

# Economic Trends

**August 2009** (Covering July 10, 2009, to August 13, 2009)

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FEDERAL RESERVE BANK  
*of* CLEVELAND

# June Price Statistics

07.22.09

by Brent Meyer

## June Price Statistics

	Percent change, last					2008 average
	1mo. <sup>a</sup>	3mo. <sup>a</sup>	6mo. <sup>a</sup>	12mo.	5yr. <sup>a</sup>	
<b>Consumer Price Index</b>						
All items	9.3	3.3	2.7	-1.4	2.6	0.3
Less food and energy	2.4	2.4	2.3	1.7	2.2	1.8
Median <sup>b</sup>	0.8	1.2	1.7	2.1	2.7	2.9
16% trimmed mean <sup>b</sup>	2.0	1.3	1.5	1.6	2.5	2.7
<b>Producer Price Index</b>						
Finished goods	23.3	9.5	4.2	-4.3	3.1	0.2
Less food and energy	6.5	2.1	2.0	3.4	2.4	4.3

a. Annualized.

b. Calculated by the Federal Reserve Bank of Cleveland.

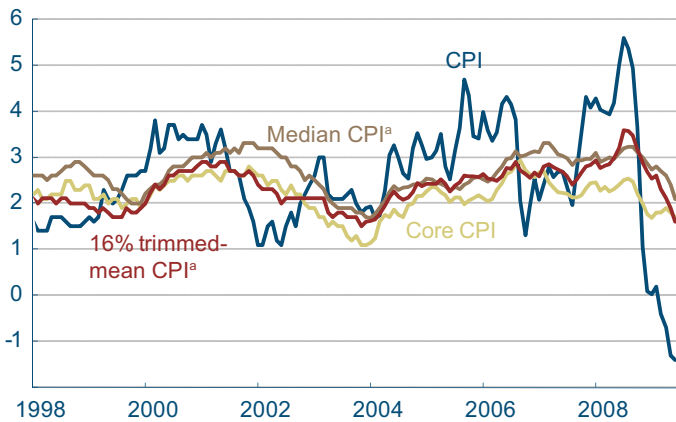
Sources: U.S. Department of Labor, Bureau of Labor Statistics; and Federal Reserve Bank of Cleveland.

The CPI jumped up 9.3 percent (annualized rate) in June, almost entirely because of a large spike in motor fuel (up 569 percent at an annualized rate). According to the data release, that spike in motor fuel accounted for over 80 percent of the overall increase in the CPI. However, even with this month's jump, the CPI is down 1.4 percent over the past year.

The core CPI rose 2.4 percent in June, following a 1.7 percent increase in May and outpacing most of its longer-term trends. Turning to the two measures of underlying inflation produced by the Federal Reserve Bank of Cleveland, the median CPI increased 0.8 percent, while the 16-percent trimmed mean CPI rose 2.0 percent in June. Over the past three months, the median has averaged 1.2 percent and the trimmed mean 1.3 percent. Over the past year, they are trending between 1.6 percent and 2.1 percent.

## CPI, Core CPI, and Trimmed-Mean CPI Measures

12-month percent change

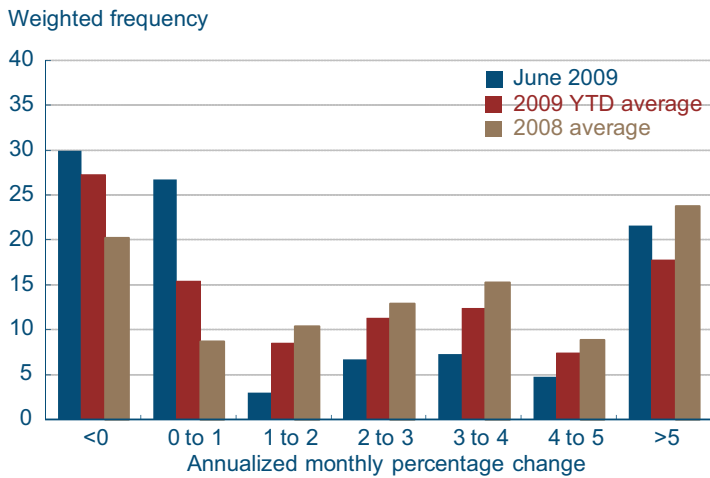


a. Calculated by the Federal Reserve Bank of Cleveland.

Sources: U.S. Department of Labor, Bureau of Labor Statistics, Federal Reserve Bank of Cleveland.

Digging a little deeper into the report reveals a couple of curious price movements. First, apparel prices exhibited an unusual seasonal pattern, jumping 8.8 percent on a seasonally adjusted basis, while falling 25.5 percent on a not seasonally adjusted basis. Perhaps the story here is that the severity of the business cycle has already depressed clothing prices (and some other items as well, such as recreation), negating any of the usual “sales” during this time of year. Said another way, apparel prices have already been slashed to “rock-bottom prices” due to the recession, but the seasonal adjustment still takes place even though there may not be much of a “season” left to adjust for—leading to artificial price increases. Also, just as in the June producer price index, prices of new vehicles rose 8.2 percent in June and are actually up 0.9 percent over the past year (which doesn't make intuitive sense given the current environment, and may be another result of ill-timed seasonal effects).

## CPI Component Price Change Distribution

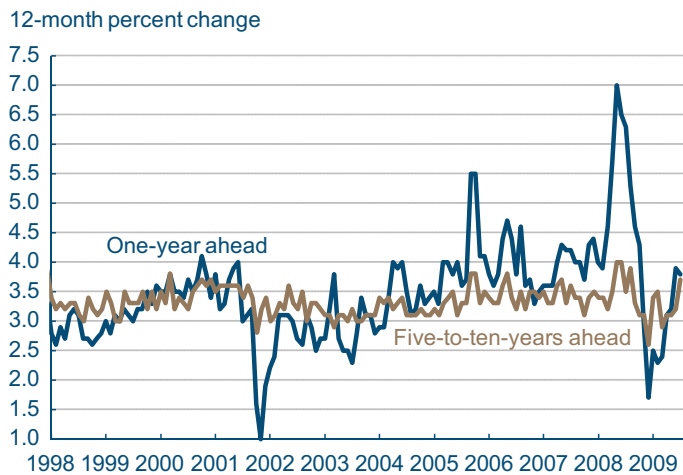


Source: Bureau of Labor Statistics.

The underlying component price-change distribution in June shows a substantial amount of weight in the tails. Nearly 52 percent (by expenditure weight) of the consumer market basket was in the extreme tails (rising in excess of 5 percent or exhibiting price decreases). Moreover, roughly 30 percent of the index rose at rates between 0 percent and 1 percent in June, leaving just 10 percent of the overall index between 1 percent and 3 percent—a broad range that is usually associated with price stability.

One-year average inflation expectations from the University of Michigan's preliminary report of its Survey of Consumers ticked down to 3.8 percent in July, from 3.9 percent in June. Longer-term (5-to-10 year ahead) average expectations jumped up to 3.7 percent from 3.2 percent in June (most likely biased by a few outliers), though the median only rose by 0.1 percentage point to 3.1 percent. The variance in the long-run responses was much wider than the average since 2000 (14 compared to 8.7), outlining the relative uncertainty survey respondents have about the inflation outlook.

