Economic Trends

June 2009 (Covering May 15, 2009, to June 10, 2009)

In This Issue:

FEDERAL RESERVE BANK
of CLEVELAND

April Price Statistics

05.20.09
by Brent Meyer

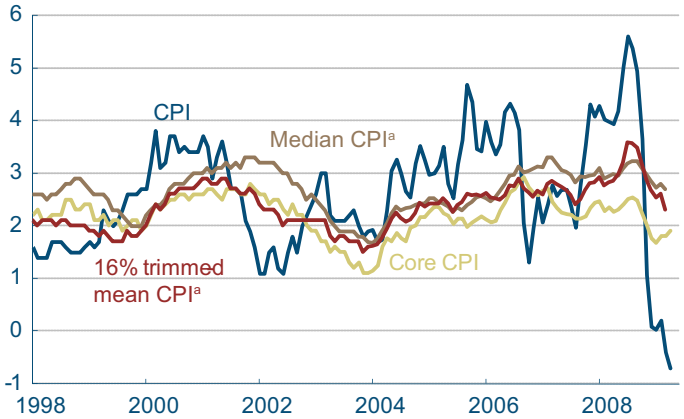
April Price Statistics

	Percent change, last					
	1mo.[a]	3mo.[a]	6mo.[a]	12mo.	5yr.[a]	2008 average
Consumer Price Index						
All items	−0.2	0.9	−3.9	−0.7	2.6	0.3
Less food and energy	3.1	2.5	1.7	1.9	2.2	1.8
Median[b]	2.1	2.1	2.1	2.6	2.8	2.9
16% trimmed mean[b]	0.9	1.3	1.1	2.1	2.6	2.7
Producer Price Index						
Finished goods	3.1	−3.0	−8.6	−3.5	2.9	0.2
Less food and energy	0.7	1.2	1.7	3.4	2.5	4.3

a. Annualized.
b. Calculated by the Federal Reserve Bank of Cleveland.
Sources: U.S. Department of Labor, Bureau of Labor Statistics; and Federal Reserve Bank of Cleveland.

CPI, Core CPI, and Trimmed-Mean CPI Measures

12-month percent change



a. Calculated by the Federal Reserve Bank of Cleveland.
Sources: U.S. Department of Labor, Bureau of Labor Statistics, Federal Reserve Bank of Cleveland.

The Consumer Price Index (CPI) was virtually flat in April, falling 0.2 percent at an annualized rate, pulled down in part by falling food and energy prices, which were down 2.2 percent and 25.1 percent, respectively. Over the past 12 months, the CPI has fallen 0.7 percent, its sharpest decrease since June 1955. The growth rate in energy prices is down 25.2 percent over the past year—compared to jumping above 29 percent last July—which is driving much of the price declines in the overall CPI.

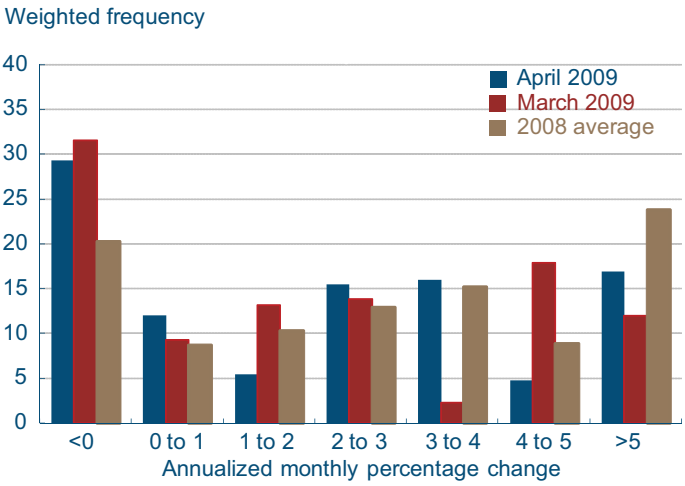
Excluding food and energy prices (core CPI), the index jumped up 3.1 percent. As was the case in March, the excise tax on tobacco was the smoking gun pushing up the core CPI. Tobacco prices jumped up 191.7 percent (annualized rate) as the tax went into effect on April 1. Early adopters raised prices in March, which led to a 251 percent increase (annualized) that month.

Alternative core measures of underlying inflation—the median CPI and the 16 percent trimmed-mean CPI—were somewhat disparate in April. The median CPI rose 2.1 percent in April and is up 2.6 percent over the past 12 months, while the 16 percent trim rose just 0.9 percent during the month and is up 2.1 percent over the past year.

The price-change distribution revealed that roughly 29 percent of the consumer market basket (by expenditure weight) exhibited price decreases this month, compared to 32 percent in March. At the same time, 17 percent of the index was in the upper tail (price increases above 5.0 percent), compared to 12 percent in March and an average of 24 percent in 2008. Even though it looks like the lower tail of the price-change distribution has grown in recent months, the share of the consumer market basket exhibiting price increases ranging between 0 percent and 3 percent was 33 percent in April, up 1.0 percentage point from the 2008 average.

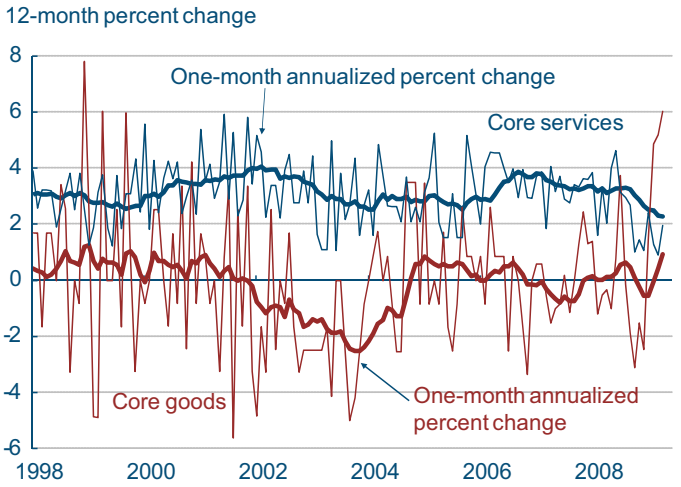
Both short-term and longer-term consumer infla-

CPI Component Price Change Distribution



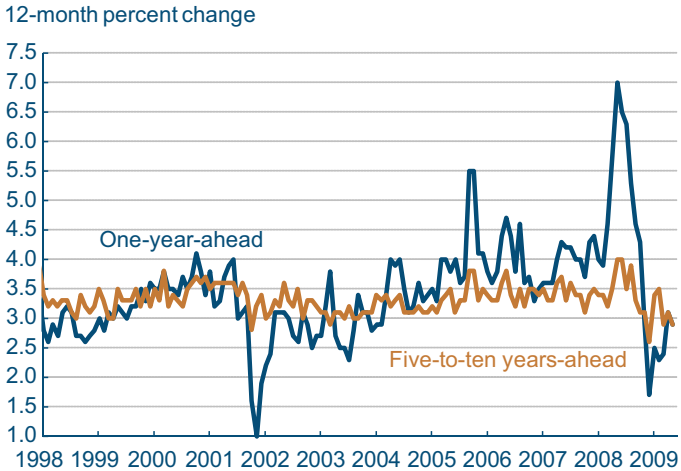
Source: Bureau of Labor Statistics

Core CPI Goods and Core CPI Services



Sources: U.S. Department of Labor, Bureau of Labor Statistics.

Household Inflation Expectations

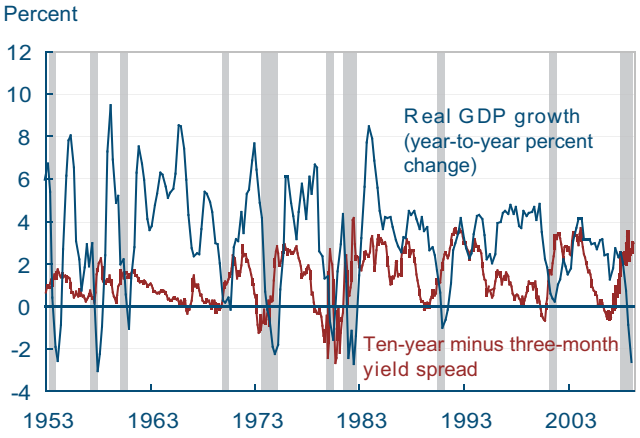


Note: Mean expected change as measured by the University of Michigan's *Survey of Consumers*.
Source: University of Michigan.

tion expectations ticked down slightly in May. One-year-ahead average expectations ticked down from 3.1 percent in April to 2.9 percent in May. Longer-term (5–10 years ahead) average inflation expectations also fell to 2.9 percent in May, though they are still above their recent low of 2.6 percent in December 2008.

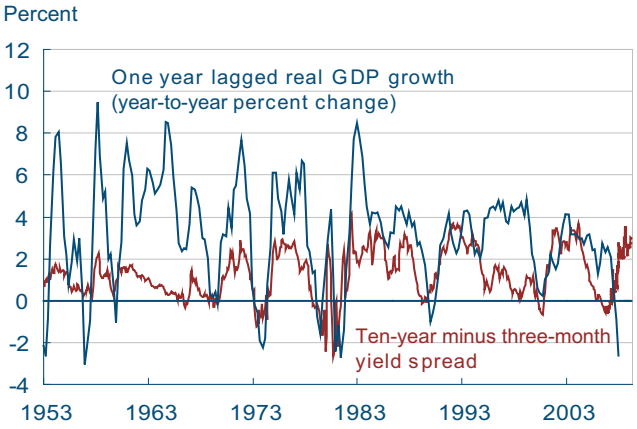
The Yield Curve, May 2009

Yield Spread and Real GDP Growth



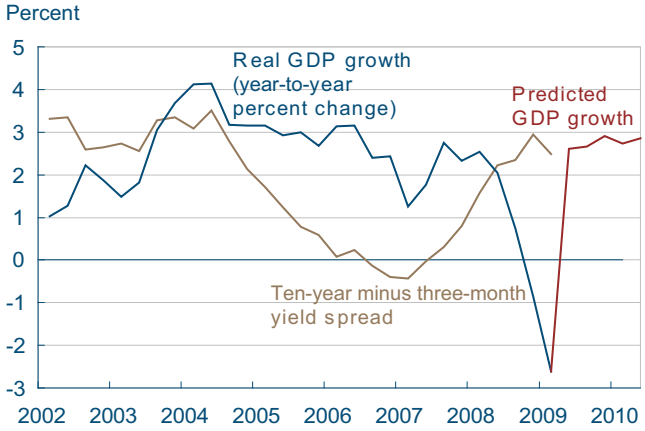
Note: Shaded bars represent recessions.
Sources: Bureau of Economic Analysis; Federal Reserve Board.

Yield Spread and Lagged Real GDP Growth



Sources: Department of Commerce, Bureau of Economic Analysis; Board of Governors of the Federal Reserve System.

Predicted GDP Growth and Yield Spread



Sources: Department of Commerce; Bureau of Economic Analysis; Board of Governors of the Federal Reserve System; authors' calculations.

05.21.09
by Joseph G. Haubrich and Kent Cherny

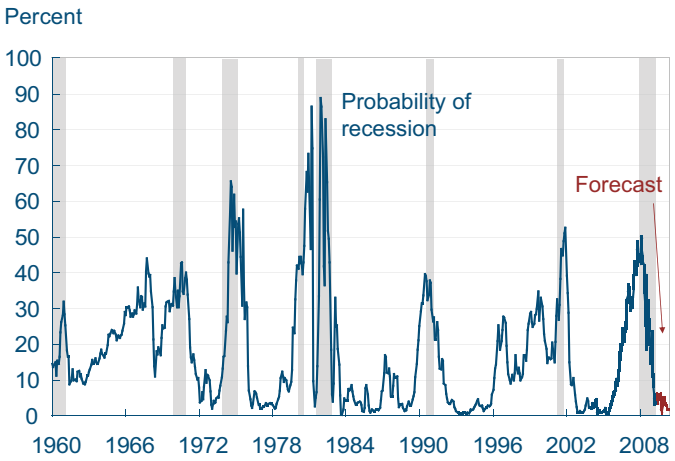
Since last month, the yield curve has shifted up and gotten steeper, with both short and long rates rising. The spread between these rates, the slope of the yield curve, has achieved some notoriety as a simple forecaster of economic growth. The rule of thumb is that an inverted yield curve (short rates above long rates) indicates a recession in about a year, and yield curve inversions have preceded each of the last seven recessions (as defined by the NBER). In particular, the yield curve inverted in August 2006, a bit more than a year before the current recession started in December 2007. There have been two notable false positives: an inversion in late 1966 and a very flat curve in late 1998.

More generally, a flat curve indicates weak growth, and conversely, a steep curve indicates strong growth. One measure of slope, the spread between ten-year Treasury bonds and three-month Treasury bills, bears out this relation, particularly when real GDP growth is lagged a year to line up growth with the spread that predicts it.

Since last month, the three-month rate edged upward from a low 0.13 percent to a barely higher 0.18 percent (for the week ending May 15). The ten-year rate increased from 2.96 percent to 3.14 percent. This increased the slope to 296 basis points, which is up from April's 283 basis points and well above March's 253. The flight to quality, the zero bound, and the turmoil in the financial markets may impact the reliability of the yield curve as an indicator, but projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.9 percent rate over the next year. This is not that far from other forecasts.

While this approach predicts when growth is above or below average, it does not do so well in predicting the actual number, especially in the case of recessions. Thus, it is sometimes preferable to focus on using the yield curve to predict a discrete event:

Probability of Recession Based on the Yield Spread



Note: Probability is estimated using a probit model; Shaded bars indicate recessions.
Sources: Department of Commerce, Bureau of Economic Analysis, Board of Governors of the Federal Reserve System, authors' calculations.

Durations of Yield Curve Inversions and Recessions

Recession	Duration (months)	
	Recession	Yield curve inversion (before and during recession)
1970	11	11
1973-1975	16	15
1980	6	17
1981-1982	16	11
1990-1991	8	5
2001	8	7
2008-present	16 (through April 2009)	10

Note: Yield curve inversions are not necessarily continuous month-to-month periods.
Sources: Bureau of Economic Analysis, Federal Reserve Board, and authors' calculations.

To read more on the NBER's Recession Dating Procedure
http://www.nber.org/cycles/recessions.html

To read more on other forecasts:
http://www.econbrowser.com/archives/2008/11/gdp_mean_estima.html

For Paul Krugman's column:
http://krugman.blogs.nytimes.com/2008/12/27/the-yield-curve-wonkish/

"Does the Yield Curve Yield Signal Recession?," by Joseph G. Haubrich. 2006. Federal Reserve Bank of Cleveland, *Economic Commentary* is available at:
http://www.clevelandfed.org/Research/Commentary/2006/0415.pdf

whether or not the economy is in recession. Looking at that relationship, the expected chance of the economy being in a recession next May stands at a very low 1.8 percent, just down from April's 1.9 percent, but above March's 1.1 percent.

The probability of recession coming out of the yield curve is very low, but remember that the forecast is for where the economy will be in a year, not where it is now. However, consider that in the spring of 2007, the yield curve was predicting a 40 percent chance of a recession in 2008, something that looked out of step with other forecasters at the time.

