertainty about the economy's near-term strength. This uncertainty stems from several sources.

The first is reversing—in a timely manner—the extraordinarily stimulative policies undertaken by U.S. fiscal and monetary policymakers. Trillion-dollar budget deficits and near-zero short-term interest rates are not consistent with maximum sustainable growth and price stability over time.

Second, the automotive, construction and finance industries are undergoing significant reorganization. These structural adjustments have lengthened the duration of unemployment for many individuals.

Third, many firms are uncertain about the future cost of their capital and labor because of recent policy initiatives related to health-care financing and financial regulation and to the possibility of higher tax rates next year.

Concerns about the health of the global economy and its potential effect on the United States have also weighed on U.S. financial markets. The source of concern mostly stems from the tumult in European banking and financial markets earlier this year. Facing unsustainably large budget deficits, several European countries, including the United Kingdom, undertook actions to reduce spending or raise taxes. Since the European sovereign debt crisis erupted in late April, equity prices and interest rates have fallen noticeably, and the St. Louis Fed's Financial Stress Index remains above its long-run average. In short, quelling these myriad uncertainties will help bolster the growth of U.S. output and employment.

Another Deflation Scare

In the minutes of the June meeting of the Federal Open Market Committee (FOMC), some members expressed concern about the possibility of deflation developing in the United States. Counting this episode, there have been three deflation "scares" in the United States over the past decade or so; the other two occurred in 1997 and in 2003. Although core and headline inflation (12-month percent change in the price indexes) is near zero if one accounts for the measurement biases that are still inherent in the Consumer Price Index, most forecasters believe that the probability of deflation this year and next remains extremely small.

At the same time, financial markets appear less certain about deflation. Over the next three years, Treasury market participants have lowered their expected inflation rate by 1 percentage point to about 0.75 percent. Assuming no change in food or energy prices, this would be the smallest three-year core inflation rate since the 1930s.

But as events over the past few years have shown, the unexpected can happen. With inflation at low levels, an adverse economic shock could cause actual and expected inflation to turn negative. If this were to occur on a sustained basis, nominal incomes would fall relative to debt, thereby increasing the real cost of servicing the debt and, thus, imparting a further drag on real activity and, thus, prices. Likewise, with an abundance of monetary stimulus in the pipeline, an unexpected surge in demand may cause the opposite to occur: an unacceptable rise in actual and expected inflation. The FOMC is committed to avoiding either outcome. Ω

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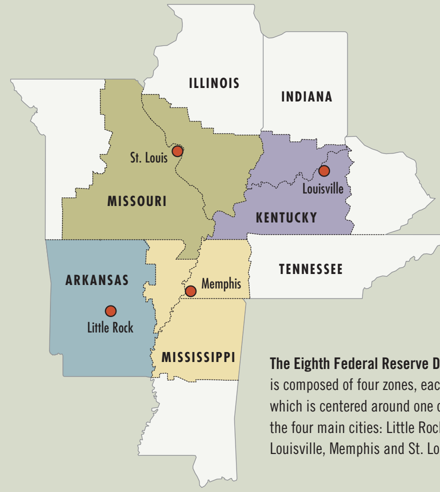
ILLUSTRATION: BRUCE MACPHERSON



The Eighth Federal Reserve District is composed of four zones, each of which is centered around one of the four main cities: Little Rock, Louisville, Memphis and St. Louis.

Tax Revenue Collections Slow Down Even More in the Eighth District States

By Subhayu Bandyopadhyay and Lowell R. Ricketts

State tax revenue continued to decline in fiscal year (FY) 2010 for the Eighth District states as well as for the combined 50 states.[1] At the same time, unemployment rates have been only gradually dropping, while assistance programs, such as unemployment insurance and Medicaid, continue to remain in high demand. As a result, states are facing large budget shortfalls that are becoming increasingly difficult to fill.

The 50 states will face a combined budget shortfall of $260 billion over the two-year period of 2011 and 2012, according to estimates from the Center on Budget and Policy Priorities.[2] To make matters worse, federal stimulus funding is running out, and concerns about the expanding federal debt may preclude states from receiving further assistance. Consequently, states face difficult decisions, including higher taxes and/or further cuts to public programs.

Although still on the decline, the decreases in the combined 50 states' tax revenue have leveled off in FY 2010 compared with FY 2009.[3] In FY 2010, sales tax, personal income tax and corporate income tax revenue were down 1 percent, 2.8 percent and 5.8 percent respectively. In contrast, FY 2009 tax revenue dropped 6.2 percent, 11.2 percent and 16.9 percent respectively. These three sources make up roughly 80 percent of states' general fund revenue.[4]

Figure 1 shows that the change in tax revenues averaged over the Eighth District states was much worse than the national average in FY 2010.[5] Sales tax, personal income tax and corporate income tax revenue fell 4.8 percent (1 percent for the nation), 8.9 percent (2.8 percent) and 14.2 percent (5.8 percent), respectively. These numbers contrast sharply with the preceding fiscal year (FY 2009, Figure 2), when Eighth District tax revenue fell 1.9 percent (6.2 percent for the nation), 8.4 percent (11.2 percent) and 13.5 percent (16.9 percent).