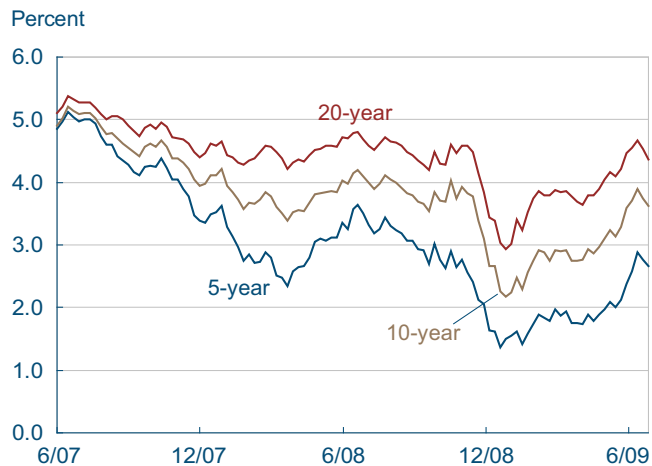
## Household Inflation Expectations



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

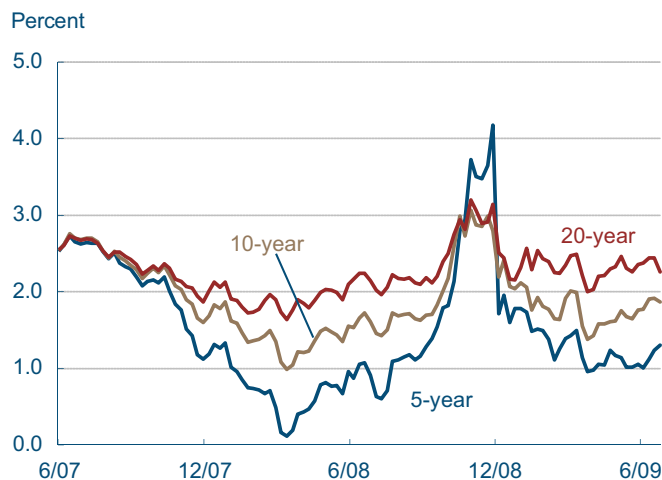
# Inflation Expectations and Monetary Policy

## Nominal Treasury Yields



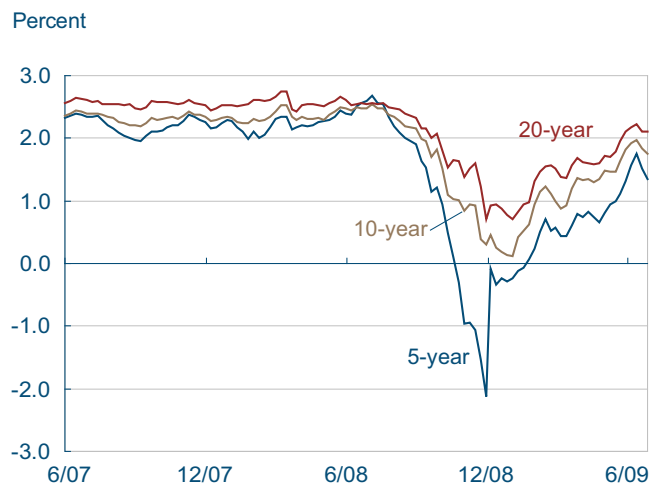
Source: Federal Reserve Board.

## TIPS Yields



Source: Federal Reserve Board.

## Breakeven Inflation Rates



Source: Federal Reserve Board.

07.14.09

by Charles T. Carlstrom and Kyle Fee

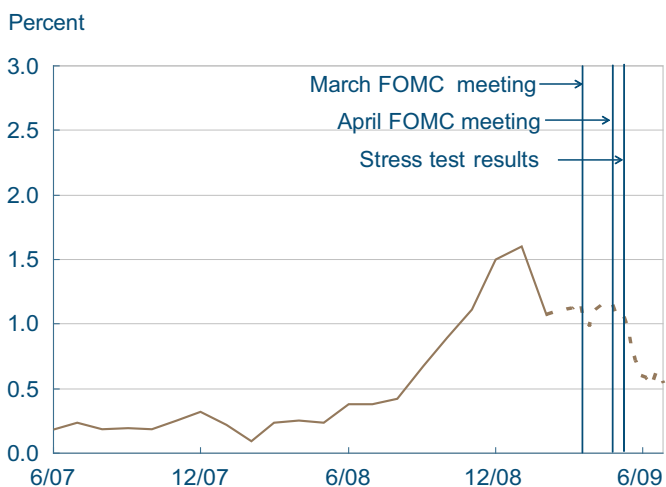
Last month, we discussed concerns about the rising yield curve, which some people believe may be signaling an increase in longer-term inflation expectations. As we explained, the sort of increase we have seen in the yield curve would not usually garner much attention, but Fed actions to address the financial crisis had already aroused some worries about future inflation. Over the month of June, the yield curve has continued to rise. A steep yield curve implies that interest rates are expected to increase. Increases in future rates are thought to 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). Since TIPS are indexed to inflation, their yields are a measure of the real (inflation-adjusted) interest rate that is expected to prevail over the maturity of the bond. When we look at TIPS-estimated real interest rates, we do not see the noticeable increase that we do in the estimates derived from nominal bonds.

Since TIPS yields give a measure of real interest rates, they are frequently used to back out a “breakeven” inflation rate, which is used as a measure of expected inflation. When we calculate this measure, we see why many are concerned with the steepening of the yield curve. TIPS-estimated expected inflation has crept up for all maturities.

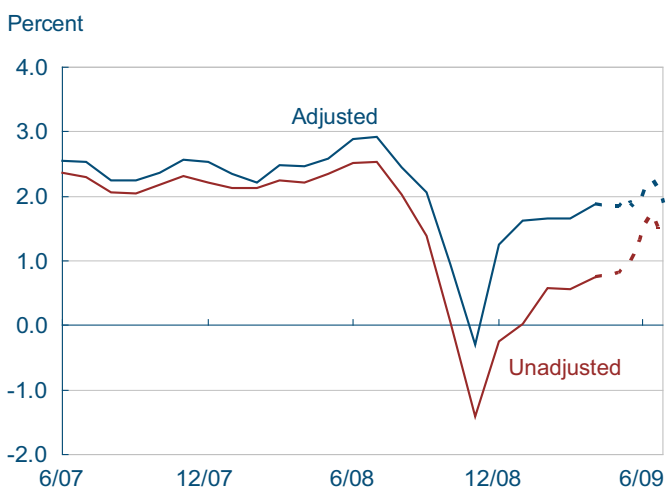
However, while breakeven inflation rates have certainly increased, they are still a little below where they were a year ago. Therefore, understanding the dramatic decrease in breakeven inflation rates from June 2008 to the end of 2008 will probably shed light on their subsequent increase. Did expected inflation really decline as dramatically from mid 2008 to the end of the year as the breakeven inflation rates suggest? We argue almost certainly not.