Of course, it might not be advisable to take this number quite so literally, for two reasons. (Not even counting Paul Krugman's concerns.) First, the probability is itself subject to error, as is the case with all statistical estimates. Second, other researchers have postulated that the underlying determinants of the yield spread today are materially different from the determinants that generated yield spreads during prior decades. Differences could arise from changes in international capital flows and inflation expectations, for example. The bottom line is that yield curves contain important information for business cycle analysis, but, like other indicators, should be interpreted with caution.

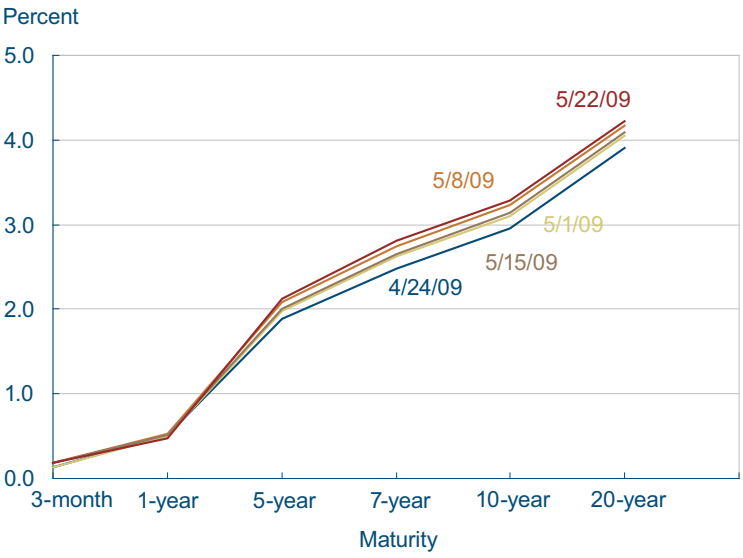
Another use the yield curve can serve is to get at the question of when the recovery will start. If we compare the duration of past recessions with the duration of the interest rate inversions that preceded them, we see that, with the exception of the 1980 recession, longer inversions have been followed by longer recessions. Given this pattern, the current recession is already longer than expected.

For more detail on these and other issues related to using the yield curve to predict recessions, see the Commentary "Does the Yield Curve Signal Recession?"

Inflation Expectations and Monetary Policy

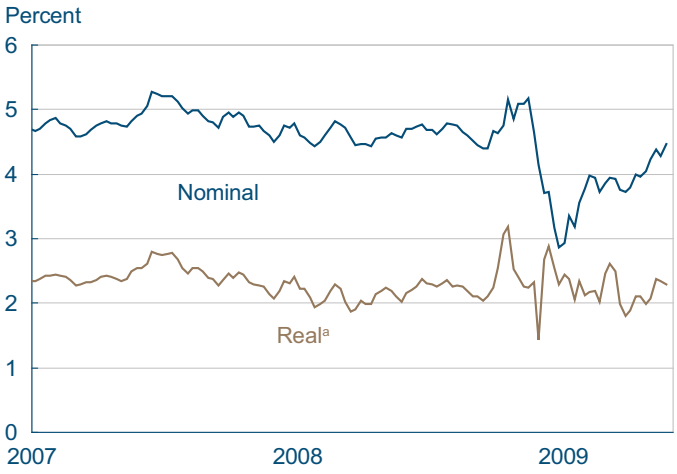
06.09.09
by Charles T. Carlstrom and Kyle Fee

Nominal Treasury Bill Yield Curves



Source: Federal Reserve Board.

TIPS-Estimated 5-10-year Forward Interest Rate



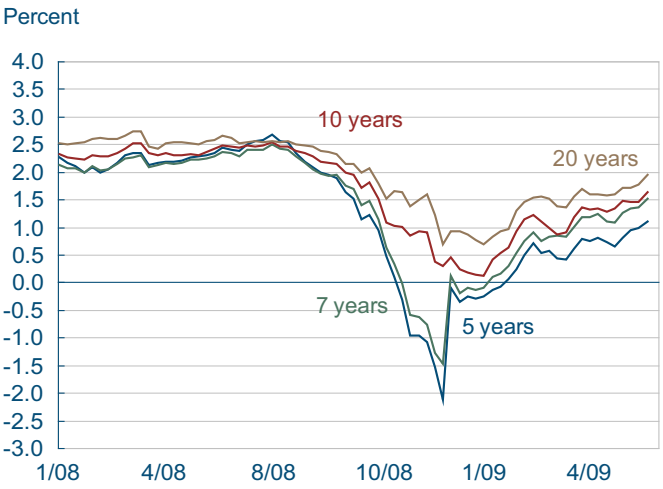
a. Calculated using TIPS data
Source: Federal Reserve Board.

Recently, there has been what many observers consider to be a disturbing increase in the yield curve. The concern is that the rising yield curve may be signaling an increase in longer-term inflation expectations. In normal times, the sort of increase we have seen in the yield curve would not garner much attention, but two developments have already aroused speculation about possible substantial increases in future inflation. One is the huge expansion of the Fed's balance sheet, and the other is the Fed's purchases of long-term treasury securities and mortgaged-backed securities. These purchases have many worried that the central bank could suffer significant capital losses on its portfolio, which would make it difficult to unwind the portfolio's expansion.

To understand why the increase in the yield curve may be troubling, it is helpful to remember that the yield curve can be used to back out implied expected forward rates. That is, a steep yield curve implies that interest rates are expected to increase. For example, the implied 5—10 year forward rate for nominal bonds measures what the average interest rate on nominal bonds is expected to be 5—10 years out. Increases in these forward rates are thought two be governed largely by future increases in the real interest rate or future increases in inflation.

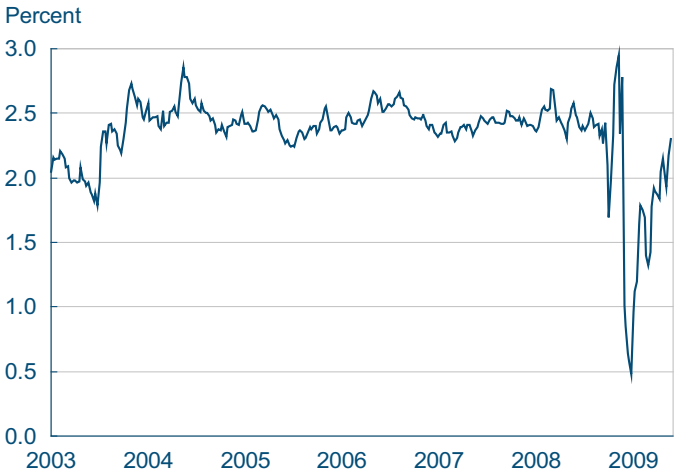
One way to gauge whether it is inflation or interest rates that is driving the recent increase in the yield curve is to look at information contained in inflation-adjusted treasury securities (TIPS). TIPS can be used to estimate the implied 5—10 year forward rates for real interest rates or to back out the "breakeven" inflation rate, which is frequently used as a measure of expected inflation. When we look at TIPS-estimated interest rates, we see no increase in implied forward real interest rates, suggesting that future real rates are not driving the recent increase in the yield curve.

TIPS Breakeven Inflation Rates



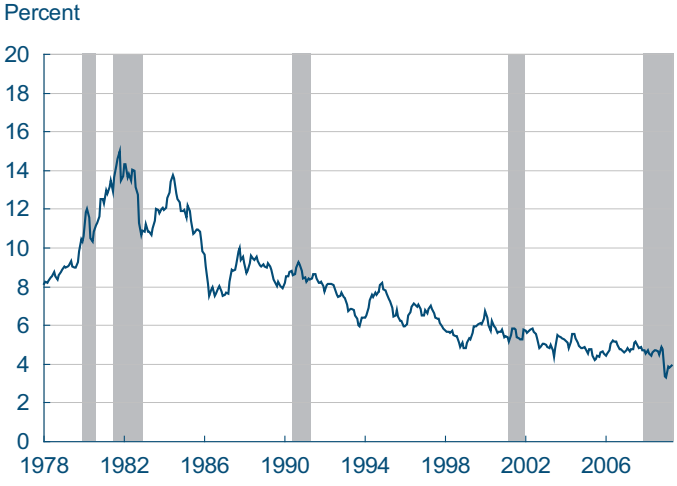
Source: Federal Reserve Board.

TIPS-Estimated 5-10-year Forward Breakeven Inflation Rate



Source: Federal Reserve Board.

Implied Forward Rate on Nominal Treasuries



Source: Federal Reserve Board.

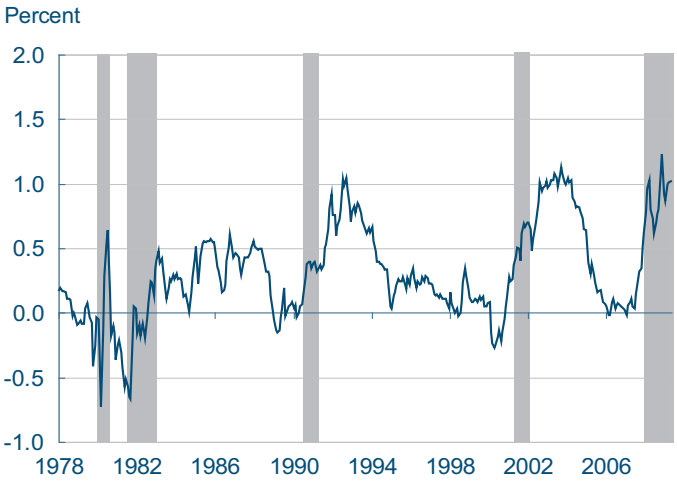
Meanwhile, breakeven inflation has crept up for 2, 5, 7, 10, and 20 years out. In times of serious liquidity concerns, however, interpreting the TIPS breakeven inflation measure is problematic. TIPS securities are less liquid than regular nominal securities, a fact that lowers their price and increases their yield. Shifts in liquidity pressures will therefore affect measured expected inflation (as liquidity pressures increase, expected inflation appears to decrease, and vice versa).

Because most measures of liquidity concerns have decreased since the last FOMC meeting, some analysts have concluded that the observed increase in expected inflation is illusory and is driven instead by the observed decline in liquidity pressures. Similarly, decreases in breakeven inflation before that were probably due to increases in liquidity pressures. But assuming the liquidity pressures on 5-year TIPS are similar to those on 10-year TIPS, the implied 5—10-year breakeven inflation rate is probably the best measure we have of long-term inflation expectations. Looking at this measure suggests that long-term inflation may have increased 30 basis points since the April FOMC meeting, and nearly 2 percentage points since the end of 2008.

But it needs emphasizing that despite the sharp increase in the rate of expected inflation, the rate is still slightly lower than it was in mid-2008. Another point worth noting is that even this TIPS measure of expected inflation may be biased. While TIPS are adjusted for inflation, they are not adjusted for deflation. For example, if everyone agreed that the future rate of inflation was going to be negative, TIPS would be identical to nominal bonds and priced as such. In such cases, breakeven inflation from TIPS would register an expectation of zero percent, and the TIPS measure of inflation expectations would be greater than actual expected inflation. While obviously such an extreme assumption is not realistic, if participants even believe there is a possibility of future deflation, breakeven inflation will overestimate actual expected inflation.

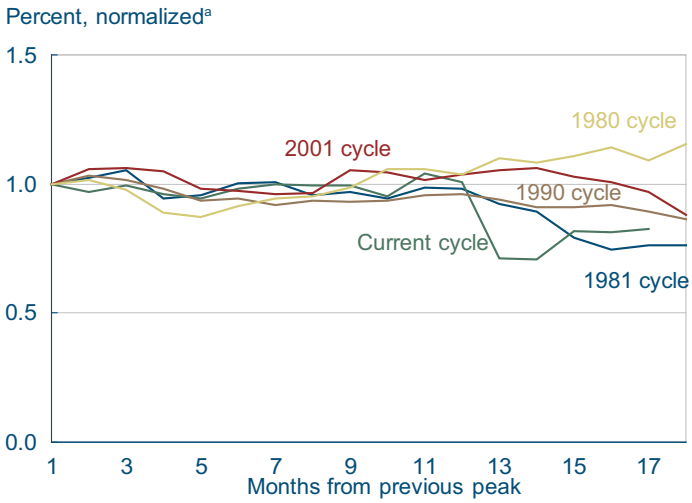
This bias, however, will influence shorter-term, 5-year TIPS more heavily than longer-term 10-year TIPS. Thus, during periods of significant deflationary risk, 5-year breakeven inflation will be greater

Yield Spread



Source: Federal Reserve Board.

Implied Forward Rate During Recessions



a. Calculated as monthly rates divided by the peak rate for each cycle.
Source: Federal Reserve Board.

than actual expected inflation, and since the 10-year TIPS is not as heavily affected by this, the 5—10 year forward rate will underestimate expected inflation. This suggests that part of the large decrease in this measure registered during 2008 was reflecting the short-term deflationary risk facing the economy. Now that the economy appears to be recovering, this deflationary risk is fading, and the 5—10 year forward breakeven inflation rates are increasing and probably, once again, coming closer to truly representing long-term inflation expectations.

But this bias in TIPS has led many to discount the fact that real yields as measured by TIPS have not been increasing. They argue that the recent run-up in the yield curve suggests that a recovering economy is indicative that future real interest rates are increasing (stronger future economic growth pushes up future real interest rates). Proponents of this view point to yield spreads, like the difference between 10-year and 5-year treasury yields, to bolster their case that increases like those we have seen are normal when the economy starts recovering. But the 5—10 year forward rates, which directly measure what rates are expected to be 5-10 years out show little in the way of a clear cyclical pattern.

To pursue this question further, we look at the behavior of the 5—10 year out "normalized" yield curve (where the initial 5—10 year forward rate is normalized to one) over this and past business cycles. While the yield spread typically increases when the economy is expected to recover, forward rates do not appear to have ticked up noticeably at this point in the recession—18 months after it started. Furthermore, the increase we have seen in forward rates comes on the heels of much larger decreases than in past recessions.

It is certainly too soon to conclude that long-term inflation expectations are increasing. But the increases we have seen in the yield curve for nominal treasury securities, coupled with a relatively flat yield curve for TIPS, warrant an ever-watchful eye to make sure that long-term inflation expectations do not creep up.

Savings Glut or Domestic Demand?

05.29.09
by Owen F. Humpage and Michael Shenk

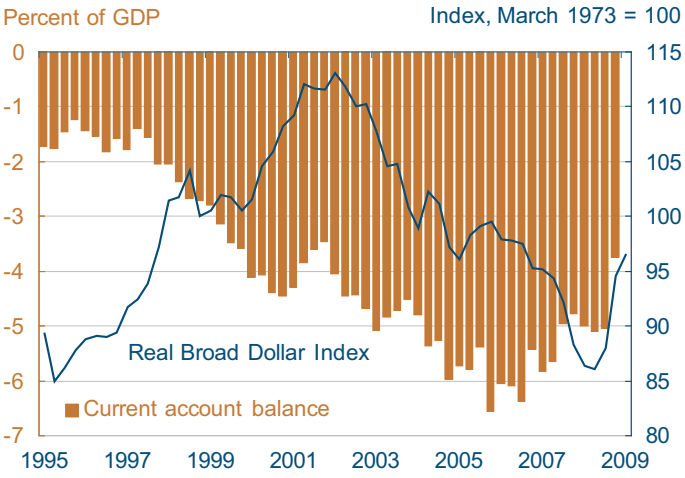
A lively debate has arisen over the contribution that foreign savings may have made to our current economic problems. Some economists argue that an influx of foreign savings helped to inflate the U.S. housing bubble, whose bursting caused the financial turmoil that led to our current recession. Others insist that the problems were by and large home grown. Most of the arguments have focused on the behavior of interest rates, yield spreads, and asset prices for proof, but foreign saving flows affect exchange rates and balance-of-payments patterns, so these data might help tell the tale.