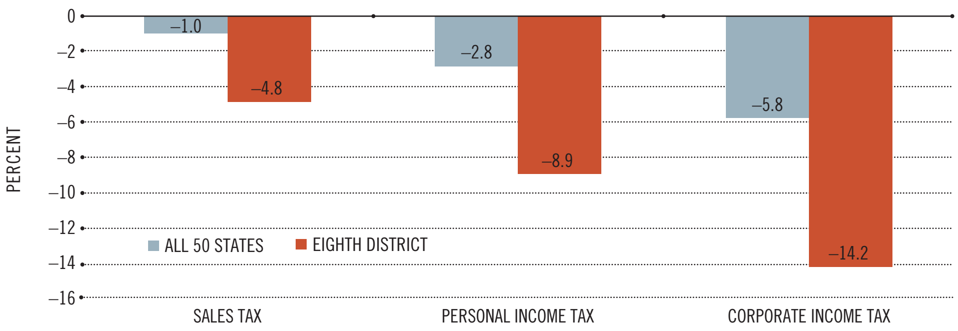
All seven of the District states experienced a decline in sales tax revenue in FY 2010. Sales tax revenue often falls when economic uncertainty discourages consumers from spending their disposable income. The states that experienced the largest declines were Illinois (–8.5 percent), Mississippi (–8.1 percent) and Arkansas (–6.1 percent). Interestingly, Indiana shifted from an 8.2 percent gain in sales tax revenue between FY 2008 and FY 2009 to a 3.6 percent decline between FY 2009 and FY 2010. Mississippi's revenue also significantly decreased between the same two periods with a shift from a –1.3 percent change to a –8.1 percent change.

Personal income tax revenue continued to decline across all seven District states in FY 2010. Personal income tax revenue falls when the unemployment rate is high because unemployed workers have significantly lower income subject to taxes. The largest declines were seen in Tennessee (–13.8 percent), Indiana (–12.5 percent) and Missouri (–10.6 percent). Between FY 2009 and FY 2010, Missouri and Mississippi experienced a greater decline (–10.6 percent and –8.3 percent respectively) in personal income tax revenue compared with the decreases between FY 2008 and FY 2009 (–6.4 percent and –4.4 percent, respectively.)

Five of the seven District states experienced a decline in corporate income tax revenue in FY 2010. Corporate income tax revenue declines as business revenues decrease due to a recessionary economic climate, which is characterized by lower demand and tighter credit conditions. Of the District states, Indiana (–34.8 percent), Illinois (–23.4 percent) and Missouri (–19.5 percent) experienced massive declines in corporate income tax revenue. The percentage declines between FY 2009 and FY 2010 for Indiana and Illinois were much more severe than the respective 7.8 percent and 8.1 percent declines experienced between FY 2008 and FY 2009. In contrast, Arkansas has been a bright spot for the District due to increases in corporate income tax revenue both between FY 2009 and FY 2010 (7.4 percent) and between FY 2008 and FY 2009 (1.6 percent).

FIGURE 1

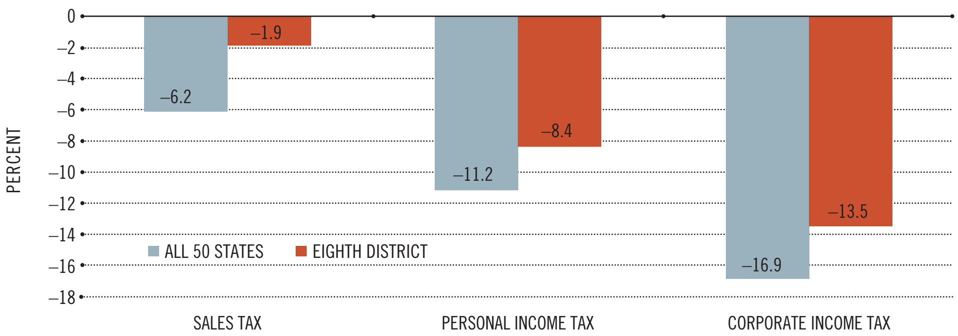
Fiscal Year 2010 Change in Tax Revenue Collections



SOURCE: National Governors Association and the National Association of State Budget Officers (2010)

FIGURE 2

Fiscal Year 2009 Change in Tax Revenue Collections



SOURCE: National Governors Association and the National Association of State Budget Officers (2010)

Stimulus funds have helped to alleviate some of the growing financial pressures on state budgets experienced during and after the recession. The American Recovery and Reinvestment Act set aside about $135-$140 billion over 2 1/2 years to help states maintain their current budgets. The Center on Budget and Policy Priorities estimates that $102 billion of the stimulus funds has already been disbursed to states over FY 2009 and FY 2010. That leaves about $36 billion or 26 percent of the total amount for FY 2011 and beyond.

With the stimulus funds almost depleted, states will have a more difficult time dealing with budget deficits than in the past two years, especially with the continued decline in tax revenue. To rectify this, further stimulus funding could be appropriated toward alleviating the financial burden on state budgets.[6] However, concerns about continued deficit spending and about the growing federal debt have made federal lawmakers apprehensive about providing further financial assistance.

If the economic recovery continues to progress, states will see improvements in the three major tax revenue sources. Indeed, for the combined 50 states, the declines in FY 2010 were much lower across all three major tax categories than in FY 2009. By comparison, the combined District states suffered larger declines in FY 2010 than in FY 2009. The cause of this reversal is not quite clear, nor is it certain that it will be sustained. Regardless, Eighth District states face a troublesome task of reconciling falling tax revenue, assistance programs that are in high demand and an economic recovery that has been slower than desired. Ω

Subhayu Bandyopadhyay is an economist and Lowell R. Ricketts is a research analyst at the Federal Reserve Bank of St. Louis. Go to http://research.stlouisfed.org/econ/bandyopadhyay/ for more on Bandyopadhyay's work.

ENDNOTES

1. The fiscal year for most states, including all of those in the Eighth District, ends June 30. The exceptions are: Alabama and Michigan, Sept. 30; Nebraska and Texas, Aug. 31; and New York, March 31.
2. See McNichol et al.
3. All tax revenue data are from the National Governors Association and the National Association of State Budget Officers. Data for FY 2009 represent actual revenue, while FY 2010 data are estimates of tax revenue as of June 2010.
4. See National Governors Association and the National Association of State Budget Officers.
5. Data for the Eighth District states pertain to the entire respective states even though only parts of six of these states are in the District. (See map at top of article.)
6. See McNichol et al.