## Liquidity Adjustment



Note: Solid lines correspond to monthly data and dashed lines to weekly data.  
Source: Federal Reserve Board.

## Liquidity-Adjusted Breakeven Inflation (5-year)



Note: Solid lines correspond to monthly data and dashed lines to weekly data.  
Source: Federal Reserve Board.

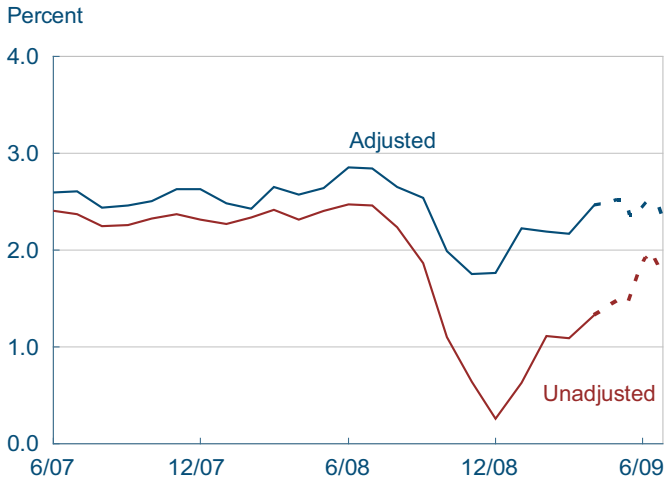
In times of serious liquidity concerns, interpreting the TIPS breakeven inflation measure is problematic. TIPS securities are less liquid than regular nominal securities, a fact that lowers their price and increases their yield. Increases in liquidity pressures will therefore decrease TIPS breakeven inflation rates even if actual expected inflation is constant. Thus, during periods of liquidity stress, breakeven inflation rates derived from TIPS will understate actual expected inflation. This suggests that the decline we saw in 2008 is probably largely due to the intense liquidity pressures prevailing at the time.

We attempt to quantify the extent to which liquidity pressures have biased observed breakeven inflation rates. To do this we need to correct for the liquidity bias in TIPS. This correction requires us to make some assumptions. First we assume that very long-term inflation expectations (as measured by the 10- to 20-year breakeven inflation rate) would have been constant in the absence of liquidity pressures. The implied forward breakeven inflation rates are calculated by assuming the expectations hypothesis, which maintains that holding long-term real and nominal interest bonds is expected to be the same as holding a series of short-term bonds. Second, we assume that liquidity pressures affected all TIPS equally. That is, 5-, 10-, and 20-year TIPS all had an equal liquidity premium embedded in them. We use this measure of the liquidity premium to adjust breakeven inflation rates of all maturities.

Our calculations show that liquidity concerns at the height of the crisis subtracted over 1.5 percentage points from measured breakeven inflation rates. That is, breakeven inflation rates severely underestimated the deflationary pressures at the time. Since then this liquidity adjustment has come down. It especially appears to have declined after the results of the stress tests given to banks were made public.

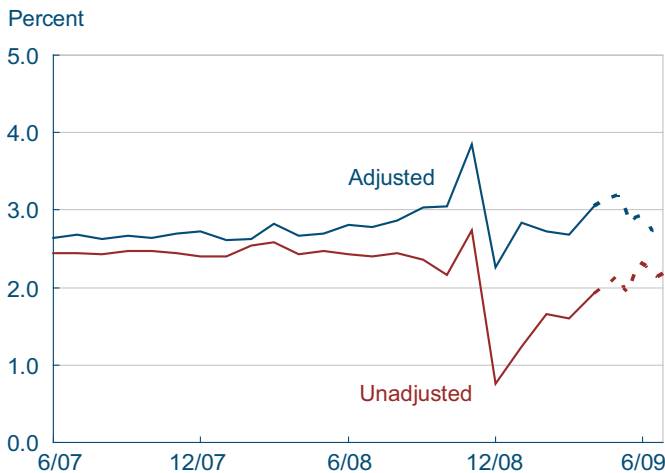
Without correcting for liquidity, 5-year breakeven inflation rates at the height of the crisis suggested that prices would decline at an average rate of almost 1.5 percent per year over the next five years. After correcting for the liquidity premium, it looked like prices were expected to be nearly flat over the next five years.

## Liquidity Adjusted Breakeven Inflation (10-year)



Note: Solid lines correspond to monthly data and dashed lines to weekly data.  
Source: Federal Reserve Board.

## Liquidity-Adjusted Breakeven Inflation (5-10 year)



Note: Solid lines correspond to monthly data and dashed lines to weekly data.  
Source: Federal Reserve Board.

Liquidity-adjusted longer-term breakeven inflation rates show a similar but significantly muted pattern as short-term 5-year breakeven inflation expectations. Using these two estimates, we can back out medium to long-term inflation expectations as measured by 5- to 10-year breakeven inflation rates. These medium-range estimates suggest that once liquidity is corrected for, inflation expectations have been largely unaffected by the crisis. Five- to 10-year inflation expectations are useful because they abstract from the high-frequency inflation declines that the market might have been expecting over the next five years. Currently, inflation expectations from 5- to 10-years out are basically identical to what they were before the crisis.

While short-term inflation expectations have crept up recently, they have just retraced the declines they experienced during the height of the crisis. Longer-term inflation expectations as measured by liquidity-adjusted 5- to 10-year breakeven inflation rates suggest that inflation expectations did not decline during the crisis and have not crept up significantly since then. They are now right around where they stood before the crisis began. But the increases we have seen in the yield curve, coupled with a relatively flat yield curve for real TIPS, warrant an ever-watchful eye to make sure that inflation expectations do not creep up.

## Implementing Long-Term Security Purchases

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07.30.09

by Andrea Pescatori, Timothy Bianco, and John Lindner

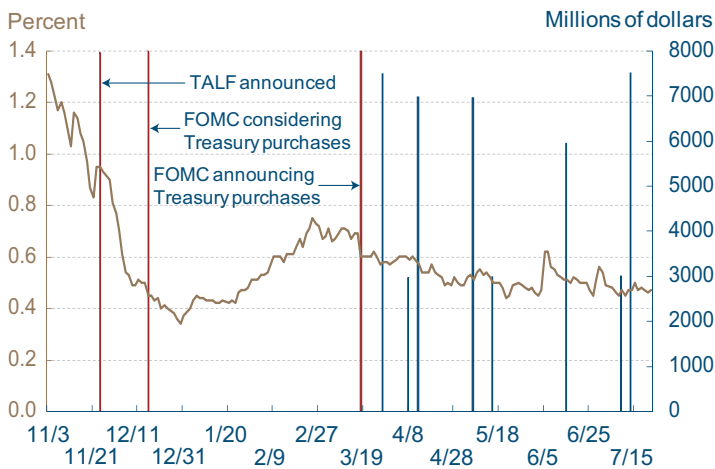
During slowdowns in economic activity and periods of inflation, the monetary authority's optimal response is to lower the real rate (to negative values if economic conditions require it). Traditionally, the Federal Reserve achieved this by reducing the target fed funds rate—which implies a reduction in short-term real rates because inflation expectations are practically fixed in the very short run. In general (but with notable exceptions), this reduction has an effect also on yields of longer maturity, which can be thought of as a combination of current and future expected short-term rates, thus stimulating the economy.