When the influx of foreign savings rises, it increases the current-account deficit. An increase in domestic demand has the same effect. But each cause leaves a distinct footprint. An expansion of the current-account deficit that stems from an exogenous inflow of foreign savings will be accompanied by an appreciation of the dollar. An expansion of the current-account deficit that stems from an increase in domestic demand will cause a dollar depreciation.

Both types of patterns have appeared in U.S. data over the last few decades. Foreign savings, for example, shot in from mid-1997 through 2000, during the dot-com boom. To buy assets in the United States, foreigners first needed to acquire dollars in the foreign-exchange market.

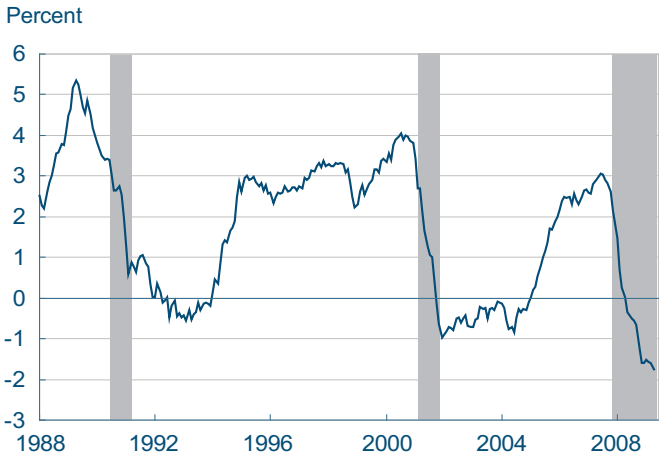
As they did, the dollar appreciated 17.4 percent in real (inflation-adjusted) terms against a broad array of our major trading partners' currencies. The dollar's real appreciation raised the foreign-currency price of U.S. exports and lowered the dollar-price of foreign-made goods and services. As a result, worldwide demand shifted away from the United States, and our current-account deficit widened from 2 percent of GDP to over 4 percent of GDP. A similar savings-led pattern also appeared in the early 1980s.

Current Account Deficit and the Exchange Rate



Sources: Bureau of Economic Analysis; Board of Governors of the Federal Reserve.

Real Federal Funds Rate



Note: The effective federal funds rate less the 12-month growth rate in the core CPI.
Source: Bureau of Labor Statistics; Board of Governors of the Federal Reserve.

The configuration of dollar and current-account trends that developed after the 2001 recession and before the real estate bust points to expanding domestic demand—not foreign savings—as the key causal development. The 2001 recession was very mild, but labor markets recovered slowly and output seemed to remain below potential. The Federal Reserve maintained an accommodative monetary policy with a real federal funds rate in negative territory through 2004. Domestic demand was strong enough to fuel import growth, but foreign economic activity and U.S. export growth lagged behind. The U.S. current account deficit grew from over 4 percent of GDP in early 2002 to 6½ percent of GDP in late 2005.

To buy imports, Americans must sell dollars and buy foreign currencies, which promotes a dollar depreciation. From early 2002 through 2005, the dollar depreciated 12.9 percent on a real basis. The dollar's depreciation, however, made U.S. dollar-denominated financial assets more attractive to foreigners, who then channeled additional savings into these instruments.

To be sure, more foreign savings flowed into the United States between 2002 and 2005 than between 1997 and 2000, but between 2002 and 2005 developments in this country essentially enticed the foreign savings in. Between 1997 and 2000, foreign savings seemed to have barged in, as if they had no place else to settle.

Economic Projections from the April FOMC Meeting

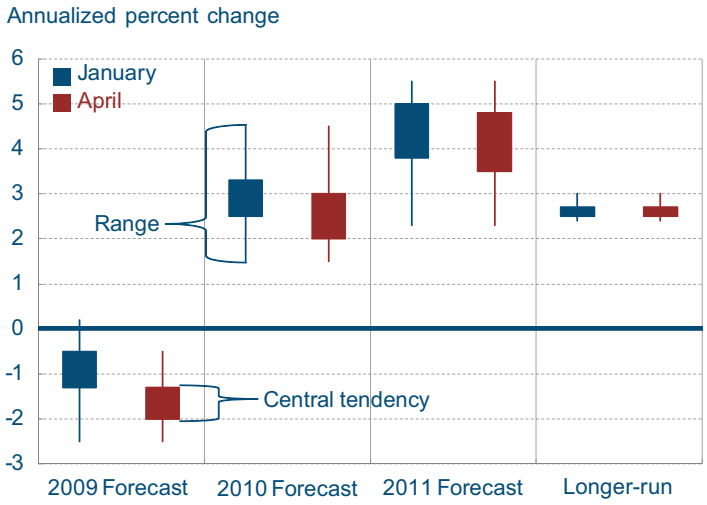
05.20.09
by Brent Meyer

The economic projections of the Federal Open Market Committee (FOMC) are released in conjunction with the minutes of the meetings four times a year (January, April, June, and October). The projections are based on the information available at the time, as well as participants' assumptions about the economic factors affecting the outlook and their view of appropriate monetary policy. Appropriate monetary policy is defined as "the future policy that, based on current information, is deemed most likely to foster outcomes for economic activity and inflation that best satisfy the participant's interpretation of the Federal Reserve's dual objectives of maximum employment and price stability."

Data available to FOMC participants on April 28-29 seemed to indicate that a few of the substantial downward trends in the economy were diminishing somewhat. Notably, personal consumption rose modestly in the first quarter, after two consecutive quarterly decreases in excess of 3.5 percent (annualized rate). Also, between the meetings, some housing-market indicators had started to show signs of stabilization (albeit at a relatively low level). On the other hand, the labor market continued to hemorrhage jobs, as factories scrambled to cut production and clear excess inventories. Furthermore, economic and financial conditions in the rest of the world continued to deteriorate in the first quarter, dampening demand for U.S. exports.

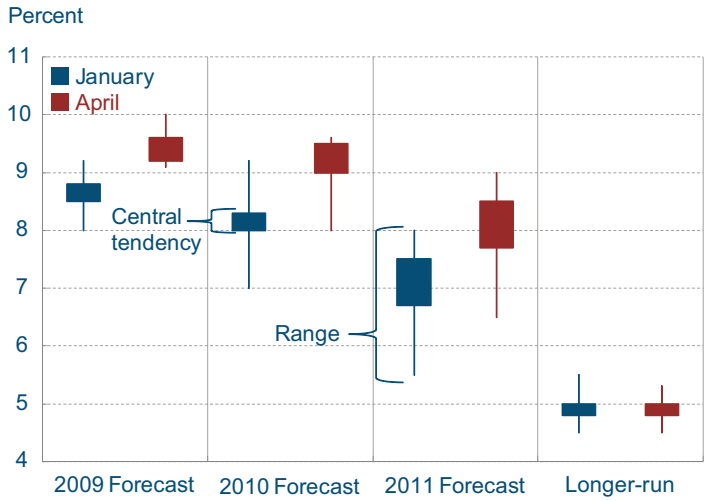
The Committee's central tendency is now for the economy to contract on a year-over-year basis in 2009 between –2.0 percent and –1.3 percent, compared to January's central tendency of –1.3 percent to 0.2 percent. As noted in the FOMC release, the first-quarter data on real GDP was weaker than many participants had expected, contributing to the weaker 2009 growth projections. Conversely, the minutes point out that April's projections for the second half of 2009 were revised up from the January meeting.

FOMC Projections: Real GDP



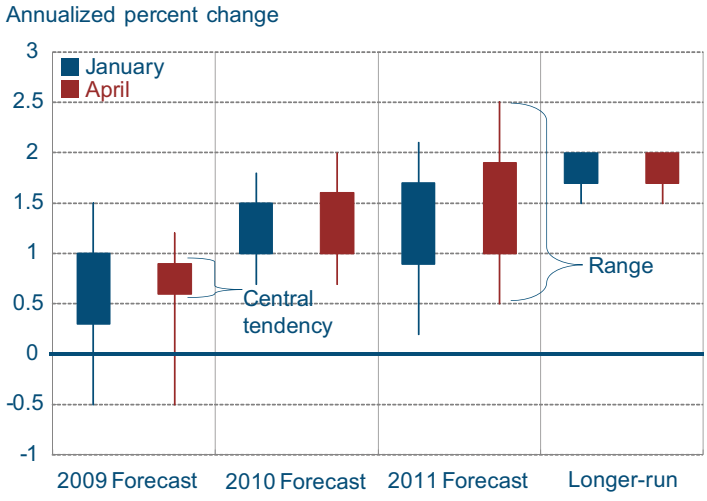
Source: Federal Reserve Board.

FOMC Projections: Unemployment Rate



Source: Federal Reserve Board.

FOMC Projections: PCE Inflation



Source: Federal Reserve Board.

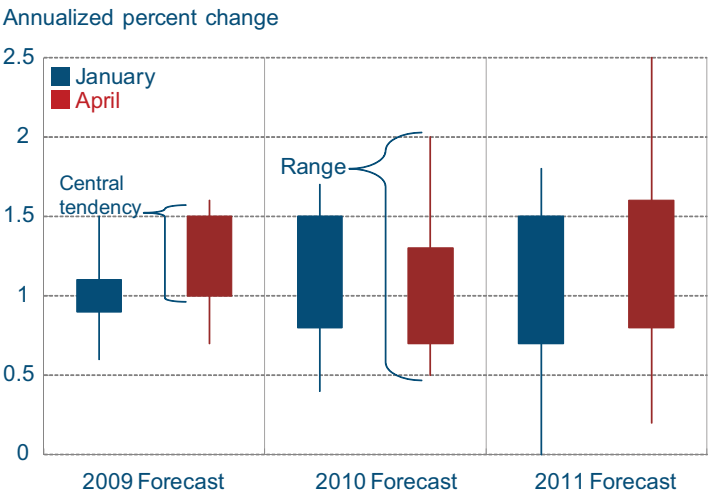
The Committee noted that the key factors aiding in the recovery will be a boost from the fiscal stimulus, housing-market stabilization, an end of the inventory correction followed by a return to accumulation, and continuing improvement in financial markets. The Committee's projections have output growth returning roughly to trend in 2010, before climbing to a central tendency of 3.5 percent to 4.8 percent in 2011—closing some of the gap between actual and potential GDP. The longer-term (5-6 years out) growth projections remained unchanged from January at the April meeting, ranging between 2.4 percent and 3.0 percent.

Reflecting the rapid deterioration in the employment situation, the Committee's projections for the unemployment rate were more pessimistic in April than in January. In fact, even the most optimistic projection jumped up above 9.0 percent in 2009. Most participants now expect that the unemployment rate will rise to between 9.2 percent and 9.6 percent in 2009, and given that most participants' projections for economic growth are not appreciably above the longer-run trend, the unemployment rate is expected to decline only slightly in 2010. Even "absent further shocks," most participants judge that the unemployment rate will remain stubbornly above its "longer-run sustainable rate" through 2011. Some participants noted that the unemployment rate may remain stubbornly high, as resources are shifted away from certain sectors that are experiencing rapid employment losses. Laborers who lose their jobs in these shrinking sectors may need an extended period of time to acquire new skills and education to adapt to working in new sectors.

The Committee's inflation projections for the next few years were revised up slightly. It was mentioned in the minutes that the most recent PCE inflation data had come in higher than had been expected at the January meeting. According to the release, many participants continue expect that "economic slack" will put downward pressure on prices and wages in the medium term, leading to inflation rates below the longer-run "appropriate" level.

It is clear that uncertainty surrounding the inflation projections remains. The April projections of PCE

FOMC Projections: Core PCE Inflation



Source: Federal Reserve Board.

inflation for 2011 range from 0.5 percent to 2.5 percent, a spread of 2.0 percentage points. Also, the range on core PCE inflation widened to 0.2 percent to 2.5 percent in the April projections, compared to 0 percent to 1.8 percent in January.

In the minutes of April's FOMC meeting, the participants noted that the uncertainty in their inflation projections was higher than historical norms, though the majority of participants viewed the risks to their inflation outlook as "roughly balanced." This compares to a "slight majority" who assessed the risks as balanced in January. That said, some participants noted their concern with the possibility that inflation expectations may head downward in response to relatively low inflation readings. On the other side of that argument were those that saw inflation expectations drifting higher if individuals think that the expansion in the Federal Reserve's balance sheet could be difficult to unwind in a "timely fashion."

Putting the Current Recession in Perspective

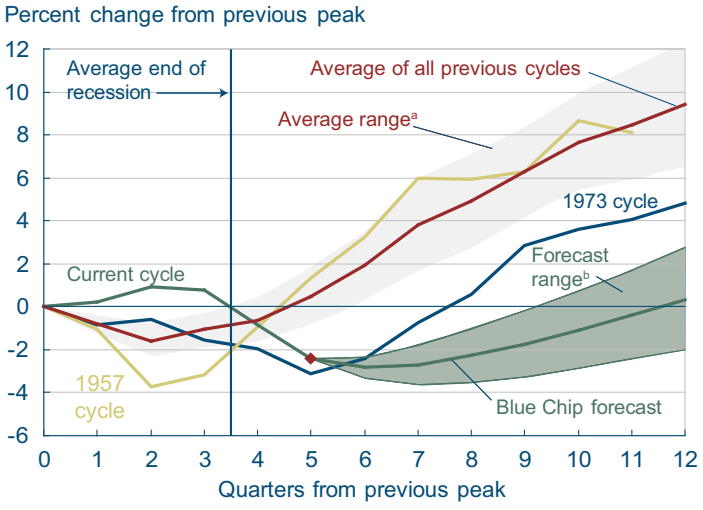
05.29.09
by Michael Shenk

The media, as well as policymakers, are increasingly calling the current economic downturn the "worst since the Great Depression." They are not necessarily saying that the economy is in a worse place than it was in, say 1975, when the unemployment rate peaked at 9.0 percent (roughly where it is today) and inflation hit 12 percent, or in the 1980s, when inflation peaked at over 14 percent and the unemployment rate hit 10.8 percent. The comparison of this recession to others centers on the steepness and breadth of the current decline relative to previous cycles. With the rate of decline slowing recently, we may be seeing some preliminary signs that the economy has hit an inflection point. With that in mind, let's compare the current recession with those of the last 60 years.

The path of GDP, so far in this cycle, has been somewhat out of the ordinary, but to date it has not surpassed the 1973 recession in terms of length or total output lost. However, based on the current Blue Chip forecast (a compilation of 50 private forecasts), that could happen in the coming quarters. If the forecasts are correct, one characteristic of this recession that would make it unique will be the length of time it lasts. While the average Blue Chip forecast predicts that GDP will not decline as much as it did during the 1973 recession or the 1957 recession (only the more pessimistic forecasters have it surpassing the 1973 recession), it is not expected to bottom out until six quarters after the onset of the recession, longer than in any postwar recession.