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Shortcomings of and Improvements to Measures of Income across Countries

By Julieta Caunedo and Riccardo DiCecio

Every man is rich or poor according to the degree in which he can afford to enjoy the necessaries, conveniencies, and amusements of human life.[1]

—Adam Smith

The task of building measures of Gross Domestic Product (GDP) that allow for comparing standards of living across countries presents several challenges. In addition, data revisions can have surprising effects. Consider two examples:

- The 2010 version of the World Bank's World Development Indicators (WDI) implies that the United States was 10 times richer than China in 2005; the previous version (2007) implied that the United States was six times richer than China for the same year. Also for 2005, India was 12 times poorer than the United States in the first version of the WDI and 18 times poorer in the latest version.
- A popular source of real GDP data used in countless studies, the Penn World Table (PWT),[2] is not free of inconsistencies either. For example, differences between the latest two versions—both covering data for the year 1996—reach a standard deviation of 7.7 percent in annual growth rates for countries in the bottom third of the income distribution.[3]

These discrepancies are relevant for policy decisions. For example, the European Commission uses GDP per capita, adjusted for purchasing power parity (PPP), in deciding how to allot structural funds; these funds—25 percent of the EC's total budget—are used to smooth disparities between and within member states.[4]

Also, assessing the success of policies designed to fight extreme poverty across the world depends on the measure used to define the poverty line.[5] For example, when the World Bank decided in August 2008 that the official poverty threshold would rise from $1.08 of income a day to $1.25, an additional 430 million people around the world were automatically classified as being impoverished.

Comparable Measures of Output: Diagnosis

There are alternative ways to measure output in an economy: adding up the value added in each sector of the economy (production approach) or adding the value of total expenditure, i.e., consumption, investment, government spending and net purchases from abroad (or current account). Most of the national accounting is done using the latter.

One obvious difficulty in comparing income across countries stems from the fact that different countries use different currencies. The use of official exchange rates would not provide an adequate comparison. For example, if the Mexican peso were to depreciate by 10 percent with respect to the dollar, the GDP of Mexico would fall by the same amount when measured in dollars. However, if prices and incomes in Mexico were unchanged, Mexican residents would not be poorer by 10 percent.[6] The Big Mac Index constructed by *The Economist* gives us a better comparison. As of July 2010, we can buy a Big Mac for $3.73 on average in the U.S. and for 32 pesos in Mexico. The burger exchange rate is 32/3.73=8.57 pesos per dollar. At such an exchange rate, a burger in Mexico and in the U.S. would have the same price in dollars.[7] However, the actual nominal exchange rate is roughly 13 pesos per dollar: The dollars necessary to buy a burger in Mexico are not enough to buy the same burger in the U.S. This is what in economics jargon is called the purchasing power parity (PPP) adjustment. Still, moving from what theory suggests as the correct measure to the actual estimations is not without controversy. We wish people were to consume Big Macs only!

Some of the main issues in constructing these measures are:

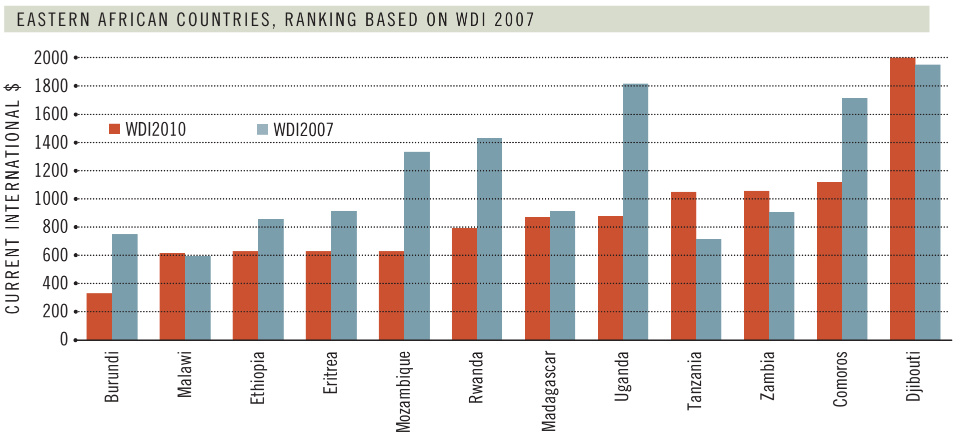
1. People in different countries typically consume different baskets of goods. For example, the per capita consumption of meat in Argentina is about 70 times larger than in India, where cow meat is not usually part of the diet. However, price indices that allow for international comparisons should be pricing the same basket of goods.

2. Even if the bundle is the same, its value should be computed using relative prices across countries (multilateral indexes). In general, durable goods in terms of consumption goods are more expensive in developing countries than they are in the developed world, and, vice versa, services are relatively cheaper in developing countries. The PWT uses a valuation of goods that tends to overstate the value of consumption in poor countries.

3. It is difficult to value activities related to the service sector (e.g., housing rental, government services, health care): What is the value added to the economy of a teacher?

4. Measures of real GDP that are based on

2005 Gross National Income per Capita Based on Purchasing Power Parity



SOURCE: WDI 2010 and WDI 2007 as reported by Nations Online at www.nationsonline.org/oneworld/GNI_PPP_of_countries.htm.

The ranking of Eastern African countries according to their gross national income per capita changes depending on which version of the World Bank's World Development indicators is used—the 2010 version or the 2007 version. Both sets pertain to data from 2005.

expenditure—the International Comparison Program (ICP) and PWT—are highly influenced by the relative price of the country's imports and exports, the so-called terms of trade. These measures tend to overstate physical output in countries that face a high relative price of exports.[8]

5. When aggregating data, it is common practice to use fixed shares of consumption, investment and public expenditure (the one corresponding to some arbitrary base year). This is problematic because changing base years (and, therefore, the contribution of each item in total output) may induce movements in estimates that do not stem from any fundamental change in value of the components.

Improving Matters

In view of these limitations, economists have relied on ingenious measures to approximate the actual growth of some countries. A recent paper develops a framework that combines measured GDP growth with growth in lights on earth, as measured from satellite images, to obtain a better estimate of "true" GDP growth.[9] For example, the authors of this study found that the "true" 10-year growth rate for Tajikistan was –0.06 percent instead of –0.227 percent as reported by WDI. The overall difference between the official figures and what the authors claim as the true GDP growth ranges from –0.25 percent to 0.25 percent.