When short-term rates are close to zero the traditional tool is no longer feasible. However, with longer-term rates substantially above zero, since November 2008, the Fed has expressed its intention of purchasing long-term securities to affect their rates. This is part of a quantitative easing policy which aims to stimulate economic activity when the usual fed funds target is bounded by zero.

The strategy of intervening in long-term treasury markets is not designed to provide liquidity to those markets (usually they do not need it) but to change the relative supply of securities in order to affect their yields. This, in turn, should have spillover effects on other assets' long-term rates. However, changing the supply of a security that is traded in a very liquid market does not necessarily affect its price, which should be determined only by its "fundamentals." For long-term U.S. treasuries, those fundamentals are inflation and output growth expectations (during the corresponding maturity period). However, not only are those fundamentals not observable but they are also a function of the policy strategy itself; moreover, the longer the maturity, the more those elements can interact with one another. As a result, it is difficult to make an accurate evaluation of the effects of the chosen policy.

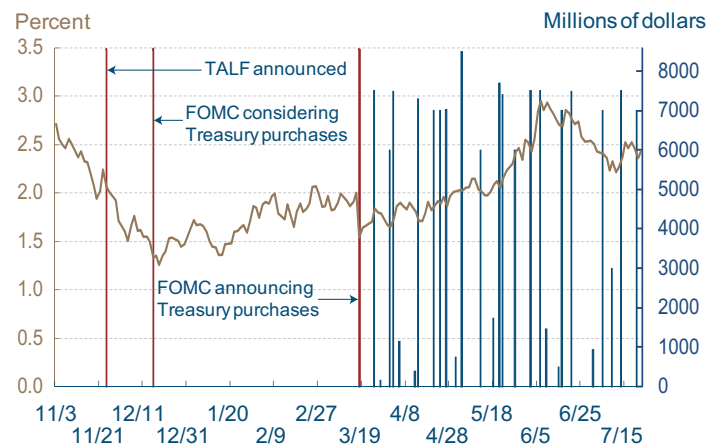


## Short-Term Treasury Yields and Purchases



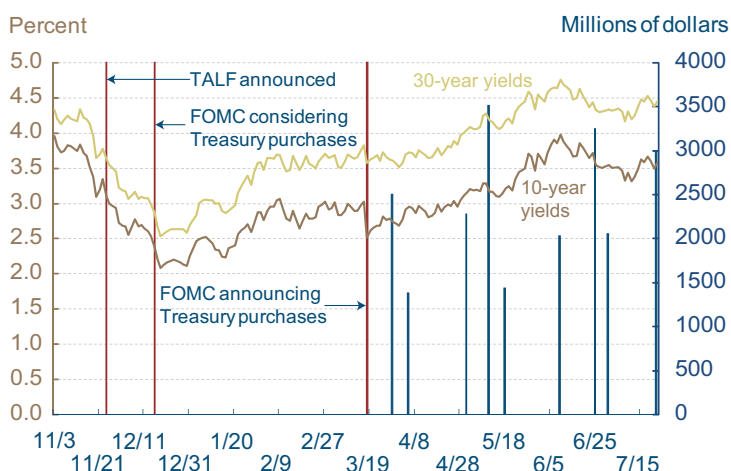
Notes: Red lines indicate announcements. Blue lines represent purchases.  
Sources: Federal Reserve Board, 1-year yields.

## Medium-Term Treasury Yields and Purchases



Notes: Red lines indicate announcements. Blue lines represent purchases.  
Sources: Federal Reserve Board, 5-year yields

## Long-Term Treasury Yields and Purchases



Notes: Red lines indicate announcements. Blue lines represent purchases.  
Sources: Federal Reserve Board, 10- and 30-year yields.

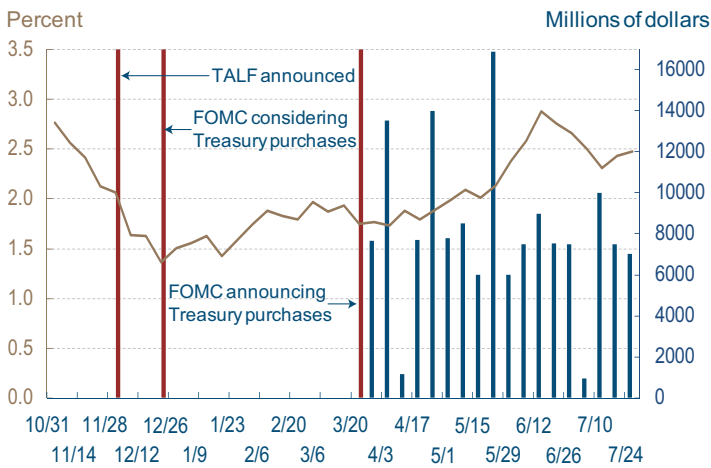
For example, in order to stimulate the economy and fight the risk of deflation, the Fed has recently intervened in the open market to reduce yields on long-term treasuries. If that strategy is successful, inflation and output growth expectations may also be positively affected, which will put upward pressure on the yields.

In November 2008, the Fed decided to intervene in the long-term markets by announcing the buying of up to \$500 billion mortgage-backed securities (MBS) and announced the TALF; in March 2009, the Fed specified the size of its intervention (\$300 billion of long-term treasuries and some additional \$750 billion in MBS during the year); this strategy was confirmed in April FOMC meetings.

Figures 1–3 show the daily rates of treasuries of different maturities combined with Fed interventions. The Fed purchases started during the spring of 2009; as the bars show, they concentrate mainly on medium-term maturities and are smoothed throughout. The biggest interventions are still relatively small compared to the volumes usually traded. For example, the thinner market for treasuries with maturities longer than 11 years has an average daily volume above \$22 billion, whereas the biggest Fed intervention was below \$3.5 billion, or less than 15 percent of the average trading volume. Hence, interventions per se do not seem to add unwarranted volatility to the market. In fact, we have not found any significant correlation between the size of the intervention and either the treasury yields or the daily returns. However, the announcement dates show an immediate effect on prices. This is when markets incorporate the information of the policy change. On November 25, when the TALF and \$500 billion MBS purchases were announced, medium- and long-term treasuries lost 18 basis points and 15 basis points, respectively (notice that the rate increases on Monday, November 24 are related to the release of a joint statement on Citigroup by the Treasury, Federal Reserve, and FDIC). On December 15, when the Fed announced its intention of purchasing long-term treasuries, there was another decrease of 16 basis points for medium-term and 12 basis points for long-term treasuries. Finally, on March 18, when the size of the intervention was specified, there were sub-

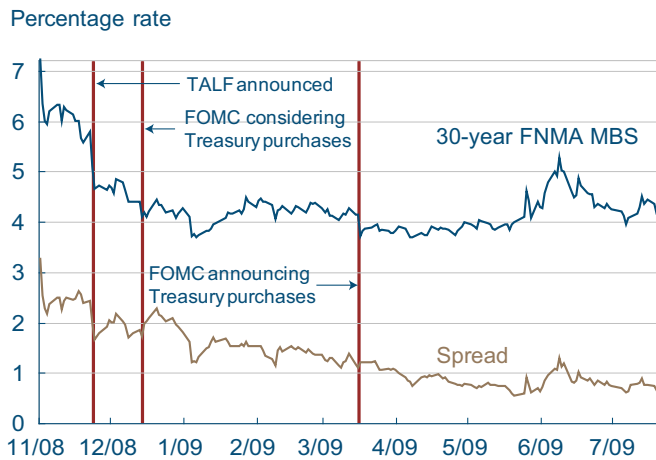


## Medium-Term Treasury Yields and Purchases



Notes: Red lines indicate announcements. Blue lines represent purchases.  
Sources: Federal Reserve Board; 5-year yields.