It's important to note that while all business cycles are inherently different, they typically share a common pattern: They begin with a recession period in which GDP growth is negative, move into a recovery period in which GDP growth ramps up above potential, and end with an expansion period in which growth settles back down to a more sustainable growth rate. At present, the recovery period of the current business cycle is forecasted to be considerably slower than is typical of previous cycles. That

Real GDP



a. Shaded area is +/-1 standard deviation from average.
b. Forecast range is defined by the average of the top 10 and the bottom 10 forecasts.
Note: Red diamond represents the current point in time.
Source: Bureau of Economic Analysis, Blue Chip *Economic Indicators*, May 2009.

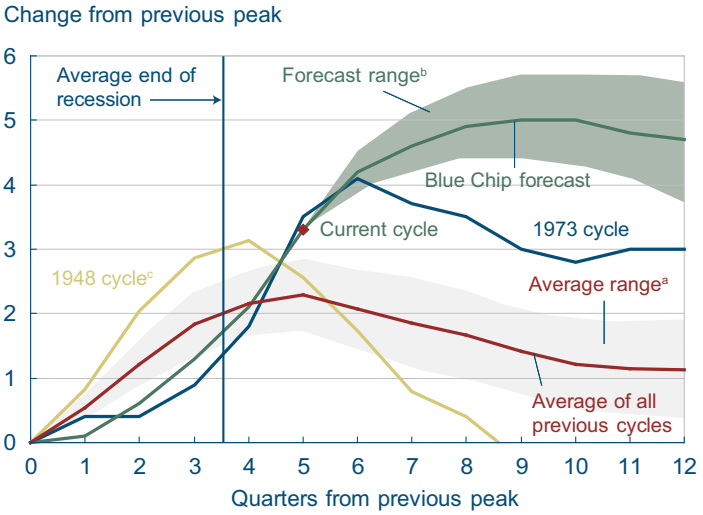
expectation may be partially a function of aggregating forecasts, but even the average of the ten most optimistic forecasts has GDP taking five quarters to fully recover. A recovery of that length would contrast sharply with the rapid recoveries we saw in 1957 and 1973.

The behavior of the labor market in this recession has also been strikingly poor when compared to previous recessions. Only the 1948 recession and the 1973 recession witnessed larger increases in the unemployment rate, but if the Blue Chip projections hold true, the current recession will eventually surpass those cycles as well. This recession is also unusual in that the labor market's poor performance is forecast to continue for some time. In fact, the unemployment rate is not expected to peak until the first quarter of 2010, nine quarters after the onset of the recession. The labor market is also expected to recover at a slower pace than in previous business cycles. Currently, 94 percent of Blue Chip forecasters expect the unemployment rate to average 9.0 percent or higher in 2010.

One potential reason why labor market woes are expected to continue past the end of the recession is that an unprecedented number of the unemployed are reporting that their layoffs are permanent in nature. Over 80 percent of those losing jobs, either due to layoffs or the completion of a temporary job, currently view their job separation as permanent. That amounts to nearly 55 percent of all those who report they are unemployed, nearly 10 percentage points higher than at any other time since the series began in 1967. With temporary layoffs accounting for such a small share of those currently unemployed, dislocations in the labor market are likely to persist for a while, as workers need time to search for new jobs that match their current skill set or go through retraining that will allow them to switch professions.

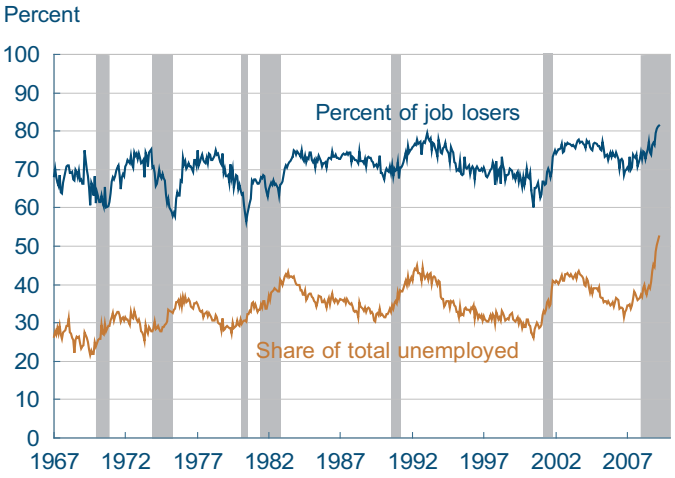
To date, the current recession has been particularly painful. Although it has probably not yet surpassed the 1973 recession in terms of overall severity, if current forecasts prove correct, it is just a matter of time before it does. What may ultimately make the current downturn the worst since the Great Depression is the sheer length of time it is expected

Unemployment Rate



a. Shaded area is +/-1 standard deviation from average.
b. Forecast range is defined by the average of the top 10 and the bottom 10 forecasts.
c. The unemployment rate during the 1948 recession increased from 3.8 percent in November 1948 to 7.9 percent in October 1949. Aggregating the unemployment rate data to show them on a quarterly basis causes the full extent of the increase not to show up.
Note: Red diamond represents the current point in time.
Source: Bureau of Economic Analysis, Blue Chip *Economic Indicators*, May 2009.

Job Losers Not on Temporary Layoff



Note: Shaded bars indicate recessions.
Source: Bureau of Labor Statistics.

to persist and the slow pace at which the recovery is expected to proceed once the downturn comes to an end. That being said, it is important to note that forecasts often prove to be wrong, and GDP data is frequently revised, so the final picture of the current business cycle may look notably different than what is currently projected.

Real GDP: First-Quarter 2009 Preliminary Estimate

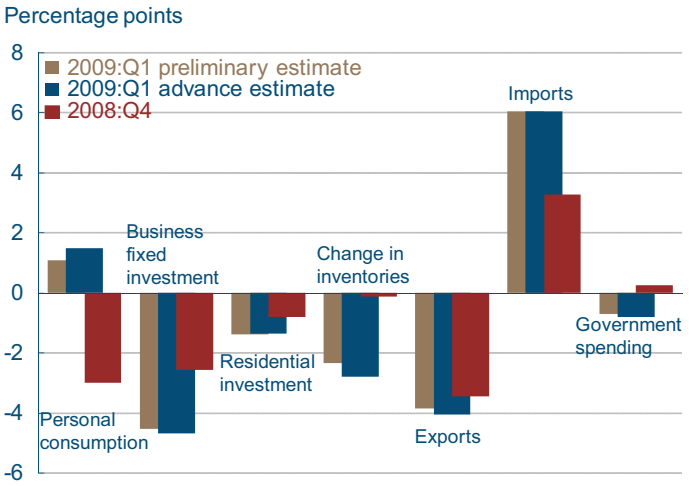
06.03.09
by Brent Meyer

Real GDP and Components, 2009:Q1 Preliminary Estimate

	Quarterly change (billions of 2000$)	Annualized percent change, last: Quarter	Four quarters
Real GDP	−168.4	−5.7	−2.5
Personal consumption	31.5	1.6	−1.4
Durables	25.8	9.6	−8.3
Nondurables	−3.4	−0.6	−3.4
Services	15.6	1.3	0.9
Business fixed investment	−146.0	−36.9	−16.0
Equipment	−94.1	−33.5	−19.5
Structures	−43.7	−42.3	−9.3
Residential investment	−38.2	−38.7	−23.4
Government spending	−18.4	−3.5	1.8
National defense	−9.6	−6.7	5.1
Net exports	61.9	—	—
Exports	−118.1	−28.7	−10.9
Imports	−179.9	−34.1	−16.5
Private inventories	−91.4	—	—

Source: Bureau of Economic Analysis.

Contribution to Percent Change in Real GDP



Source: Bureau of Economic Analysis.

First-quarter real GDP growth was revised up from an annualized percent change of –6.1 percent in the advance estimate to –5.7 percent, according to the preliminary estimate released by the Bureau of Economic Analysis (BEA). Most of the revisions to the components that comprise GDP were relatively minor.

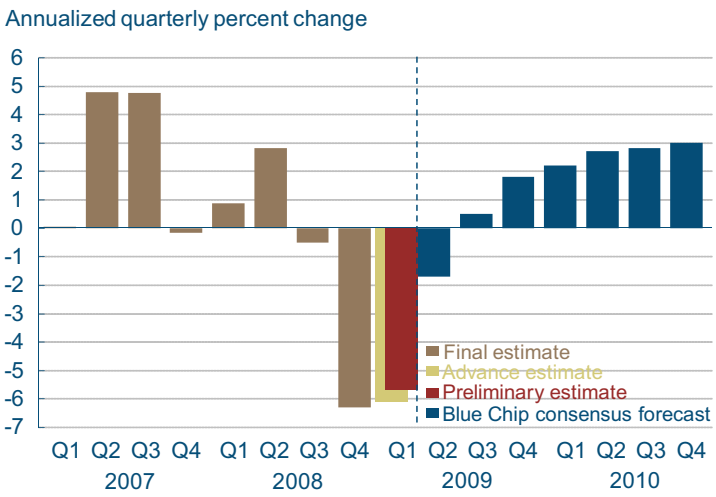
Personal consumption was revised down to an increase of 1.6 percent (from 2.2 percent), taking 0.4 percentage point (pp) away from real GDP growth. However, that is still well above its growth rate of –1.4 percent over the past four quarters. The downward revision to consumption was offset by a 0.5 percentage point upward revision to the change in private inventories. Though many analysts were previously encouraged by the steep sell-off in private inventories, the upward revision may dampen expectations for an impending accumulation.

Exports were revised up from –30.0 percent to –28.7 percent, though it remains the deepest quarterly decline since the fourth quarter of 1971. The upward revision to exports added 0.2 pp to output growth in the first quarter, and imports were virtually unrevised, boosting the contribution of net exports to GDP from 2.0 pp to 2.2 pp in the first quarter. Also, the estimate of first-quarter business fixed investment was revised up slightly, adding an additional 0.1 pp, though, at a quarterly growth rate of –36.9, it remains at a postwar-record low.

The panelists on the Blue Chip survey revised down their estimate of real GDP growth for 2009 from –2.6 percent to –2.8 percent, according to the May survey. However, that was an artifact of a downward surprise to their first-quarter growth estimate. Forecasts for the remaining quarters of 2009 were all revised up slightly. On the other hand, the consensus estimate for 2010 growth ticked down from 1.9 percent to 1.8 percent.

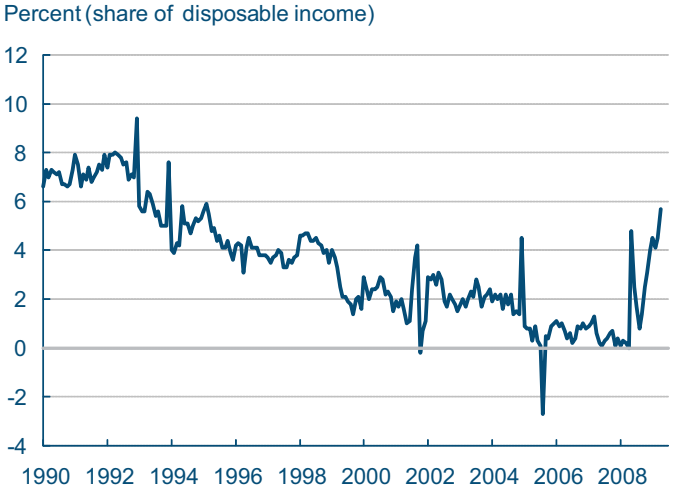
According to the BEA's report on personal income, the personal savings rate (as a percentage of dispos-

Real GDP Growth



Source: Blue Chip *Economic Indicators*, May 2009; Bureau of Economic Analysis.

Personal Savings Rate



Source: Bureau of Economic Analysis.

able income) jumped up from 4.5 percent in March to 5.7 percent in April, its highest level since February 1995. The BEA did note that April's estimates for disposable income (and the resulting savings rate) were bolstered by the reduction in personal taxes due to the American Recovery and Reinvestment Act of 2009 (ARRA). Nevertheless, over the past six months, the savings rate has averaged 4.3 percent, up dramatically from the six-month-average of 0.4 percent at the start of the recession. In the first quarter, consumption's share of real GDP reached 72.2 percent (a postwar-record high).

As consumers continue to shift resources away from consumption and toward repairing their balance sheets (likely as a rational reaction to limited credit availability and decreased wealth), the question naturally arises: If consumption growth is likely to be dampened, what component will pick up the slack and how painful will that transition be?

Improving Financial Market Conditions and Economic Recovery

06.05.09

by Filippo Occhino and Kyle Fee

After deteriorating sharply in August 2007 and then again in the fall of 2008, financial market conditions have improved markedly during the past quarter. Given the historical relationship between financial market conditions and economic activity, we interpret this as an encouraging sign that the economy may be recovering.

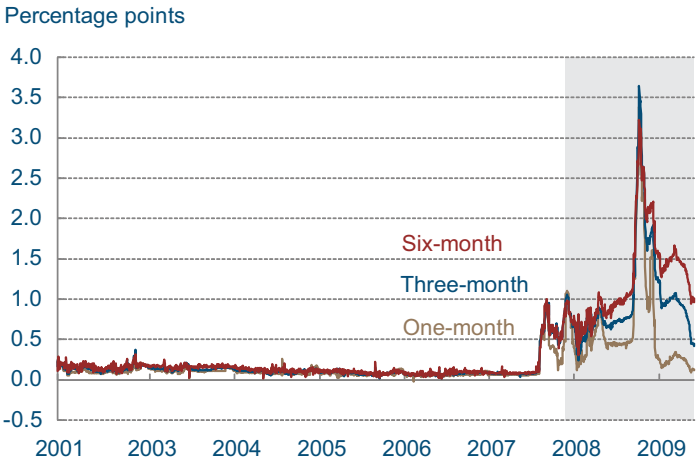
The improvement in financial markets can be observed in the recent evolution of a few indicators of financial market stress, including indicators of borrowers' credit risk, financial market liquidity, and uncertainty among market participants. We take a look at these indicators and explain how they may be related to economic activity.

First we consider two interest rate spreads, the Libor-OIS spread and the spread between the commercial paper rate and the T-bill rate. These spreads provide information about short-term credit risk as well as market liquidity.

The London Interbank Offered Rate (Libor) is the rate at which banks borrow dollar-denominated funds in the London interbank market, so it increases both with the short-term credit risk of the borrowing institutions and with the illiquidity of the Libor market. The Overnight Index Swap (OIS) rate, however, is the fixed rate swapped against the federal funds rate (the floating rate at which banks borrow overnight dollar-denominated funds in the federal funds market), so it reflects the market expectation of the rate that will prevail on average in a less risky and more liquid market. The Libor-OIS spread, therefore, is an indicator of both the short-term credit risk of financial institutions and the illiquidity of the Libor market relative to the federal funds market.