More orthodox attempts aim at solving the problem of comparable bundles of goods. The latest PPP measures are built upon regional data, which typically compare groups of countries with similar economic structures and consumption patterns. Then, a few countries are selected as "bridges" to allow for cross-regional comparisons. An issue with this methodology is that the relative ranking of economies by GDP per capita may depend on the composition of the group of economies being compared.[10]

As for the treatment of the net foreign balance, some authors point out the importance of distinguishing the expenditures approach from the production approach to construct real GDP.[11] Real GDP constructed from the production side measures the production possibilities of an economy and should not take the terms of trade into account. Even though real GDP data in the PWT are constructed according to the expenditure approach, the growth rates are more similar to those of production-based real GDP. For a sample of 151 countries, the aforementioned authors found that for one-third of them, expenditure-based real GDP is above output-based real GDP. When assessing how rich are the rich, complementing current measures with output-based series may improve the quality of the analysis.

continued on Page 22

ENDNOTES

1 See Smith.
2 See Heston, Summers and Aten.
3 See Johnson, Larson, Papageorgiou and Subramanian.
4 See Koechlin and Schreyer.
5 See Chen and Ravallion.
6 Mexican residents would be worse off because imports priced in dollars would be more expensive.
7 See www.economist.com/node/16646178
8 See Feenstra, Heston, Timmer and Deng.
9 See Henderson, Storeygard and Weil.
10 See the World Bank's 2005 ICP Handbook.
11 See Feenstra, Heston, Timmer and Deng.
12 This is the so called "ring adjustment" that is available in the 2005 ICP update and will be included in the PWT 7.0 to be released later this year.

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continued from Page 21

How Much Do We Actually Know?

It is quite unrealistic to believe that the comparisons between poor and rich countries are so far off that the relative position of countries would be reversed. However, the picture gets blurry when looking at the poorest economies. The figure depicts the change in ranking of Eastern African countries due to the WDI update. Countries are ranked from poorer to richer (left to right) in 2005 based on the latest version of the WDI (2010). The ranking gets shuffled if one uses the 2005 figures from the previous version of the WDI (2007).

Although a 40 percent margin of error is allowed for countries with the lowest data quality in the PWT, it is not plausible to attribute all of the inconsistencies to poor data quality. Merely changing the base year creates standard deviations in the differences of annual growth rates as large as 5.4 percent on average.

Moreover, the current measures tend to build price and quantity indices for baskets of goods resembling more those consumed in the rich than in the poorest economies. Arguably, the most promising project directed to partially solve this problem seems to rely on the regional grouping of countries.[12]

We also expect the issue with the treatment of international accounts to be solved soon. If not, the user should be particularly careful when looking at countries that are resource-rich or that have an ample exportable base in commodities: These countries are the ones most affected by changes in relative prices of their exportable goods.

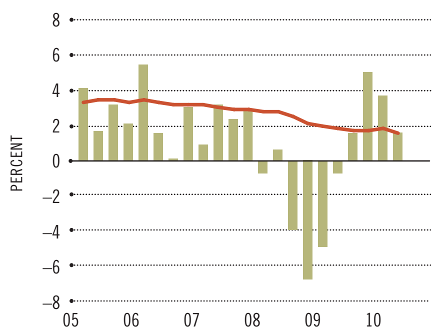
We should expect further adjustments in the growth figures across countries. Hopefully, adjustment in levels and growth rates will be smoothed along time. Common sense remains the best way to assess results. Robustness checking should be combined with in-depth understanding of how data are constructed. Ω

Riccardo DiCecio is an economist at the Federal Reserve Bank of St. Louis. Julieta Caunedo is a research analyst. Go to http://research.stlouisfed.org/econ/dicecio/ to see more of DiCecio's work.

E C O N O M Y A T A G L A N C E

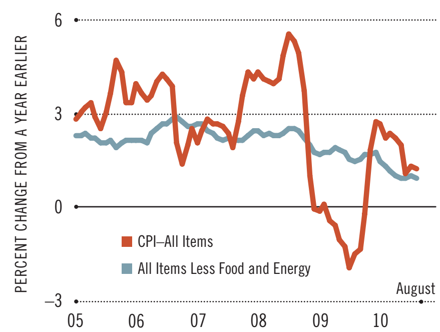
Eleven more charts are available on the web version of this issue. Among the areas they cover are agriculture, commercial banking, housing permits, income and jobs. Much of the data is specific to the Eighth District. To go directly to these charts, use this URL: www.stlouisfed.org/publications/re/2010/d/pdf/10-10data.pdf

REAL GDP GROWTH

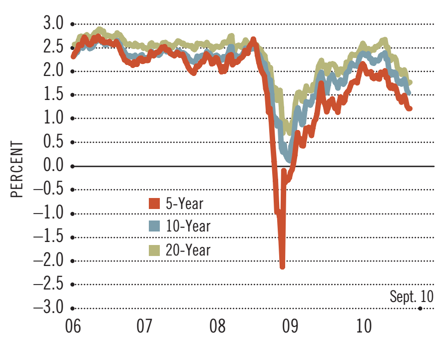


NOTE: Each bar is a one-quarter growth rate (annualized); the red line is the 10-year growth rate.

CONSUMER PRICE INDEX

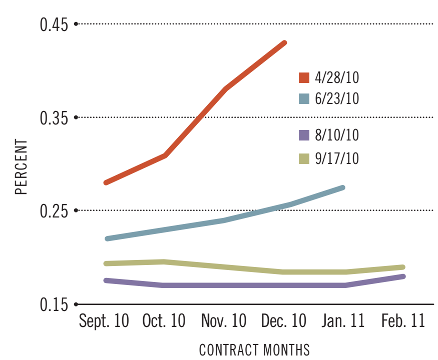


INFLATION-INDEXED TREASURY YIELD SPREADS



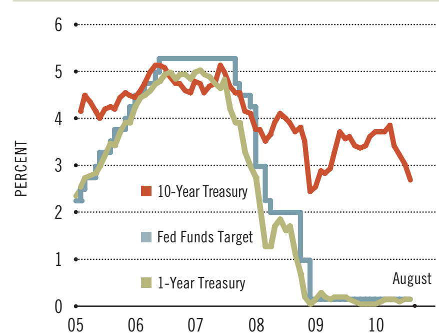
NOTE: Weekly data.