## Mortgage-Backed Securities Yield



Source: Federal Reserve Board, Bloomberg.

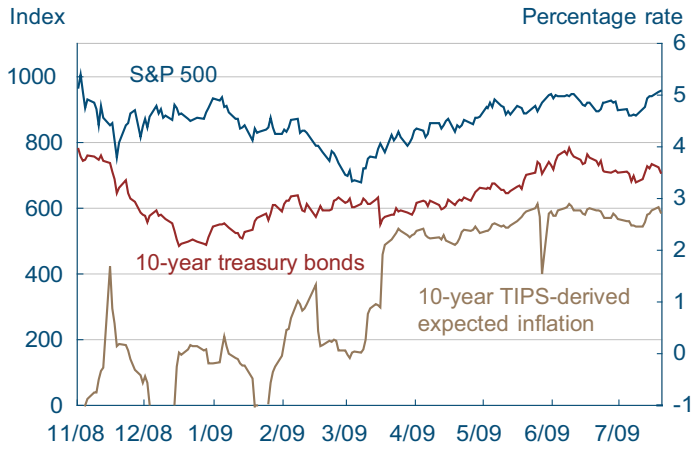
stantial reductions of 46 basis points and 26 basis points, respectively; even the short-term maturity showed a reduction of 9 basis points.

The figures presented are aggregated at a daily frequency. Figure 4 shows the same data as figure 2 (medium-term purchases) but they are aggregated at a weekly frequency. The interpretation corroborates the one given earlier for the daily frequencies: Weeks with sizeable Fed interventions seem to have no statistically significant impact on prices.

It is worth noting that, except for the initial impact on announcement days, long- and medium-term treasuries not only have not been affected by Fed purchases at daily or weekly frequency but also have trended up—especially in the case of treasury bonds with maturities of 10 years and over; this has been true at least since the end of December 2008. Unlike medium- and long-term securities, the 1-year rate has been trending down, at least since the end of February 2009; rates are now below 0.5 percent. This might suggest that the policy has been successful and that the medium- and long-term rates have been trending up because the risk of a prolonged recession and deflation has faded—whereas, given monetary policy lags, shorter-term expectations have not changed so dramatically. To corroborate this idea, we have found that the correlation at a weekly frequency between 10-year treasury bonds and Standard & Poor’s 500 (which should mainly reflect output growth expectations) is strongly positive and significant at 46 percent—while on the March 18 announcement day they moved in opposite directions (see figure 5). Moreover, most measures of inflation expectations have also been trending up to values more consistent with the Fed’s long-run inflation target. For example, figure 5 shows the 10-year inflation expectation derived from TIPS (Treasury Inflation-Protected Securities). Even if part of the series’ volatility can be attributed to swings in the liquidity premium for the thinner market of TIPS, the trend is clearly upward.

The Fed has also targeted the market for mortgage-backed securities. In contrast with the treasury market, the MBS market has been particularly hard hit during the crisis. In fact, almost two-thirds of

## S&P 500 and 10-Year Treasury Bonds

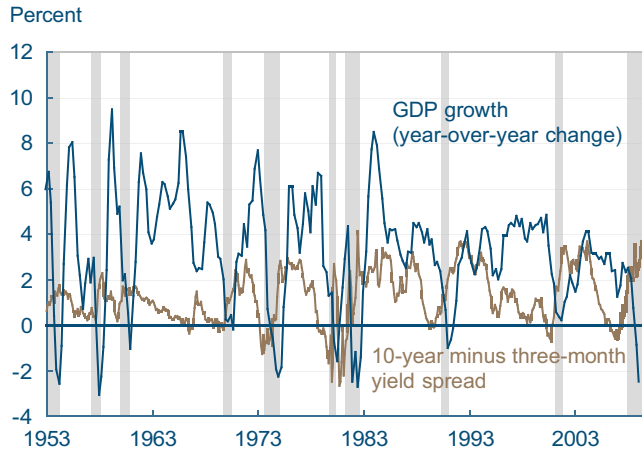


Source: Federal Reserve Board, *New York Times*.

the Fed's purchases of long-term securities have been concentrated in the MBS market. In figure 6, we show the weekly yield on a 30-year Fannie Mae MBS (5 percent coupon) and its spread with the 10-year treasury (the average maturity of a mortgage is 10 years). In a market that is not perfectly liquid, the Fed's purchases are supposed to have a stronger effect. The impact of those purchases on MBS yields is beyond the scope of this page, but it is reasonable to believe that those purchases should have played a role in reducing the spread at least since January 2009, when they actually started.

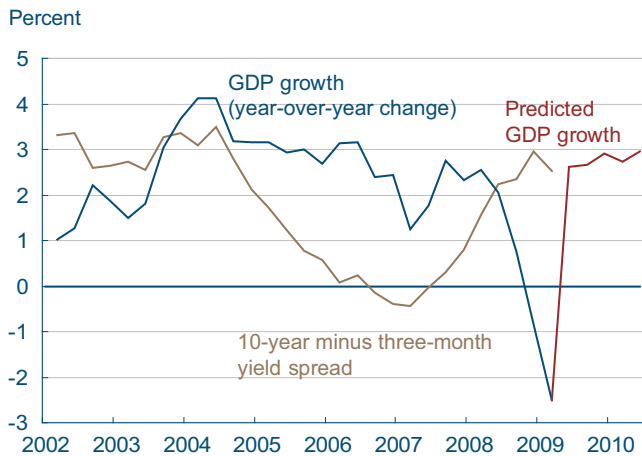
# The Yield Curve, July 2009

## Yield Curve Spread and Real GDP Growth



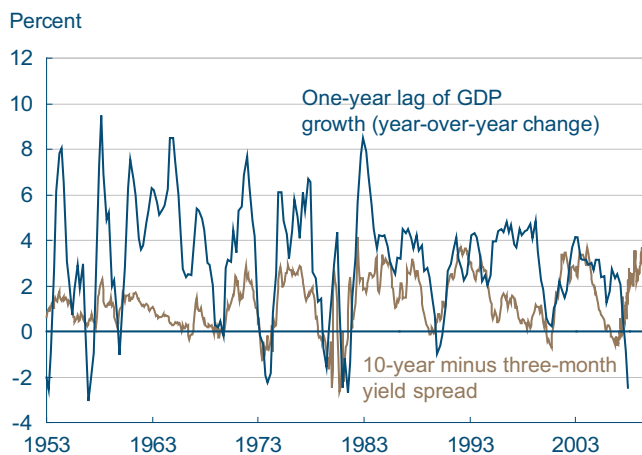
Source: Bureau of Economic Analysis, Federal Reserve Board.