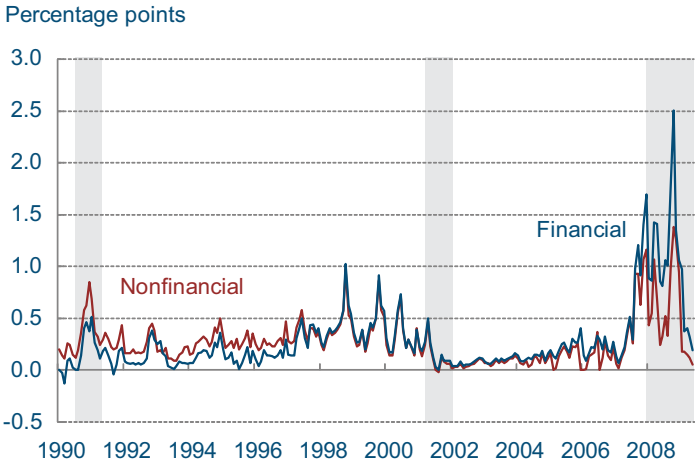
After increasing sharply during the summer of 2007 and peaking at 364 basis points in October 2008, the three-month Libor-OIS spread has steadily decreased. Recently, it returned to levels below 50 basis points. The spread's return to more

Libor–OIS Spread



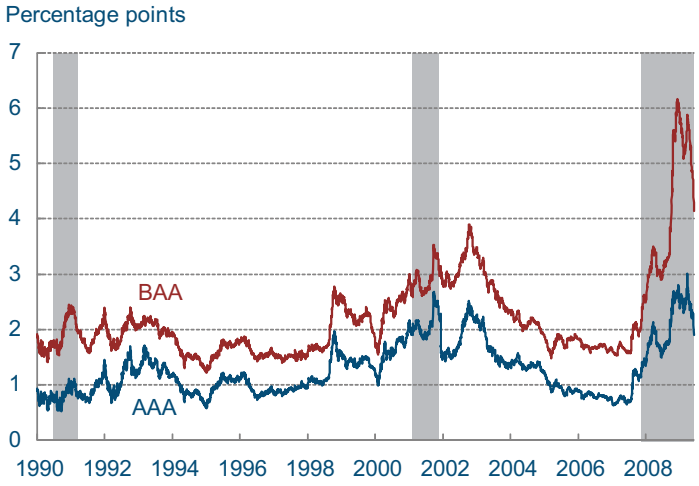
Note: The shaded bar indicates a recession.
Sources: Bloomberg; *Financial Times*.

Commercial Paper–Treasury-Bill Spread



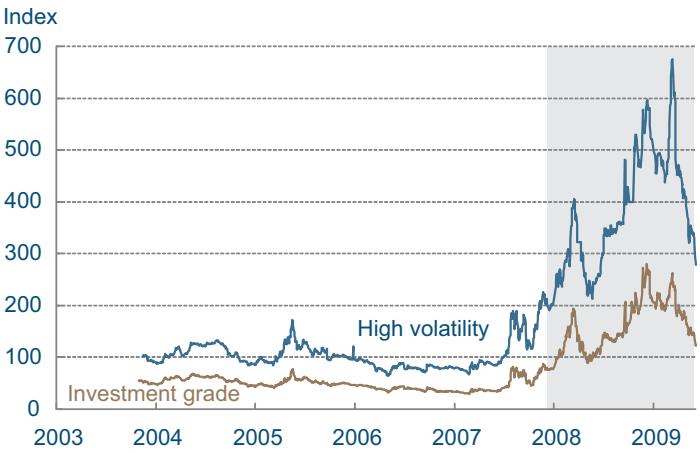
Note: The shaded bars indicate recessions.
Source: Federal Reserve Board.

Corporate Bond-Treasury-Note Spread



Source: Federal Reserve Board.

CDS Spread Indexes



Note: The shaded bar indicates a recession.
Source: Bloomberg.

typical levels suggests that both banks' credit risk and the relative liquidity of the Libor market have substantially improved.

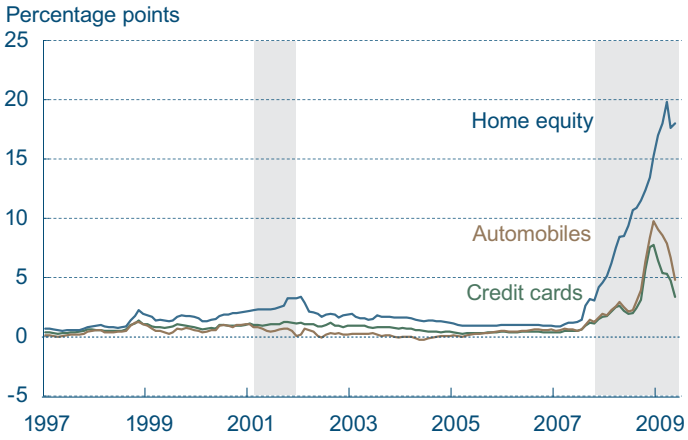
Spreads between the three-month commercial paper rate and the three-month T-bill rate tell a similar story: They increased sharply during the second half of 2007, peaked in October 2008, and have been decreasing since then to levels last seen before August 2007. This trend suggests that both the short-term credit risk of the issuing institutions and the liquidity of the commercial paper market relative to the T-bill market have improved.

Like short-term credit spreads, longer-term credit spreads, such as the difference between corporate bond and Treasury security yields, have also declined, although to a much lesser extent. The current level of the spread between the yields of Baa-rated corporate bonds and 10-year constant maturity Treasury notes is slightly more than 4 percent, much less than its peak above 6 percent in December 2008, but still quite elevated.

To look at longer-term credit risk from another angle, we consider the five-year CDX North America Investment Grade Index (CDX NA IG), which is an index tracking the credit default swap (CDS) spreads for 125 North American investment-grade companies. The index can be interpreted as the average cost of buying CDS protection against the default of any of the underlying 125 companies: If the five-year index is 150, a market participant can buy five-year protection on all of the 125 companies by paying annually 150 basis points per company. The index therefore increases with the perceived risk of those companies defaulting.

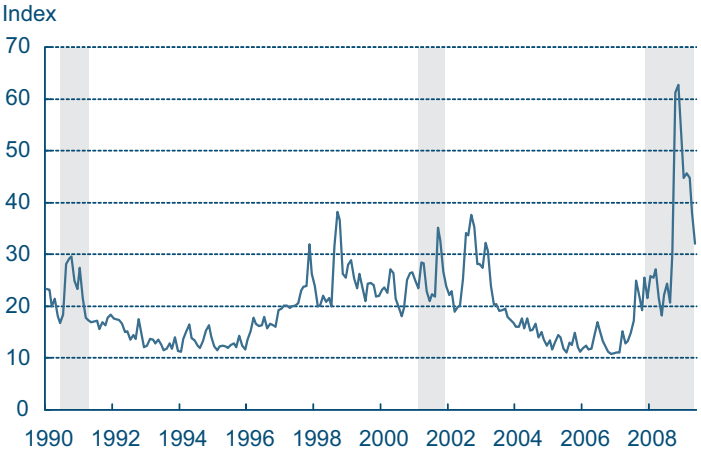
The index sharply increased in March 2008 in conjunction with the collapse of Bear Stearns. It peaked at 279 basis points in December 2008, had a second peak at 262 basis points in March 2009, and then continuously decreased toward its current level below 150 basis points. The High Volatility Index, which tracks the subset of 30 companies with the widest CDS spreads, displayed the same qualitative behavior. The trends in both indexes indicate that the cost of buying insurance against

Asset-Backed Security–Treasury-Note Spreads



Note: The shaded bars indicate recessions.
Source: Merrill Lynch.

Volatility Index (VIX)



Note: Shaded bars indicate recessions.
Source: *Wall Street Journal*.

default has decreased, and likely so has the risk of default, although the cost remains high relative to the past.

The indicators we have looked at thus far are linked to firms' credit risk. We now turn to some indicators of consumers' credit risk. Some useful indicators are the spreads between the yields on asset-backed securities and those on risk-free, two-year Treasury notes. These spreads proxy for the credit risk of the corresponding underlying asset classes (like automobile loans or credit cards). After peaking in late 2008, these spreads have come down, signaling an improvement in the market's assessment of consumers' credit risk, although the spreads remain much higher than before the crisis.

Finally, we turn our attention to an indicator of general market risk. The Chicago Board Options Exchange's Volatility Index (VIX) measures the implied volatility of the S&P500 stock index over the next 30 days, using the stock index option prices. Numbers correspond to the annualized percentage point change expected over the next 30 days. The VIX index is considered to be a forward-looking indicator not only of market risk, but also of uncertainty and sentiment among market participants.

After reaching a historic high of 62.6 percent in November 2008, the index has rapidly fallen off toward its current level of 32 percent.

What does all this imply for economic activity? In the past, indicators of financial market stress have tended to be negatively correlated with economic activity. That is, on average, periods of financial market stress have tended to coincide with periods of weak economic activity. The table below shows correlations between some of these financial market indicators and indicators of economic activity (current and future GDP and investment).

The CDX is strongly correlated with GDP and investment, whereas the financial commercial paper spread shows little, if any, correlation. Also, notice how several indicators of financial market stress tend to be more strongly correlated with future economic activity, relative to current activity, suggesting that they tend to lead the cycle. The period after the second quarter of 2007 is somewhat anomalous

because of the extreme values reached by some indicators of financial market stress. If one excludes that period, therefore, some correlations are affected. The main message, however, is not overturned.

Correlations

	GDP			Investment		
	Same quarter	Quarter +1	Quarter +4	Same quarter	Quarter +1	Quarter +4
Three-month Libor OIS spread	−0.55	0.16	−0.50	−0.56	0.02	−0.52
Financial commerical paper spread	−0.01	0.38	0.00	−0.06	0.30	−0.02
BAA corporate bond spread	−0.55	−0.05	−0.31	−0.04	−0.19	−0.44
CDX NA IG index	−0.78	−0.26	−0.81	−0.83	−0.42	−0.72
ABS credit card spread	−0.57	−0.09	−0.64	−0.61	−0.15	−0.75
ABS home equity spread	−0.50	−0.10	−0.74	−0.53	−0.15	−0.79
ABS auto spread	−0.42	−0.02	−0.36	−0.44	−0.03	−0.46
Volatility index (VIX)	−0.33	0.02	−0.15	−0.44	−0.08	−0.32

Note: Correlations were computed after detrending the logarithms of GDP and investment with an H-P filter.
Sources: Bloomberg; Merrill Lynch; Federal Reserve Board; *Wall Street Journal*; *Financial Times*.

There are several factors driving these correlations.

First of all, economic shocks can simultaneously affect both economic activity and financial market conditions. For instance, an adverse productivity shock, which causes productivity to be low for an extended period of time, tends to discourage current investment and increase default probabilities, credit risk spreads, and indicators of market illiquidity. Similarly, an adverse volatility shock that increases market risk and uncertainty for an extended period of time will have a similar effect on current investment, default probabilities, and indicators of financial market stress.

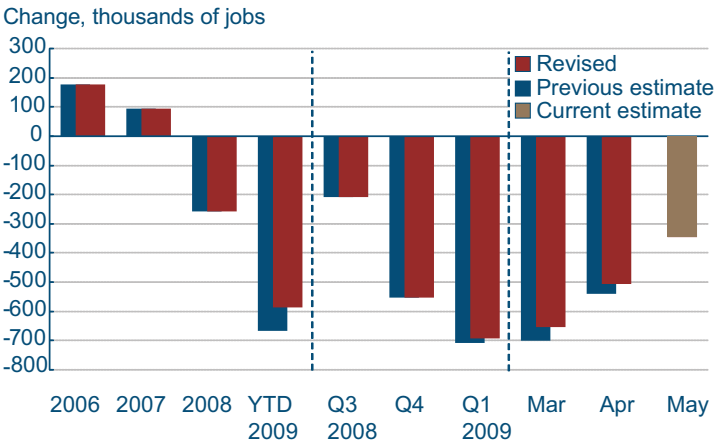
Moreover, economic activity and financial market conditions can affect each other directly, with the direction of causality running both ways. On one hand, shocks that depress economic activity tend to deteriorate borrowers' balance sheets and net worth, thereby increasing their probabilities of default and indicators of financial market stress. On the other hand, a financial shock that directly deteriorates borrowers' balance sheets and net worth, like a surprise housing or stock market decline, tends to increase default probabilities, credit risk spreads, and the cost of financing. These effects will depress

borrowers' investment and consumption demand, and thus economic activity.

Because indicators of financial market stress are negatively correlated with economic activity, and in some cases they tend to lead it, the recent improvement of financial market conditions represents a hopeful sign that economic activity may be recovering.

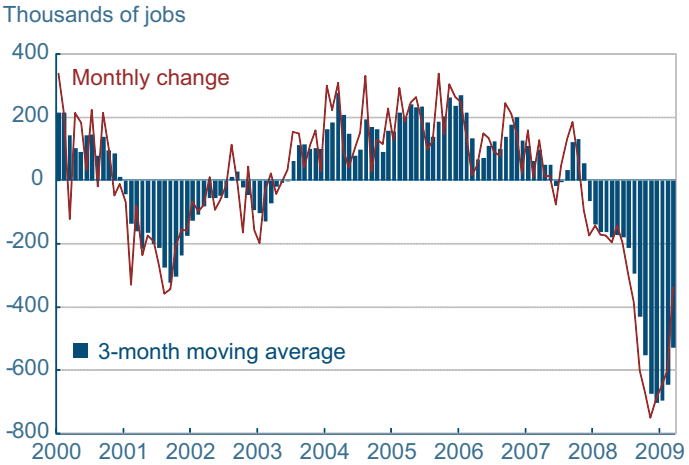
The Employment Situation, May 2009

Average Nonfarm Employment Change



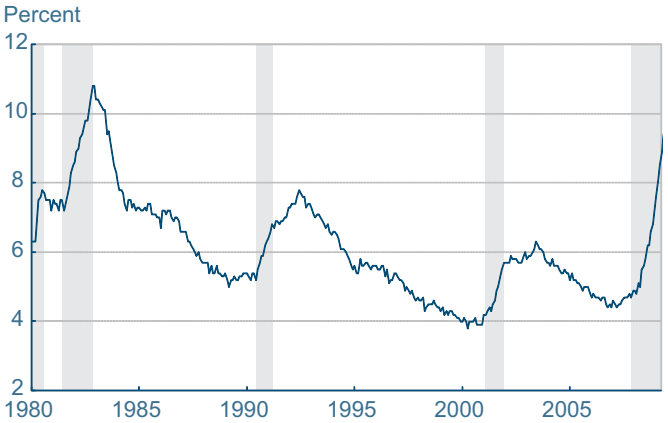
Source: Bureau of Labor Statistics.

Private Sector Employment Growth



Source: Bureau of Labor Statistics.

Unemployment Rate



Seasonally adjusted rate for the civilian population, age 16+.
Source: Bureau of Labor Statistics.

06.05.09
by Beth Mowry and Murat Tasci

Employment losses moderated in May, as nonfarm payrolls dropped by 345,000, much less than the average loss of 643,000 of the prior six months. This was the smallest payroll decline since September 2008, and revisions to March and April lessened those months' losses by a total of 82,000.The moderation was driven by fewer losses in construction; trade, transportation, and utilities; and professional and business services, as well as larger gains in education and health.