RATES ON FEDERAL FUNDS FUTURES ON SELECTED DATES



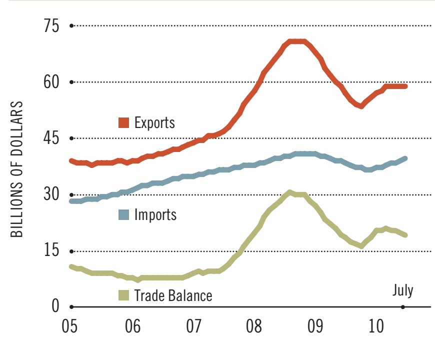
CIVILIAN UNEMPLOYMENT RATE

INTEREST RATES



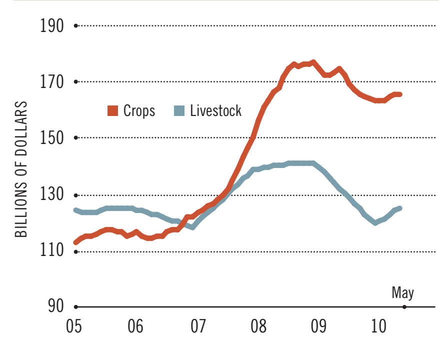
NOTE: On Dec. 16, 2008, the FOMC set a target range for the federal funds rate of 0 to 0.25 percent. The observations plotted since then are the midpoint of the range (0.125 percent).

U.S. AGRICULTURAL TRADE



NOTE: Data are aggregated over the past 12 months.

FARMING CASH RECEIPTS



NOTE: Data are aggregated over the past 12 months.

FACTORY CLOSINGS

Shock Community into Opening Wallets for Economic Development

At the DENSO factory, air conditioning, ventilating and heating systems are made for cars. The city of Osceola lured the Japanese company with a $3 million package, which included an improved site for the plant and a break on electric rates. Seven years later, the company is one of the city's major employers.

By Susan C. Thomson

In Mayor Dickie Kennemore's telling, Osceola, Ark., had already been through a half century of economic peaks and valleys. Plants opened; plants closed. Good times followed bad, and vice versa.

Then came the big plunge in 2000 and 2001. In less than two years, textile maker Fruit of the Loom and furniture manufacturer EckAdams left town, Southwire shuttered one of its two Osceola wire-making plants and the Siegel-Robert Inc. auto parts factory in tiny nearby Wilson shut down. Kennemore calculates the four closings together cost at least 2,000 jobs for his town, located on the Mississippi River in the state's northeastern corner.

The losses shocked the city into action. It began to pursue industrial development, using cash generated by the city-owned electrical distribution system to help make it happen.

Meanwhile, another big setback occurred in 2002, this time in Blytheville, 20 miles north of Osceola. Both of the towns are Mississippi County seats, with Blytheville having about twice the residents. Blytheville's setback occurred when it lost out to Murray, Ky., in the bidding for a Pella plant that makes windows and doors.

The towns' misfortunes were a wakeup call for the countywide Great River Economic Development Foundation, which had been trying unsuccessfully to attract new industry.

"We were responding to companies' requests for information, praying to God that somebody would visit, and getting absolutely nothing," says Executive Director Clif Chitwood.

Unlike the city of Osceola, the foundation was approaching prospects empty-handed because it had no spare funds for inducements. As a means to a nest egg, it proposed a half-cent, county sales tax for economic development. In a countywide election in 2003, the proposal squeaked by, 60 votes to spare.

Osceola/Mississippi County, Ark.
by the numbers

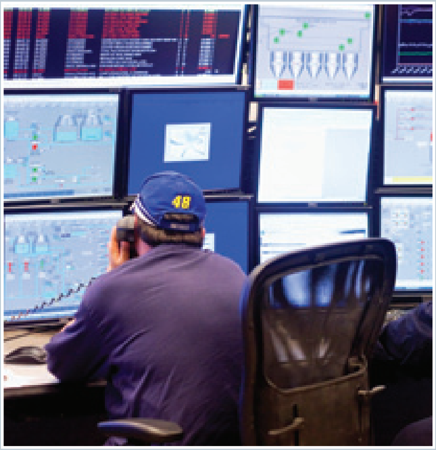
Osceola Population	7,894 *
Mississippi County Population	46,605 *
County Labor Force	20,949 **
County Unemployment Rate	10.8 percent **
County Per Capita Personal Income	$30,437 ***

* U.S. Bureau of the Census, estimate July 1, 2009
** HAVER (BLS), July 2010, seasonally adjusted
*** BEA/HAVER 2008

TOP EMPLOYERS IN OSCEOLA

American Greetings	1,250 †
DENSO Mfg.	419 †
Kagome/Creative Foods Inc.	241 †
Viskase	230 †
Osceola School District	146 ††

† ReferenceUSAGov, Infogroup Inc.
†† Self-reported



At the Plum Point Energy Station, employees monitor operations of the coal-fired power plant via a bank of computer screens. PHOTO BY SUSAN C. THOMSON

The $1.2 billion Plum Point power plant went into service this summer. The city provided $3.5 million in incentives for the project. A second power plant is planned for the same site. It will qualify for 20 years' abatement of real estate taxes.
PHOTO COURTESY OF NAES CORP., PLUM POINT ENERGY STATION

At Kagome/Creative Foods Inc., Dominique Jefferson packages products for shipment as Larry Jacobs looks on. The company received more than $1 million in taxpayer money for a new water treatment plant.
PHOTO BY SUSAN C. THOMSON

That same year, Osceola's own efforts began to pay off. The city landed DENSO Mfg., a Japanese maker of automotive heating, ventilating and air-conditioning systems. A $3 million package of sweeteners, including land, site improvements and five years of below-market electric rates, bested all bids for the plant. In a smaller side deal, Systex Products, which supplies injection moldings to DENSO, tagged along to set up shop next door.