## Predicted GDP Growth and Yield Spread



Source: Bureau of Economic Analysis, Federal Reserve Board, authors' calculations.

## Yield Spread and Lagged Real GDP Growth



Sources: Bureau of Economic Analysis, Federal Reserve Board.

08.01.09

by Joseph G. Haubrich and Kent Cherny

Since last month, the yield curve has flattened slightly, with long rates dropping while short rates stayed essentially unchanged. The difference between them, 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.

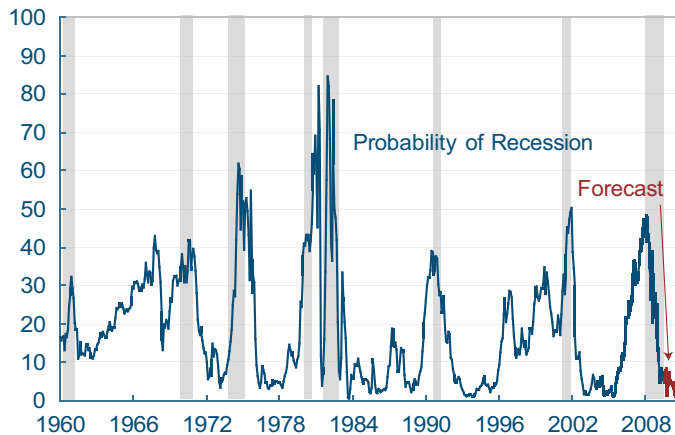
More generally, a flat curve indicates weak growth, and conversely, a steep curve indicates strong growth. One measure of slope, the spread between 10-year bonds and 3-month T-bills, bears out this relation, particularly when real GDP growth is lagged a year to line up growth with the spread that predicts it.

Since last month the three-month rate has held steady at a low 0.19 percent (for the week ending July 24) just up from June's 0.18 percent. The ten-year rate dropped to 3.62 percent, down 13 basis points from June's 3.75. The slope cropped to 343 basis points, down from June's 357 basis points, but still well above May's 296 basis points. Part of the increase may reflect a continuing reduction in financial market turmoil. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.6 percent rate over the next year. This is not that far from other forecasts.

While such an 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

## Probability of Recession Based on the Yield Curve

Percent probability, as predicted by a probit model



Source: Bureau of Economic Analysis, Federal Reserve Board, authors' calculations.

## Durations of Yield Curve Inversions and Recessions

Recessions	Duration (months)	
	Recessions	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	18	10

(through June 2009)

Note: Yield curve inversions are not necessarily continuous month-to-month periods.

Source: Bureau of Economic Analysis, Federal Reserve Board, and authors' calculations.

To read more on other forecasts:

[http://www.econbrowser.com/archives/2008/11/gdp\\_mean\\_estima.html](http://www.econbrowser.com/archives/2008/11/gdp_mean_estima.html)

Econbrowser's The Administration's Economic Forecast against Updated Alternatives:

[http://www.econbrowser.com/archives/2009/05/the\\_administrat\\_2.html](http://www.econbrowser.com/archives/2009/05/the_administrat_2.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>

event: whether or not the economy is in recession. Looking at that relationship, the expected chance of the economy being in a recession next July stands at a low 1.8 percent, just up from June's 0.8 percent, and even with May's 1.8 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, this 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 way to get at the question of when the recovery will start is to compare the duration of past recessions with the duration of the preceding interest rate inversions. The chart makes the comparison for the recent period. The 1980 episode is anomalous, but in general longer inversions tend to be followed by longer recessions. Following 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?"

## Economic Projections from the June FOMC Meeting

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07.16.09

by Brent Meyer

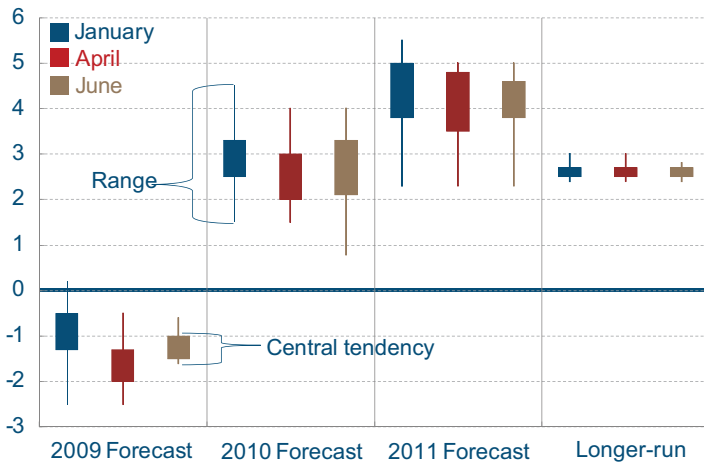
The economic projections of the Federal Open Market Committee (FOMC) are released in conjunction with the minutes of the meetings four times a year (January, April, June, and October). The projections are based on the information available at the time, as well as participants' assumptions about the economic 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 June 23-24 showed some signs of stabilization after two quarters of substantial decreases. Notably, financial conditions continued to improve between meetings. The spread between corporate bond yields and comparable Treasury securities diminished considerably between FOMC meetings, not to mention one-month and three-month Libor-OIS spreads narrowed to pre-credit-crisis levels. Some housing-market indicators began to show signs of stabilization (albeit at a relatively low level). However, those signs of stabilization were tempered with continued labor market deterioration, further production cuts, and shedding of excess inventories. Furthermore, FOMC participants noted that "weak economic conditions" in many other countries would likely dampen demand for U.S. exports in the near term.

The Committee's central tendency is now for the economy to contract on a year-over-year basis in 2009 between -1.5 percent and -1.0 percent, compared to April's central tendency of -2.0 percent to -1.3 percent. As noted in the Summary Economic Projections section of the release, the path implied by incoming data indicated that growth was less negative than previously expected, and participants

## FOMC Projections: Real GDP

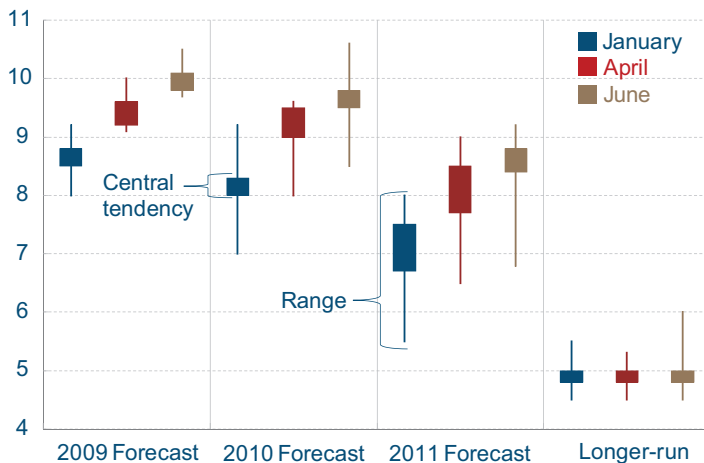
Annualized percent change



Source: Federal Reserve Board.