The unemployment rate, however, continued its rapid ascent, climbing 0.5 percentage point to 9.4 percent, its highest since 1983. Although May's job losses were far lower than expected, the additional 345,000 brings total losses this recession to 6.2 million.

The Diffusion Index of Employment Change, which tracks the percentage of industries with increasing employment, made its largest jump since September 2007 and now sits at 32.7. However, it still implies that only 32.7 percent of industries are expanding employment, and the rest are laying off or holding their own.

Goods-producing payrolls dropped by a more moderate 225,000 in May, owing entirely to smaller losses in construction. The construction industry shed just 59,000 jobs, a much smaller number than the 108,000 of the month before. The improvement applied to both residential and nonresidential construction. Manufacturing losses stayed roughly the same at 156,000.

Job losses in service-providing industries were cut in half last month to 120,000. Industries responsible for this improvement were trade, transportation, and utilities; professional and business services; education and health; and leisure and hospitality. Trade, transportation, and utilities lost only 54,000 jobs in May compared to April's loss of 115,000. Retail trade losses were halved (17,500) in the sector's best month since June 2008. Profession-

al and business services dropped 51,000 payrolls compared to the previous month's 111,000, and leisure and hospitality had its first positive report since the beginning of the recession, contributing 3,000 jobs.

Education and health, the only industry that has not experienced a net job loss this recession, had its best month since November, adding 44,000 jobs. Losses in financial activities lessened to 30,000 over the month, but losses in information increased slightly to 24,000. The government sector, which typically makes positive contributions to the employment picture, actually lost 7,000 jobs last month compared to a large 92,000 gain in April.

Labor Market Conditions and Revisions

	Average monthly change (thousands of employees, NAICS)				
	2006	2007	2008	YTD 2009 April 2009	May 2009
Payroll employment	178	96	−257	−585	−345
Goods-producing	5	−34	−126	−302	−225
Construction	15	−16	−57	−108	−59
Heavy and civil engineering	3	0	−6	−11	−8.7
Residential[a]	−5	−23	−35	−45	−19.5
Nonresidential[b]	16	6	−16	−52	−31.7
Manufacturing	−14	−22	−73	−183	−156
Durable goods	−4	−16	−54	−146	−131
Nondurable goods	−10	−5	−19	−37	−25
Service-providing	173	130	−131	−282	−120
Retail trade	3	14	−44	−44	−17.5
Financial activities[c]	9	−10	−19	−46	−30
PBS[d]	45	25	−63	−122	−51
Temporary help services	2	−7	−44	−56	−6.5
Education and health services	39	43	43	27	44
Leisure and hospitality	33	21	−21	−127	3
Government	17	24	14	19	−7
Local educational services	6	8	1	5	2
	Average for period (percent)				
Civilian unemployment rate	4.6	4.6	5.8	8.5	9.4

a. Includes construction of residential buildings and residential specialty trade contractors.
b. Includes construction of nonresidential buildings and nonresidential specialty trade contractors.
c. Includes the finance, insurance, and real estate sector and the rental and leasing sector.
d. PBS is professional business services (professional, scientific, and technical services, management of companies and enterprises, administrative and support, and waste management and remediation services.
Source: Bureau of Labor Statistics.

Despite the many brighter spots in this report, the unemployment rate shot up by a more-than-expected 0.5 percentage point all the way to 9.4 percent. The number of unemployed workers rose by 787,000, and the employment-to-population ratio, which had held steady at 59.9 percent in April, slipped 0.2 percentage point to 59.7 percent. Both the unemployment rate and the employment-to-population ratio are at levels not seen since the mid-1980s.

The Labor Market in this Downturn: A Historical Comparison

06.05.09
by Murat Tasci and Beth Mowry

The National Bureau of Economic Research (NBER) declared December 2007 as the peak of the previous expansion in the U.S. economy (and thus, the start of the current recession). Assuming that we are still in the recession, this downturn will likely be the longest since 1945. The deterioration in labor market conditions in the current downturn has been particularly stark, according to either of the typically consulted measures (nonfarm payroll employment and unemployment). From the start of the recession to the end of May 2009, total nonfarm payroll employment declined by about 6 million, or 4.3 percent. In the same period, the unemployment rate jumped from 4.9 percent to 9.4 percent, amounting to almost 6.9 million additional unemployed workers.

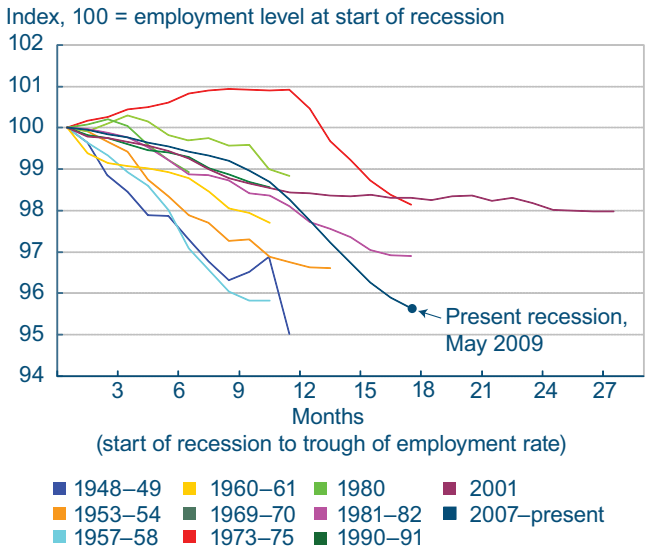
Changes in the Unemployment Rate and Payroll Employment over the Business Cycle

Recessions	Unemployment rate increase from recession start to peak (percentage points)	Drop in employment from recession start to trough (percent)
1948-1949	4.1 (11)	5.0 (11)
1953-1954	3.5 (14)	3.4 (13)
1957-1958	3.4 (11)	4.2 (10)
1960-1961	1.9 (13)	2.3 (10)
1969-1970	2.6 (12)	1.2 (11)
1973-1975	4.2 (18)	1.9 (17)
1980	1.5 (6)	1.1 (6)
1981-1982	3.6 (16)	3.1 (17)
1990-1991	2.3 (23)	1.4 (10)
2001	2.0 (27)	2.0 (27)
2007-present	4.5 (17)	4.3 (17)

Note: Numbers in parentheses represent the total number of months from the beginning of the recession to the peak of the unemployment rate or the trough of unemployment. For the current recession it indicates the total number of months since the beginning of the recession.

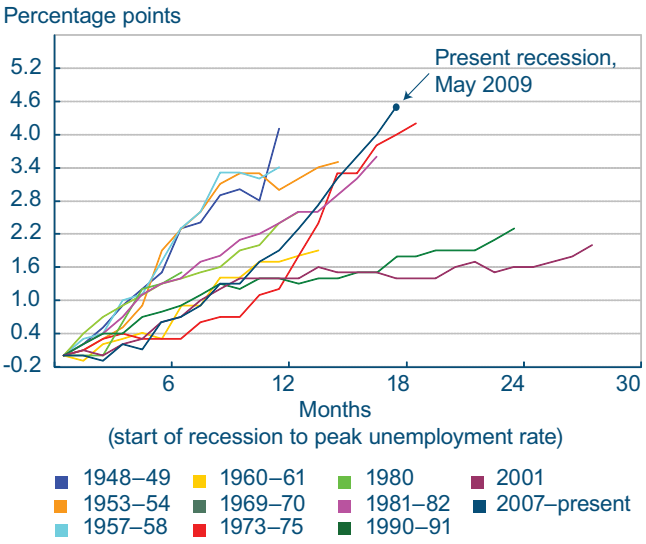
In a typical business cycle, the unemployment rate starts to increase right around the beginning of the recession and does not show any sign of decline until the recession is over. The rate at which the unemployment rate increases over the course of the recession is a good measure of how severe a down-

Employment Index



Note: Seasonally adjusted.
Source: Bureau of Labor Statistics.

Cumulative Increase in the Unemployment Rate



Source: Bureau of Labor Statistics.

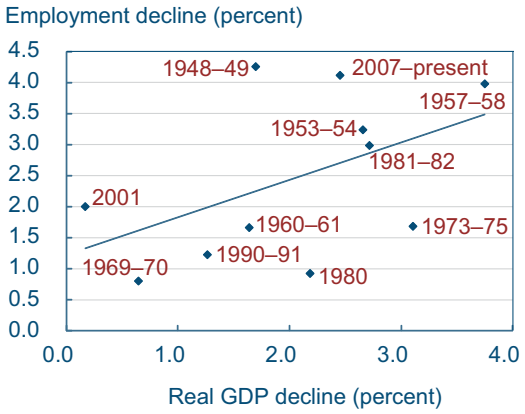
turn is. In this regard, the current downturn resembles the 1973–1975 and 1981–1982 recessions. In those recessions, the unemployment rate peaked in the 18th and 16th months after the start of recession, respectively, and then started to decline. If anything, one might argue that the unemployment rate now looks likely to continue to rise for several more quarters and peak well after the end of the recession. The course of the unemployment rate during the previous two recessions (1990–1991 and 2001) might provide some insight about this: In both recessions, unemployment did not increase by large numbers, but the gradual increase was over a very long period (23 and 27 months, respectively).

A similar picture emerges from the pattern of employment decline over the past 17 months. The magnitude of the decline seems to be very much in line with the 1981–1982 recession, but it is probably far from over. In terms of job loss, the current downturn is the worst recession since the 1948–1949 recession, 4.3 percent relative to 5 percent. The most prolonged recovery in the labor market in the postwar period was observed after the 2001 recession. It took nine quarters for the decline in employment to stabilize.

The so-called "jobless recovery" following the last complete recession puzzled many economists, because the declines in productivity and real GDP in that recession were quite modest. In fact, the actual decline from peak to trough in real GDP was less than 0.2 percent. By that measure it was the mildest-ever U.S. recession. However, in general, there is quite a robust positive correlation between the magnitude of the decline in real GDP and payroll employment in recessions. The current recession fits the typical pattern less closely to some extent. The most recent data for the first quarter of the year indicates that real GDP has declined 2.34 percent overall since the peak in the third quarter of 2007 (making the current recession the fifth-worst to date). The associated quarterly employment decline of 4.11 percent roughly fits the general pattern.

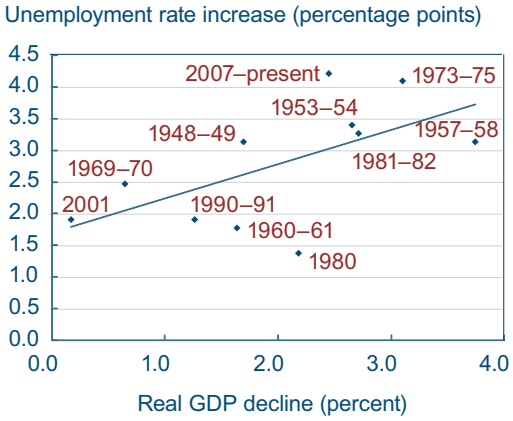
The correlation between output loss and the unemployment rate in recessions is even stronger. The overall output decline of 2.34 percent so far in this recession is now associated with an increase of

Real GDP and Employment Decline



Notes: Real GDP percent decline is measured within official NBER recessions, and percent decline in employment is from the start of recession to employment trough. All measures are quarterly, and unemployment and employment data for for the second quarter of 2009 include only April and May.
Source: Bureau of Labor Statistics.

Real GDP Decline and Unemployment Rate Increase in Recessions



Notes: Real GDP percent decline is measured within official NBER recessions, and the unemployment rate increase is from the start of recession to the peak in the series. All measures are quarterly, and unemployment and employment data for for the second quarter of 2009 include only April and May.
Source: : Bureau of Labor Statistics.

4.23 percentage points in the unemployment rate (measured quarterly). The jobless recovery after the 2001 recession also featured a significant increase in the unemployment rate relative to the decline in output. Even though the unemployment rate increased barely 2 percentage points in that recession, the prerecession level of unemployment was 4.2 percent, which indicates an increase of almost 50 percent.

Analyzing different recession episodes in the postwar period points to some general patterns and some major outliers. First of all, large jumps in the unemployment rate and large drops in employment have been associated with significant losses in output. Secondly, the labor marketâ€™s adjustment usually extends beyond the end of the recession. The recoveries after the last two downturns, especially the 2001 recession, were very long. If this pattern persists in the current downturn, the already severe losses of employment and increases in the unemployment rate might make a prolonged recovery even more painful for the labor market.

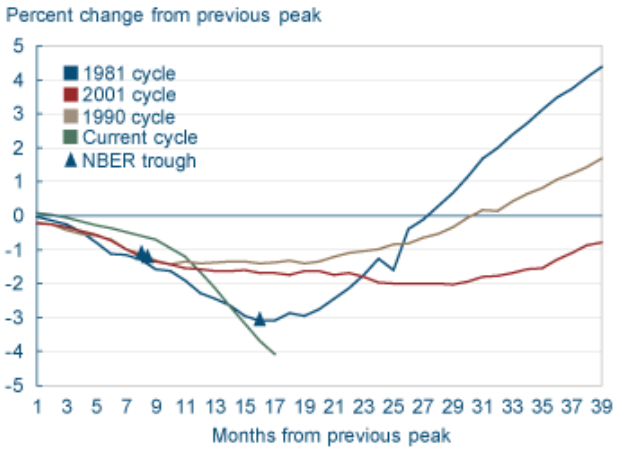
Regional Labor Market Recessions and Recoveries

05.28.09
by Tim Dunne and Kyle Fee

All the recent talk of "green shoots" has led to speculation about what a recovery of the U.S. labor market will look like. Will employment begin to bounce back in a V-shaped recovery curve, or will a U-shaped or even an L-shaped curve ensue? While this alphabet soup of recovery patterns (there's a W, as well) describe previous national labor market recoveries, the patterns also emerge at the regional level.

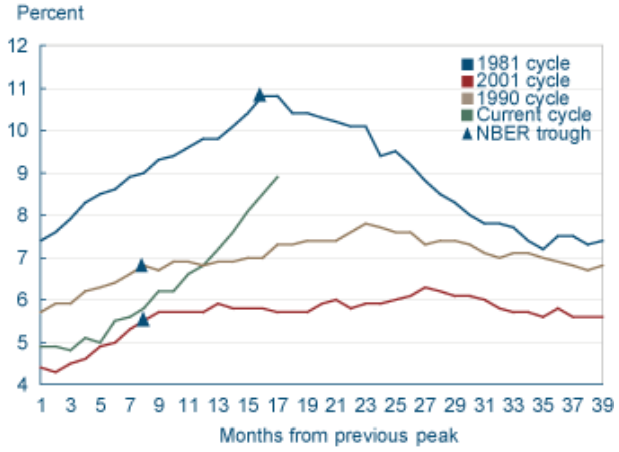
At the national level, labor market recoveries after the four most recent U.S. recessions (1981, 1990, 2001, and the current one) were not all alike. Once the trough in nonfarm payroll employment had been reached in the 1981 recession, employment rebounded sharply, and unemployment fell markedly. The next two recessions, on the other hand, experienced relatively "jobless" recoveries, with payroll employment growth picking up slowly (if at all) after the trough was reached and unemployment rising for several quarters. Seventeen months into the current recession, nonfarm payroll employment has declined 4.0 percent, and the unemployment rate has risen 4.0 percentage points. The trough in this recession will be both deeper and occur later than in the previous three. The current unemployment rate of 8.9 percent is still below what it was in the 1981 recession, but most analysts expect that it will continue to rise over the next several quarters.