Chitwood gives Osceola "a lot of credit" for DENSO and its other big solo win, the Plum Point Energy Station. The city began pursuing the $1.2 billion coal-fired power plant in 2003 when Dynegy Inc. and LS Power announced it as a joint project. An offer of a 1,000-acre site with infrastructure improvements and 20 years of real estate tax abatement proved persuasive. The incentives totaled $3.5 million.

Work on the power plant began in 2006. By Kennemore's estimate, activity during the four years of construction peaked at 1,200 workers, 90 percent of them from out of town. The plant went into service this past summer. The site was designed and is ready to accommodate a second plant of the same size. Construction awaits only a state clean air permit. The new plant will also qualify for 20 years' abatement of real estate taxes.

As the first power plant was completed, work began on Osceola's latest industrial coup, this one by way of the tax-bankrolled foundation. The foundation put up $3 million to buy and start work on a 40-acre site where a German company will build a $10 million, 65,000-square-foot plant for making components for wind turbines. It's the first U.S. plant for the company, Beckmann Volmer. When the plant opens next spring, about 300 will work there. Already, there are plans for a $7.5 million addition, which will require 200 more workers.

Alexandra Altvater, the company's director of business development, says it was attracted to Osceola by "the best package" among those offered by three Midwestern states. Arkansas, eager for green industry, offered $4 million toward the building; this will kick in after the foundation's $3 million runs out.

That $3 million is a big chunk of the $17 million in tax proceeds that the Economic Development Foundation had committed to two dozen development projects by mid-2010. Chitwood calculates that the money has secured for Mississippi County 3,000 jobs with a total annual payroll of $90 million. In dollars and jobs, Osceola and Blytheville have by chance benefited in rough proportion to their populations, he says.

The foundation divides its attention and resources between recruiting new employers and helping existing ones expand and, thereby, keep or add jobs. "If a company isn't making a serious capital investment about every 10 years, you can wave them goodbye," Chitwood believes.

With jobs to be gained as a result, the foundation contributed $91,000 toward sewer upgrades at Gilster Mary Lee Corp., a private label foodmaker in Osceola, and $1.2 million in a new water treatment plant at Kagome/

A truck delivers grain from nearby farm fields to Osceola's port, already the busiest in Arkansas and being expanded to twice its current capacity. The city is spending $3 million on the improvements.
PHOTO BY SUSAN C. THOMSON

A vacant plumbing supply store downtown was donated by the landlord to the city, which hopes to renovate it for re-use. The city is asking other absentee landlords of empty buildings to do the same. PHOTO BY SUSAN C. THOMSON

Creative Foods Inc., which makes tomato-based sauces, margarine and other oil-based spreads. American Greetings Corp. got $550,000 for electrical upgrades when the growing company was hiring.

Based in Cleveland, Ohio, the greeting card company has a long history and deep stake in Osceola—and vice versa. A presence in town since 1961, it has grown into a 2.5-million-square-foot manufacturing and distribution complex. In physical size and numbers of employees, it's the company's as well as the city's largest plant. The city prizes the company not only as a reliable, mainstay employer but also as an exemplary corporate citizen.

"Their staff lives here," says Eric Golde, executive director of the Osceola-South Mississippi County Chamber of Commerce. "They participate in the Chamber of Commerce. They participate in all the civic activities. The corporation is a major supporter of events."

For employers old and new, the foundation prefers to invest in tangibles like land, buildings, access roads and utilities while allowing for an occasional grant for training employees. One of these training grants, for $281,000, went to Osceola's Viskase Corp., a maker of casings for sausage and other food. Another recipient of foundation money was structural steelmaker Telling Industries, which received $425,000 to buy and repair the vacant Southwire plant. About 50 people work at the plant, which opened two years ago.

For all the money spent and jobs created so far, Mississippi County's jobless rate is stuck above the national average—where it's been historically, observes Greg Reece, a senior vice president of the First National Bank of Eastern Arkansas and head of its Osceola branch. That's because "a lot of our work force isn't mobile," he says.

Despite high unemployment, it is "very, very hard to find people to work," says the human resources manager at Kagome/Creative Foods, Nita Reams. In Chitwood's view, this is partly a case of too many undereducated, unemployable youth—"a systemic multigenerational" problem that he says 10 to 20 years of above-average job growth will fix.

Osceola's recent growth has been on the outskirts, amid fields of corn, soybeans, rice and cotton, all evidence of the strong role that agriculture has traditionally played in the community and still does. Grain shipments help make Osceola's port Arkansas' busiest, with annual shipments topping 200 million tons. The city is spending $3 million on improvements, which will double the port's capacity by the end of the year.

Kennemore says it's time now for the city "to take a breather on industrial development and let the new industries and new jobs come to fruition."

For the immediate future, the city is concentrating on commercial development, he says. One focus is downtown, where half of the storefronts stand empty. He says the 12-square-block area began emptying out in the 1970s as the mom-and-pop retailers retired. The city has recently begun asking absentee downtown landlords to deed their properties back to the city, which could then fix them up and lease them to new operators. Kennemore imagines "a sports bar, a little coffee shop, a sandwich shop, an old-fashioned soda bar. …"

Over the years, Osceola's commercial center has shifted from downtown to the four-mile stretch of Highway 140 between there and Interstate 55 to the west. Kennemore says that a strip mall developer and chain stores have shown interest and that a tire store has bought a site there. It's across the highway from 15 acres Wal-Mart recently bought for one of its "supercenters." No incentives were required, and construction is to begin in January 2011, Kennemore says.