## FOMC Projections: Unemployment Rate

Percent



Source: Federal Reserve Board.

continued to expect that the economy would begin to recover in the second half of 2009.

The growth outlook for 2010 and 2011 remained roughly consistent with January’s and April’s projections. Growth in 2010 is expected to be “sluggish,” as household balance sheets and financial conditions are expected to recover only gradually. In 2011, the central tendency is for output to grow above its longer-run trend—increasing between 3.8 percent and 4.6 percent—thus closing some of the gap between potential and actual GDP. The Committee noted that the key factors aiding in the recovery will be a boost from the fiscal stimulus, accommodative monetary policy, and continuing improvement in financial markets.

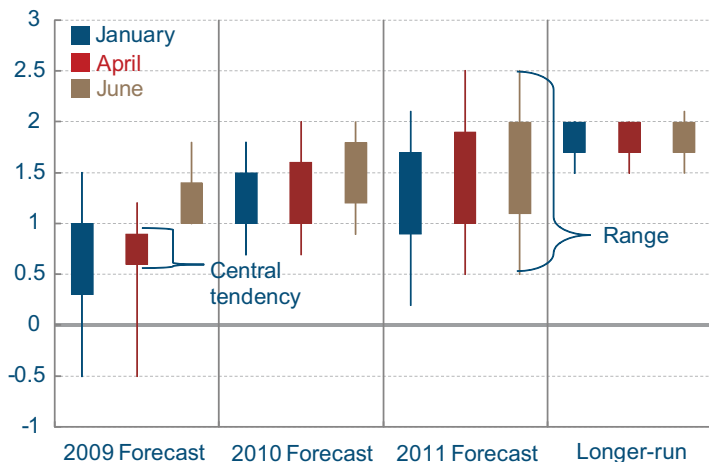
Reflecting the continued deterioration in the labor market, the Committee’s projections for the unemployment rate grew more pessimistic in June. The range of unemployment rate projections for 2009 jumped up from 9.1 percent to 10.0 percent in April to 9.7 percent to 10.5 percent in June. Importantly, FOMC participants expect the unemployment rate to remain stubbornly high in 2010, as expectations for output growth are not appreciably different than its longer-run trend. Furthermore, it was noted that some participants are concerned about a structural reallocation of labor that could keep the unemployment rate from falling as fast as it otherwise would have. Most participants expect that the unemployment rate will return to a “longer-run sustainable level” between 4.8 percent and 5.0 percent. However, some participants raised their projections of that level, which pushed the upper end of that range from 5.3 percent in April to 6.0 percent in June.

Perhaps one of the more striking changes to the FOMC’s economic projections was the shift in the near-term inflation outlook. Higher-than-expected incoming inflation data, as well as rising oil and commodity prices, were cited by participants as contributing to the upward revision. Most participants now expect PCE inflation in 2009 to be between 1.0 percent and 1.4 percent, up from April’s projection of 0.6 percent to 0.9 percent. Near-term core PCE projections were revised up as well, though not as aggressively. Still, reflecting



## FOMC Projections: PCE Inflation

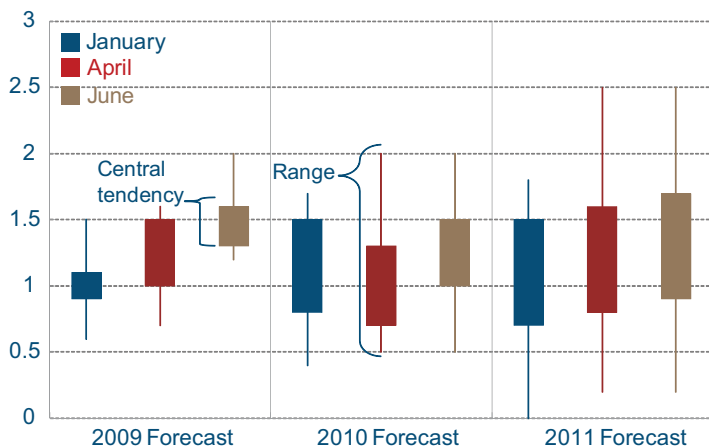
Annualized percent change



Source: Federal Reserve Board.

## FOMC Projections: Core PCE Inflation

Annualized percent change



Source: Federal Reserve Board.

what the release called “sizable economic slack,” most FOMC participants foresee inflation rates over the medium term falling below their respective longer-run projections. However, it is clear that uncertainty surrounding the inflation projections remains. The June projections of PCE inflation for 2011 range from 0.5 percent to 2.5 percent, a spread of 2.0 percentage points. Moreover, the 2011 range on the less-volatile core PCE measure of inflation reflected a 2.3 percentage point spread.

In the minutes of June’s FOMC meeting, participants noted that the uncertainty was higher than historical norms for all forecasted variables. Interestingly, the majority of respondents viewed the risks around their projections of real GDP and the unemployment rate as “roughly balanced,” compared to a more pessimistic weighting of the risks to the outlook over the past two projections. They pointed to “tentative signs of economic stabilization, indications of some effectiveness of monetary and fiscal policy actions, and improvements in financial conditions” in their assessment of the risks. Many participants also viewed the risks to their inflation projection as “roughly balanced,” while a few participants, according to the release, viewed the risks to their inflation projections to the downside and one saw them to the upside.

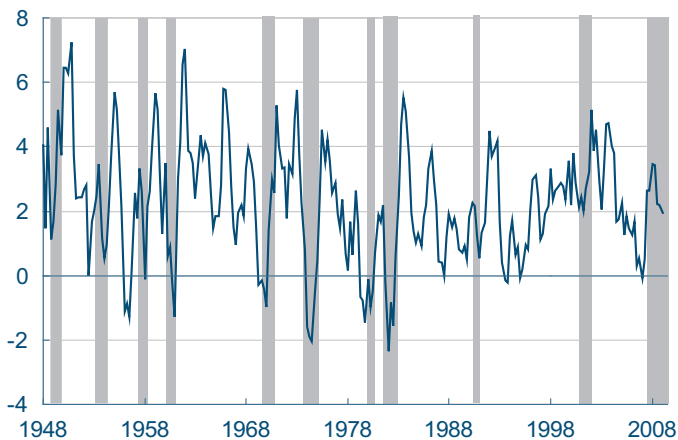
## Productivity in the Recession and Going Forward

07.30.09

by Paul Bauer and Michael Shenk

### Nonfarm Business Sector Productivity

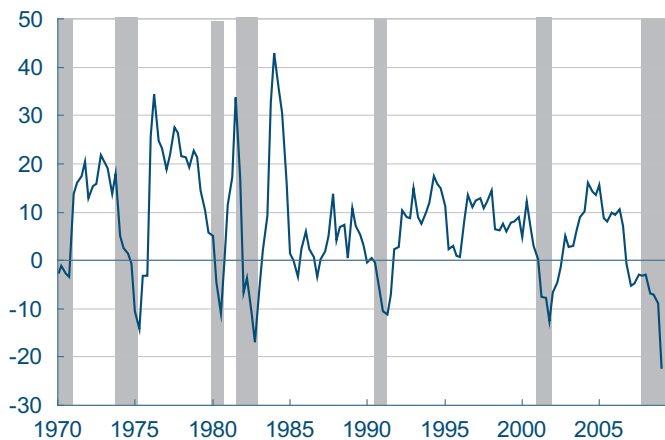
Four-quarter growth rate



Source: Bureau of Labor Statistics.