U.S. Nonfarm Payroll Employment



Source: Bureau of Labor Statistics.

U.S. Unemployment Rate

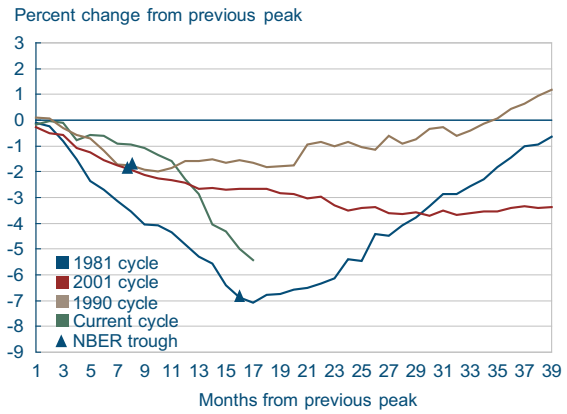


Source: Bureau of Labor Statistics.

Labor market recovery patterns have varied across the states of the Fourth District in these recessions as well. Past business cycles indicate that Ohio typically has been relatively slow to recover lost employment. This was true in the recovery cycle after the 1981 recession, when Ohio's recovery lagged the nation, as well as after the 2001 recession, when Ohio experienced a truly "jobless" recovery, as nonfarm payroll employment remained essentially flat from 2002 through 2007. Since the start of the current recession, the percentage decline in Ohio's payroll employment has exceeded the nation's decline by 1.3 percentage points, but the decline is still less than in the 1981 recession. Ohio's unemployment rate rose to 10.2 percent in May, above the national unemployment rate but well below the peak unemployment rate of 13.9 percent, seen in the 1981 recession.

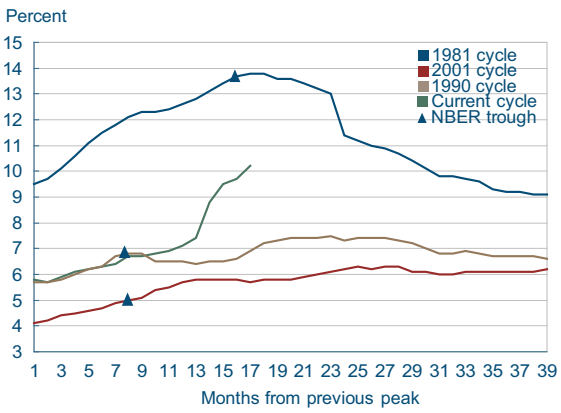
Pennsylvania's payroll employment, in contrast, initially held up relatively well in the current recession, although it started to deteriorate in 2009. Still, the state's labor market performance is better than the nation's as a whole, with Pennsylvania's unemployment rate a full percentage point below the national rate and its nonfarm payroll employment declining by 1.2 percentage points less than the nation's drop.

Ohio Nonfarm Payroll Employment



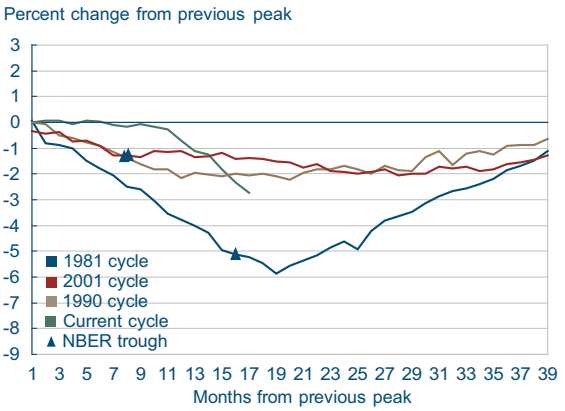
Source: Bureau of Labor Statistics.

Ohio Unemployment Rate



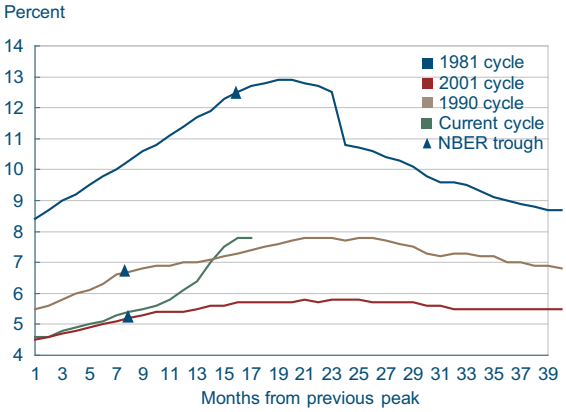
Source: Bureau of Labor Statistics.

Pennsylvania Non-Farm Payroll Employment



Source: Bureau of Labor Statistics.

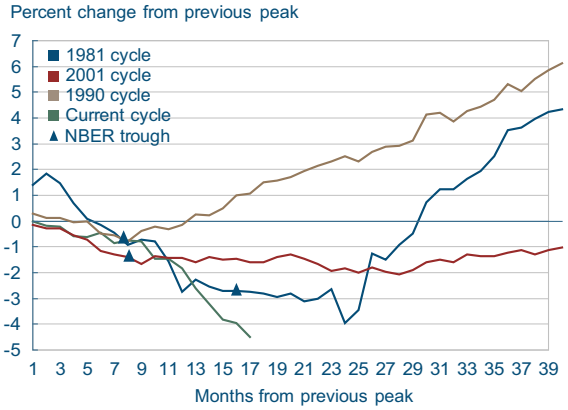
Pennsylvania Unemployment Rate



Source: Bureau of Labor Statistics.

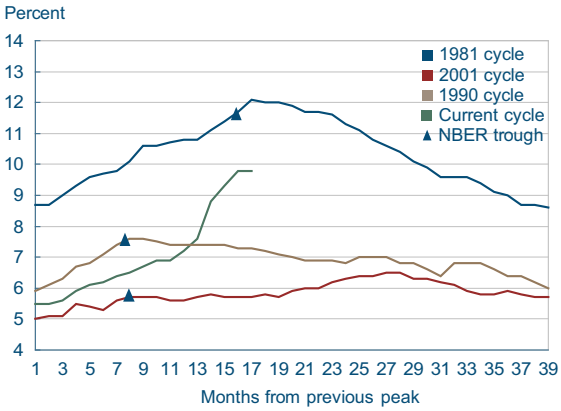
Kentucky's employment losses in the current cycle are somewhat greater than the national decline. Kentucky has lost 4.5 percent of its nonfarm payroll employment, and the state's unemployment rate has risen to 9.8 percent. In terms of nonfarm payroll employment losses, this is shaping up to be Kentucky's worst downturn of the past four cycles. Kentucky's unemployment rate is up 4.3 percent, with 3.4 percentage points coming in the past five months.

Kentucky Non-Farm Payroll Employment



Source: Bureau of Labor Statistics.

Kentucky Unemployment Rate

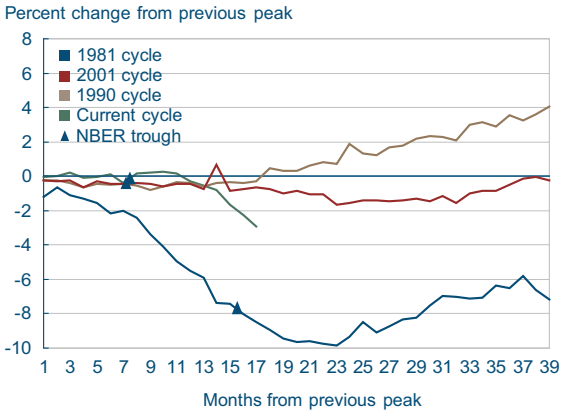


Source: Bureau of Labor Statistics

According to the current data, West Virginia's downturn occurred somewhat later and has been milder than Ohio's, Kentucky's, and Pennsylvania's. However, since the beginning of 2009, West Virginia has been playing catch-up, as its payroll employment declined sharply and its unemployment rate rose. Indeed, West Virginia's unemployment rate is up 3.2 percentage points in this cycle, with almost the entire increase taking place since December 2008 (3.0 percentage points). Still, this is markedly different from the 1981 recession, when West Virginia experienced the highest unemploy-

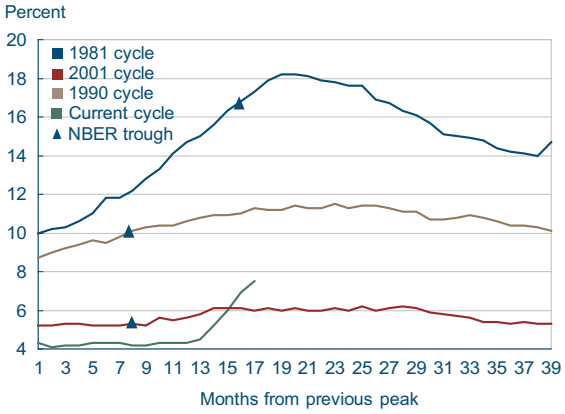
ment rate of any state (18.2 percent), and nonfarm payroll employment remained depressed for years after the recession.

West Virginia Non-Farm Payroll Employment



Source: Bureau of Labor Statistics.

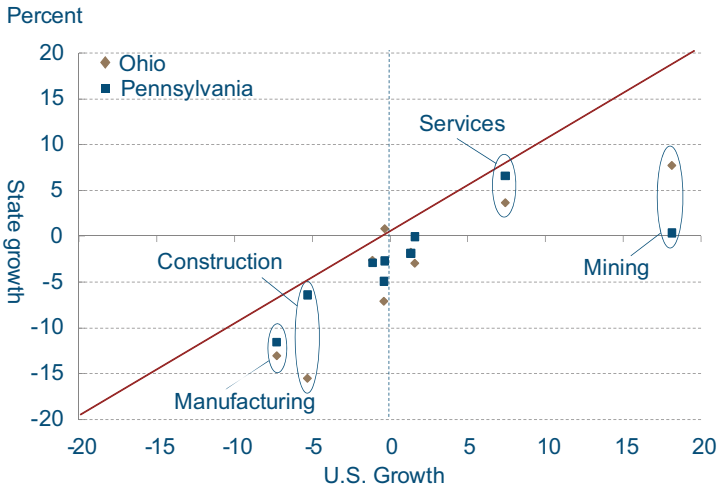
West Virginia Unemployment Rate



Source: Bureau of Labor Statistics.

Hidden in these state patterns is the possibility that different industries in Fourth District states may be experiencing different patterns of job losses across the recessions. We illustrate this for Ohio and Pennsylvania by comparing the employment growth rates of various industries in these states to national growth rates in the same industries. We do this comparison for both the 1981 recession and the current recession. In the charts below, the solid red line represents what would be equal growth rates at the state and national level. Thus, for data points below the line, the growth rate of the industry in that state is below the national level, and vice versa for points above the line.

Sector Employment Growth, 1980 to 1982

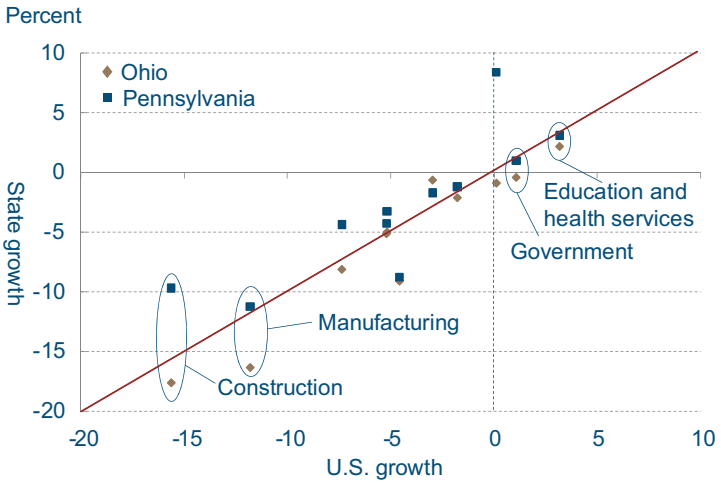


Note: For the 1981 recession, we use data from the BEA that measures employment growth between 1980 and 1982. For the current recession, we use BLS data as in the charts above. The vertical dotted line delineates positive from negative growth at the national level.
Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

During the 1981 recession, almost all of Ohio's and Pennsylvania's industries grew at rates that were below their corresponding national rates. National growth rates in the construction and manufacturing sectors were quite low, but in Ohio and Pennsylvania they were even lower. Employment growth in services remained positive, as well as in mining. Still, Ohio and Pennsylvania experienced below-national growth across almost all sectors.

In the current recession, growth rates in most Ohio and Pennsylvania industries have remained relatively close to the nation. Again, construction and manufacturing have experienced the sharpest national declines in employment. Pennsylvania's construction industry has outperformed the nation, while Ohio's manufacturing industry has under-

Sector Employment Growth Since December 2007



Note: For the 1981 recession, we use data from the BEA that measures employment growth between 1980 and 1982. For the current recession, we use BLS data as in the charts above. The vertical dotted line delineates positive from negative growth at the national level.
Source: Bureau of Economic Analysis, Bureau of Labor Statistics.

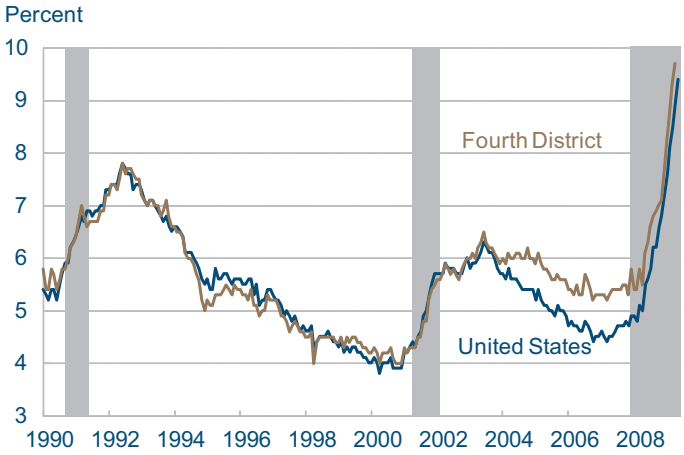
performed the nation. This underperformance of manufacturing in Ohio reflects, in part, the fact that Ohio has an above-average concentration of automotive industries, and these industries have recently experienced sharp declines in employment. Sectors that have expanded employment nationally include education and health services and government. These sectors grew at similar rates in Ohio and Pennsylvania, as well.

Overall, states with counties in the Fourth District have experienced somewhat different labor market cycles in the current recession. Ohio has had the weakest labor market, while Pennsylvania and West Virginia have had relatively strong labor markets. Employment recoveries from recessions have also differed markedly. In recent recessions, job losses have been relatively minor but the accompanying recovery was also anemic. A current fear is that while we are experiencing a sharp labor market contraction similar in magnitude to the 1981 recession, we will have a labor market recovery similar to those which occurred after the 1990 or 2001 recessions—the L-shaped scenario.