Still, the sales tax is seen as key to continued growth.

The sales tax "has exceeded what we thought it would do," says Steve McGuire, the county's "judge," or elected chief executive.

Voters passed the tax on trust and with a 10-year time limit. In August, with seven years of results to show for it, backers confidently returned to the electorate with a proposal to extend the tax for 10 more years—to 2023.

The measure sailed through with a 77-percent favorable vote, heartening Chitwood. "It lets us continue without having to worry about losing momentum," he says. Ω

Susan C. Thomson is a freelancer.

LETTERS TO THE EDITOR

The first three letters are in response to "Unconventional Oil Production: Stuck in a Rock and a Hard Place," an article that appeared in the July 2010 issue of *The Regional Economist*. To read more letters, go to www.stlouisfed.org/publications/re/letters/index.cfm

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Aug. 6, 2010

Dear Editor:

This article seems correct in what it covers. But it is also incomplete and out-of-date because it fails to discuss recent successful development of oil shales in the Niobrara and Bakken formations using conventional drilling and fracturing techniques. Accounts of operations in these two new areas have been very promising, describing potential of significant oil production being developed over the next several years without the environmental problems that nag oil sands and the mining of oil shale. This is outstanding news for U.S. oil production. Perhaps a followup article would be in order for the benefit of your readers.

Henry Corder, investment adviser in New Orleans

Response from Authors of Article, Kristie Engemann and Michael Owyang:

Our goal was to give a broad overview of production from oil sands and oil shale and, specifically, the feasibility in an economic sense. We are aware of potentially new technology to develop unconventional oil, but due to publication lags, we relied on older studies for our sources.

If you would like to share more up-to-date information, please send it and perhaps we can post it.

Aug. 9, 2010

Dear Editor:

I am curious as to your source of information as Suncor, the Canadian company, has indicated that it is profitable when oil is above $41/bbl while this article indicates that the level is above $70/bbl. Can you clarify?

John Sturges, director of investments at Oppenheimer & Co. in New York

Response from Authors:

We wrote that existing Canadian oil sands operations could be economically feasible even with oil prices of less than $50 per barrel, while new operations would require at least $70 per barrel. We obtained this information from:

McColl, David. "The Eye of the Beholder: Oil Sands Calamity or Golden Opportunity?" Canadian Energy Research Institute, Oil Sands Briefing, February 2009.

Aug. 22, 2010

Dear Editor:

I read with great interest the article "Unconventional Oil Production" in July's *Regional Economist.* Concerning oil sands, you may be interested to know that over a year ago, my students and I developed a method of separating oil from oil sand that uses no water and only 25 percent of the energy of the conventional separation method. Even though you might think that this development would be of interest to the oil producers in Alberta, and even though I have written and e-mailed all of the "players" that I could identify (over 50), plus the Albertan government, my method has generated little or no interest at all by the oil sand operators. This is especially puzzling since merely investigating this waterless, low energy (shall we say "green"?) technique would address some of the most serious issues that the oil companies are facing in Alberta.

My patent application number is 20100096298, and I will be happy to share the lab results, machine description (the machine has only one moving part), scale-up calculations, and more. My e-mail is bdemayo223@yahoo.com.

Ben de Mayo, professor emeritus of physics, University of West Georgia, Carrollton, Ga.

The following was received after several articles appeared in St. Louis Fed publications on the topic of quantitative easing (QE).

July 27, 2010

Dear Editor:

I would like to express my thoughts on the past and current policies and philosophy of the Fed and the FOMC. I do think that the use of quantitative easing (now) is a questionable policy which probably acts to promote a "moral hazard" for our system. What Mr. Bernanke and the FOMC are (were) practicing (2008-2010) creates a confusing use of our monetary unit (the dollar). I would maintain that creating some $1.4 trillion via QE (2008-09) and then collecting interest on this sum is a clear moral hazard for most Americans ... and also a policy which promotes a mentality that is not philosophically sound. The message that this policy sends to the marketplace is that our market system cannot solve its problems. Furthermore, this policy sends a message to the American people that capitalism has failed and that select sectors must be favored to resolve the issues.

The fact that the excess revenue (billions) earned from this sum is transferred to the Treasury account does not really help. Revenue is earned by creating QE via policy action, and this gives the public (myself and others) the perception that the Fed is playing by special and somewhat unique accounting rules. I think that most Americans have viewed our central bank as independent from favor or special profits up until now.

The Fed, when acting as an umpire or coach, is acceptable to most Americans ... but when policies are used to FAVOR select persons, sectors, entities, then a moral hazard is evident. Has the QE policy allowed the marketplace to rebalance? This is doubtful, in my opinion. Do the Fed and FOMC policymakers think that favoritism is absolutely necessary given our current situation? If so, then this policy needs to be explained to the public so that the people will support this policy. Implementing policies via the media and then assuming that the public will support these policies is doubtful strategy. And we all know that CONFIDENCE is key to progress under our system.

Perception is important, and the soundness of our monetary unit ($1.00) is also important. I might add that a monetary unit ($1.00) which is not grounded in physical reality is much more difficult to maintain within a marketplace that has lost confidence. Fiat money can work if the people have confidence and if they view our central bank as independent (no favoritism). History, however, does suggest that imaginary monetary units ($1.00 and multiples thereof) can collapse quite quickly if the marketplace loses confidence. In the final analysis, money is a psychological concept. I hope my comments will be helpful to those who are representing us within the Fed and the FOMC.

Donald B. Swenson, philosopher in Marana, Ariz.

ASK AN ECONOMIST

Adrian Peralta-Alva has been an economist in the Research division of the Federal Reserve Bank of St. Louis since May 2008. His expertise is macro-economics. Recently, he has been studying whether it is a good idea to spend more on infrastructure as a way to boost the economy now that housing construction has slowed down so much. In his free time, he enjoys spending time with his family, traveling and playing outdoor sports. For more on his work, see http://research.stlouisfed.org/econ/peralta-alva/

Why have Americans gained so much weight during the past 50 years?