Fourth District Employment Conditions, April 2009

06.09.09
by Kyle Fee

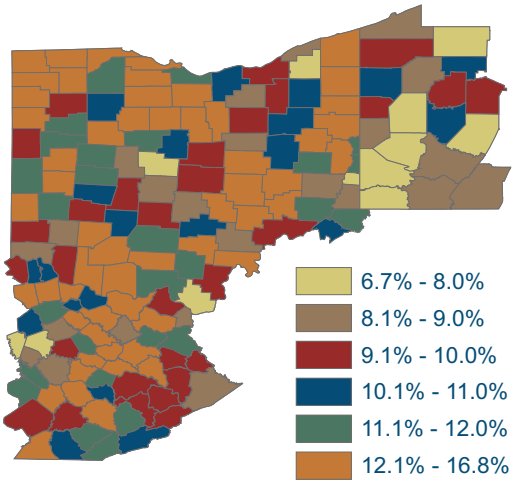
Unemployment Rate[a]



a. Seasonally adjusted using the Census Bureau's X-11 procedure.
Notes: Shaded bars represent recessions. Some data reflect revised inputs, reestimation, and new statewide controls. For more information, see http://www.bls.gov/lau/launews1.htm.
Sources: U.S. Department of Labor, Bureau of Labor Statistics.

County Unemployment Rates

U.S. unemployment rate = 8.9%



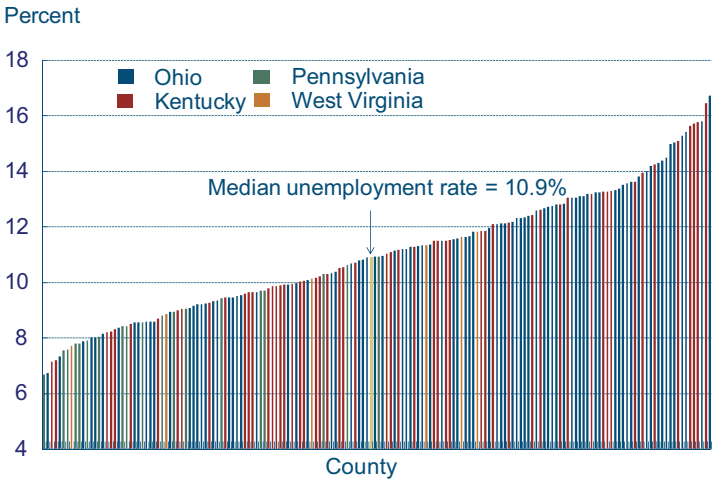
Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

The District's unemployment rate increased 0.4 percentage point to 9.7 percent for the month of April. The increase in the unemployment rate is attributed to an increase of the number of people unemployed (4.1 percent) and a decrease in the number of people employed (–0.4 percent). The District's unemployment rate was again higher than the nation's (by 0.8 percentage point), as it has been since early 2004. Since the recession began, the nation's monthly unemployment rate has been 0.6 percentage point lower on average than the Fourth District's. Since this time last year, the Fourth District's unemployment rate has increased 4.2 percentage points, and the nation's, 3.9 percentage points. Year over year, the number of people unemployed in the Fourth District increased 77.8 percent (78.8 percent for the nation), while the number of people employed fell 4.4 percent (3.7 percent for the nation).

There are significant differences in unemployment rates across counties in the Fourth District. Of the 169 counties that make up the District, 47 had an unemployment rate below the national rate in April, and 122 counties had a higher rate. There were 104 District counties reporting double-digit unemployment rates for April. Large portions of the Fourth District have high levels of unemployment. Geographically isolated counties in Kentucky and southern Ohio have seen rising rates, as economic activity is limited in these remote areas. Distress from auto-industry restructuring can be seen along the Ohio-Michigan border. Outside of Pennsylvania, lower levels of unemployment are limited to the interior of Ohio or the Cleveland-Columbus-Cincinnati corridor.

The distribution of unemployment rates across Fourth District counties ranges from 6.7 percent (Allegheny County, Pennsylvania) to 16.7 percent (Williams County, Ohio), with the median county unemployment rate at 10.9 percent. Counties in Fourth District Pennsylvania generally populate the

County Unemployment Rates



Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Employment Growth and Sector Shares

	Unemployment rate (percent)	Percent of population (25+) with a bachelor's degree or higher
Akron	9.6	28.0
Canton	11.2	21.4
Cincinnati	9.3	28.2
Cleveland	9.3	26.8
Columbus	8.2	32.4
Dayton	11.4	25.8
Lexington	7.8	32.9
Pittsburgh	7.5	27.6
Toledo	12.5	23.8
Youngstown	12.9	19.0

Source: Bureau of Labor Statistics.

lower half of the distribution, while the few Fourth District counties in West Virginia moved to the middle of the distribution. Fourth District Kentucky and Ohio counties continue to dominate the upper half of the distribution. These county-level patterns are reflected in statewide unemployment rates: Ohio and Kentucky have unemployment rates of 10.2 percent and 9.8 percent, respectively, compared to Pennsylvania's 7.8 percent and West Virginia's 7.5 percent.

Current unemployment rates for Fourth District metropolitan statistical areas (MSAs) differ markedly. While the industrial composition of these areas helps to explain much of these differences (see "Ohio's Local Labor Markets" and "Employment Loss in Ohio's Manufacturing Industry" for more detail), human capital plays a similar role. MSAs with higher percentages of the population holding a bachelor's degree or higher tend to have lower unemployment rates. Naturally, the level of human capital reflects an MSA's industrial composition, but human capital will be a vital contributor to how these areas cope with and adjust to this downturn.

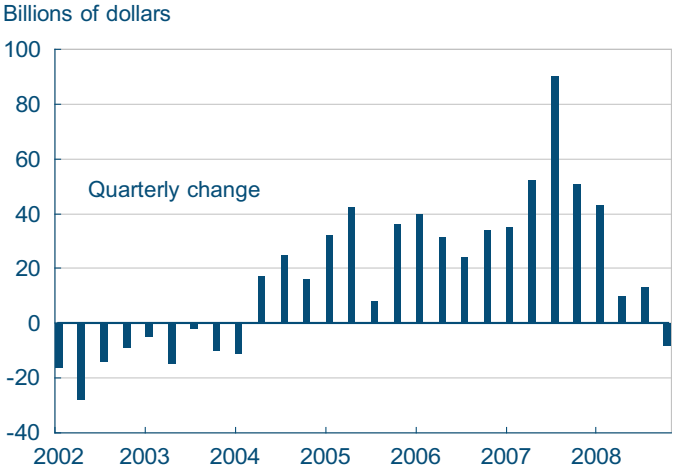
The Credit Environment for Business Loans

05.28.09
by Yuliya Demyanyk, Kent Cherny, and Saeed Zaman

A major concern arising out of credit market impairments is that businesses, which rely on credit for operations and growth, may find it difficult to receive new loans or refinance existing ones. Some reports have shown evidence of contraction in commercial and industrial (C&I) loans, usually using loan volume data. We look at some other measures of business lending, based on Call Report, FDIC, and Federal Reserve survey data, to analyze supply and demand patterns for these loans.

Loans to businesses come in two primary forms: lines of credit that can be tapped for cash management and working capital, and term loans meant for business expansion. Both are important for the smooth functioning of businesses, particularly at times when financial market and economic conditions are strained. Consider that in an illiquid market environment, a firm or entrepreneur might want both a backup credit line for liquidity and a term loan to finance the purchase of, for example, a business line that a troubled competitor is selling off.

Quarterly Change in C&I Loan Volume

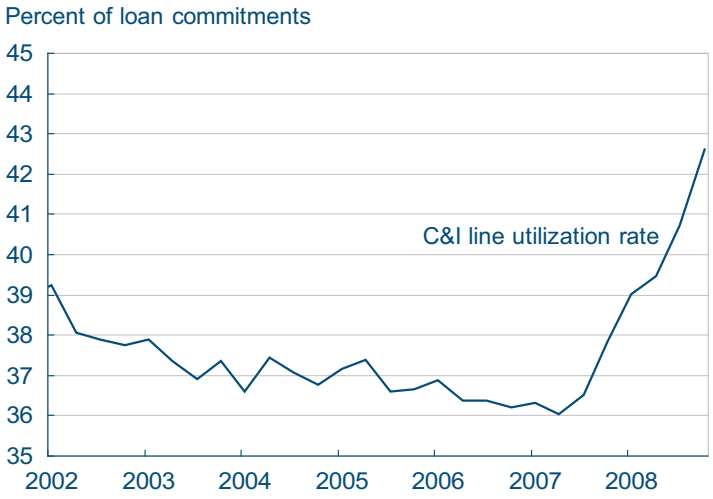


Source: Federal Deposit Insurance Corporation.

FDIC data show that commercial and industrial loan volume experienced significant growth from 2006 to mid-2007, but then fell off sharply with the onset of the recession in 2008. A shrinking C&I loan volume does not, however, mean that all commercial credit is contracting. The type of commercial credit outstanding has shifted somewhat to credit line draw-downs. In addition, a decline in the overall demand for C&I loans has reduced loan volumes.

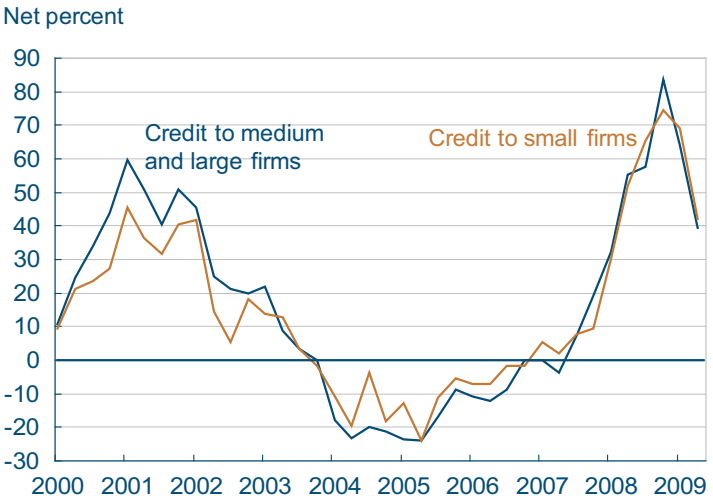
Commercial credit-line utilization rates have exhibited a very different trend from the loan volume numbers. As banks grew more cautious about extending term loans, businesses opted to increase draw-downs on existing credit lines from banks. Since 2007, utilization rates as a percentage of extended commitments have risen nearly 7 percent.

C&I Credit Line Utilization Rate



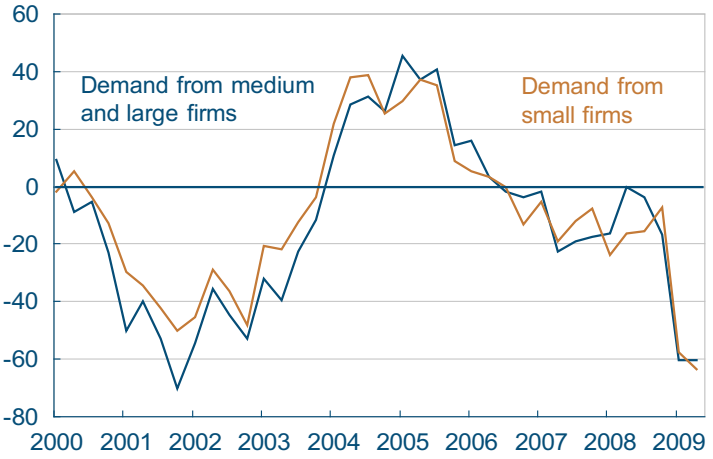
Source: Federal Deposit Insurance Corporation.

Banks Reporting Tighter Credit Standards



Source: Federal Reserve Board.

Banks Reporting Stronger Loan Demand



Source: Federal Reserve Board.

According to some recent reports, banks have been shortening the maturity term of their business loans, adding stricter covenants, and generally tightening credit standards. Relative tightening in C&I markets can be analyzed using the Fed's Senior Loan Officer Opinion Survey, which collects information about credit markets from bank lenders each quarter. Their responses can be used to gauge the supply of and demand for credit.

The data from the survey show that fewer banks have tightened their credit standards for business loans in the first quarter of 2009 compared to the end of 2008. As of the first quarter of 2009, the net percentage of banks reporting tighter standards (those tightening minus those loosening) was approximately 40 percent. That is, the fraction of banks still tightening has fallen. This reduction applies to commercial loans that have been extended to both small firms and medium-to-large firms, and as such it indicates a broader-based reduction in tightening across the banking sector.

The survey also shows that about 80 percent of domestic banks continued to increase interest rate spreads on loans to medium and large businesses (about 75 percent bumped up spreads for small firms as well). But although a large majority of banks are still widening interest rate spreads beyond their cost of funds, the practice is somewhat less pervasive than during the previous two quarters. Banks partially attributed the net tightening of standards and loan terms to "a less favorable or more uncertain economic outlook, a worsening of industry-specific problems, and a reduced tolerance for risk."

Demand is the other half of the picture. The demand for business loans shows a dramatic fall-off since the end of last year. Most recently, 60 percent of bank respondents told the Federal Reserve that they were seeing weaker demand for business loans from firms of all sizes. Loan officers attributed the weaker demand primarily to "a decrease in [the need] to finance investment in plant or equipment...inventories, accounts receivable, and mergers and acquisitions." Simply put, fewer economic opportunities mean lower demand for credit. Another possibility is that the restrictive credit

standards of banks, combined with the degraded balance sheets of a large fraction of firms, are leading many businesses to assume that they cannot get credit on favorable terms, and consequently they do not approach financial institutions for new loans or credit lines.

Finally, we compare Fourth District banks to the larger domestic banking sector. To avoid the swings in loan volumes by the largest banks, we limit our sample to only those banks with less than $15 billion in total assets. We find that Fourth District banks of this size realized, at the aggregate level, a return on total assets of 0.19 percent last quarter, down from 0.78 percent in the fourth quarter of 2008. At the national level (which includes the Fourth District banks), net income for institutions with under $15 billion in assets was negative, resulting in an ROA of -0.005 percent. Gross returns on commercial loans were identical regionally and nationally, at 1.38 percent. And although C&I charge-offs fell between the fourth quarter and first quarter, commercial loans that were past due or no longer accruing interest continued to creep up during this period for all banks, including those in the Fourth District.

Aggregated Bank Commercial Loan Statistics

Indicator	2008:Q4		2009:Q1	
	Fourth District banks	All U.S. banks	Fourth District banks	All U.S. banks
Return on total assets (percent)	0.78	0.10	0.19	–0.005
C&I interest income to total C&I loans (percent)	7.24	6.38	1.38	1.38
C&I charge-offs (as percentage of C&I loans)	0.79	1.03	0.26	0.39
C&I past-due and non-accruing loans (as percentage of C&I loans)	2.64	2.21	3.00	2.78

Note: Excludes banks with more than $15 billion in assets.
Source: Bank Call Reports.

The data we have considered indicate that business loan volumes continue to exhibit a downward trend, though firms are still drawing heavily on credit lines that may have been established before the tighter credit cycle. And while loan officers are reporting some easing of the credit supply, demand for business loans remains low and may result in continuing C&I volume contraction at the ag-

gregate level. Going forward, increasing C&I loan volume, a continuing loosening of credit terms, and a return of business loan demand will serve as indicators that credit markets and the real economy are returning to health.

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