The average weight of an American adult female has increased by 14 pounds since the early 1960s, going from 140 to 154 pounds. The average weight of an adult male has increased by 16 pounds, from 166 to 182. Obesity rates have risen dramatically as well. What is behind this increase in weights? The quick answer is lower taxes, along with higher wages for women.

The consensus in the medical literature is that people gain weight when calories consumed are greater than calories expended. A switch to sedentary lifestyles in the U.S. is an important factor accounting for obesity levels. However, the switch to a sedentary lifestyle in the U.S. occurred before the mid-1960s. Further, estimates of the decline in calories expended in the U.S. suggest these changes are too small to account for recent increases in weights. It is well-established, nevertheless, that American adults consume more calories now than in the 1960s.

Hence, Americans have gained weight because they consume more calories than before. But why has this occurred? Nationally representative data of food consumption by U.S. individuals suggests that this increase in caloric intake can be attributed to a dramatic increase in calories consumed from food prepared away from home (restaurants, fast food, snacks, frozen pizza eaten at home, etc.), which more than compensated for a simultaneous decline in calories consumed from foods prepared at home from scratch.

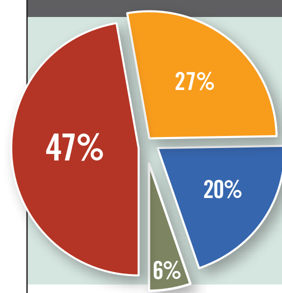
Economic theory can help us understand the changes in the food consumption patterns of American households. In fact, these changes roughly coincide with important declines in income taxes and with a substantial increase in the average wage of women relative to that of men. Both of these changes increase the opportunity cost of cooking at home from scratch. A higher opportunity cost of time can also help us understand some of the dramatic changes in time use patterns of American households during the last 50 years. Married females devote more than twice the number of hours to jobs outside the home while the total household time devoted to food preparation and cooking has gone down by a factor of two. Since high consumption of food prepared away from home may be here to stay, policies focused on informing individuals so they can make healthier choices when eating food prepared away from home may be useful in controlling the obesity epidemic. If consumers demand healthier food, then the establishments that produce it may respond by providing higher quality food, achieving a virtuous cycle as well.

Submit your question in a letter to the editor. (See Page 2.) One question will be answered by the appropriate economist in each issue.

FED FLASH POLL RESULTS

When a new issue of *The Regional Economist* is published, a new poll is posted on our web site. The poll question is always related to an article in that quarter's issue. Here are the results of the poll that went with the July issue. The question stemmed from the article "An Early Childhood Investment with a High Public Return."

SHOULD SOCIETY INVEST IN HIGH-QUALITY EARLY CHILDHOOD EDUCATION PROGRAMS FOR DISADVANTAGED CHILDREN?



- Yes, and use tax dollars because the investment will save taxpayers in the long run.
- Yes, but only if funding is provided by private sources.
- No. This is the family's responsibility.
- No. Society has higher priorities at this time.

583 RESPONSES AS OF 9/20/2010

THIS ISSUE'S POLL QUESTION:

What impact, if any, have the unusually low interest rates of the past couple of years had on you?

1. Great. I refinanced my mortgage, saving a bundle.
2. Good. I'm paying lower rates on some of my credit cards, and/or my home equity loan rate has fallen.
3. My finances haven't changed any.
4. What good are low interest rates if you can't get a loan?
5. Lousy. I live on the interest on my savings.

After reading "Low Interest Rates Have Benefits...and Costs" on pp. 6-7, go to www.stlouisfed.org/publications to vote. (This is not a scientific poll.)

MORE ECONOMIC INFORMATION THAT'S EASY TO ABSORB

If you like to get your economic information in relatively plain English (as we try to give you in *The Regional Economist*), you might want to check out *Liber8*, an economic information portal at http://liber8.stlouisfed.org/. The librarians at the St. Louis Fed designed this site with university and government document librarians, students and the general public in mind. The librarians recognized that economic information can, at times, be difficult for the noneconomist to find and understand. This site provides a single point of access to the economic information that the Federal Reserve System, other government agencies and data providers have to offer. The librarians specifically selected nontechnical sources that would be simpler to use and easier to understand.

One of the highlights of the site is an (almost) monthly newsletter, which tackles a current economic topic, usually in only a few paragraphs. (September's feature: "State Pension Plans in Peril: The Need for Reform.") These articles are usually written by assistants to our economists. The theme of each article carries over into much of the other information on the portal. (For example, while that September issue of the newsletter appears on the portal page, other articles, charts and economic indicators related to pension issues also are featured on the home page.)

Liber8 is a free service of the St. Louis Fed. No registration or password is required.

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N E X T   I S S U E

The Bailout Crisis
How Large? How Costly?

In a financial crisis, shrinking liquidity and credit shortages threaten both financial and nonfinancial firms. During the crisis of the past several years, the federal government and the Federal Reserve extended unprecedented amounts of assistance to banks, brokerage firms and auto manufacturers, as well as to the broad financial markets.

As the economy improves, some of these programs are unwinding with profits to the government, while others remain in the red. Did the government do too much or too little? And what are projections for the taxpayers' final bill? Find out in the January issue of *The Regional Economist*.

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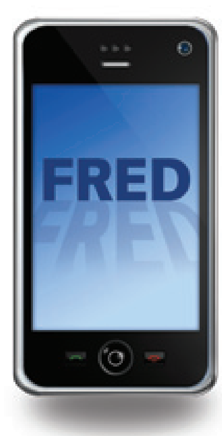
Calling All Data Junkies: FRED Is on the Phone

FRED®, our signature database, has gone mobile. On your phone, iPad or other mobile device, you can now browse the entire FRED series, view the data and even see graphs formatted for smaller screens. Nearly 22,000 datasets are available on FRED (Federal Reserve Economic Data). Jump in at **http://m.research.stlouisfed.org/fred/** No registration is required, and, as always, there's no charge.



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