### Gross Private Domestic Investment

Four-quarter growth rate



Source: Bureau of Economic Analysis.

In contrast to previous postwar recessions that tended to see sharply lower labor productivity growth, if not outright declines, the 2001 and the current recessions have had relatively strong labor productivity growth. In 2001, year-over-year productivity never dropped below 2.0 percent. In the current recession, productivity has remained over 1.9 percent. The sustainability of this productivity growth has implications for monetary policy, the affordability of the Federal deficit, and ultimately our living standards in the long run.

Gains in labor productivity (output per hour) come from three sources: increasing the amount of capital per worker (capital intensity); increasing workers' average level of skill, education, and training (labor composition); and a residual (multifactor productivity) that picks up economy-wide gains in knowledge and organizational methods not captured by the previous two effects. Only annual estimates are available for the breakdown in labor productivity. The post-1995 resurgence in labor productivity has been spurred largely by capital intensity and multifactor productivity. However, the growth for 2007 to 2008 was fueled more by capital intensity and a bit less multifactor productivity.

In expansions, the source of productivity gains from capital intensity comes from firms investing at a faster rate than they are adding workers. Unfortunately, in this recession gross private domestic investment is currently falling over 20 percent on a year-over-year basis, so the gains from capital intensity are a consequence of it being easier for firms to shed workers than capital. While this process boosts the amount of capital available per worker, it is not sustainable in the long run. Firms are being forced to run leaner and that should help boost productivity once demand recovers.

Labor composition, after adding 0.4-0.5 percentage points from 1987 to 1995, has only added a modest 0.2 percentage point to labor productivity

## Labor Productivity for Private Nonfarm Business

	Annual growth				
	1987-1991	1990-1995	1995-2000	2000-2007	2007-2008
Output per hour of all persons	1.5	1.6	2.5	2.5	2.8
Contribution of capital intensity	0.6	0.6	1.2	0.9	1.6
Contribution of labor composition	0.4	0.5	0.2	0.2	0.1
Multifactor productivity	0.5	0.5	1.1	1.4	1.1

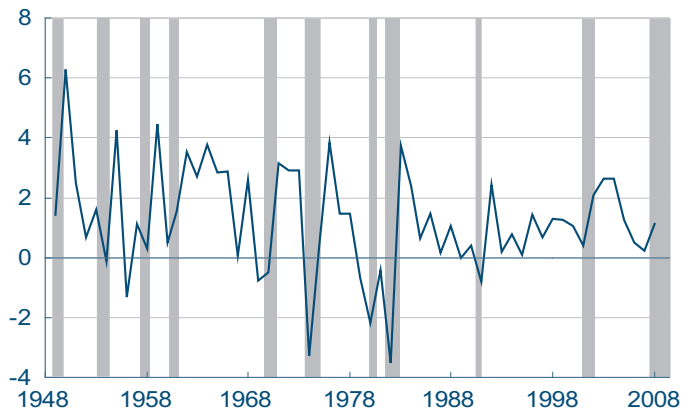
Note: Multifactor productivity plus contribution of capital intensity and labor composition may not sum to output per hour due to independent rounding.  
Sources: Bureau of Labor Statistics.

since 1995 and only 0.1 percentage point from 2007 to 2008. As always happens in recessions, laid off workers—and young people that might have entered the labor market—choose instead to enroll in further education and training programs. Taken alone, this will boost the contribution from labor composition in the future. However, what matters for productivity is how much output a worker produces, and for re-employed workers, they frequently move to new occupations or a different industry where they may be less productive than in their previous employment. As the overall effect of labor composition has been small in recent years, the economy-wide effect of this phenomenon should be small.

The third source of labor productivity, multifactor productivity, does continue to show a pro-cyclical pattern. In the mild recessions of 1991 and 2001, it did not dip very much from its previous rate, and that has been the case for the current recession. The last two times we had prolonged periods of structural reallocations, 1974-1975 and 1980-1983, multifactor productivity took a much bigger hit. Viewed optimistically (remember that we do not have estimates for 2009 yet) the flow of innovations appears to be continuing to make their way to the market.

## Private Nonfarm Business Sector Multifactor Productivity

Percent change from previous year



Source: Bureau of Labor Statistics.

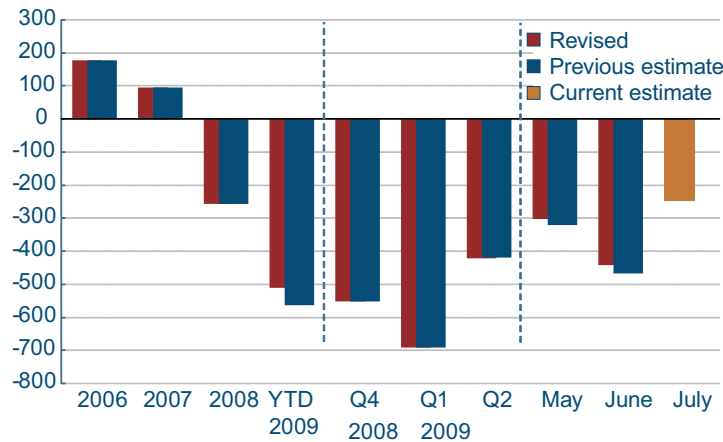
# The Employment Situation, July 2009

08.10.09

by Murat Tasci and Alex Bluebond

## Average Nonfarm Employment Change

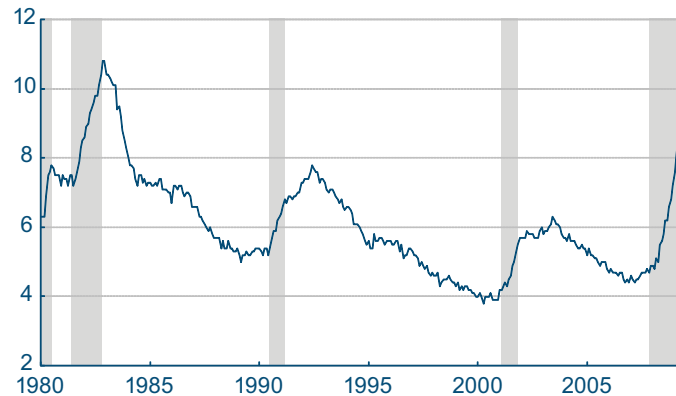
Change, thousands of jobs



Source: Bureau of Labor Statistics.

## Unemployment Rate

Percent



Note: Data are seasonally adjusted rate for the civilian population, age 16 and older.  
Source: Bureau of Labor Statistics.

The decline in nonfarm payroll employment slowed to 247,000 in July, beating expectations of a 320,000 decline. Upward revisions to May and June added 43,000 jobs, bringing estimated payroll changes in those months to -303,000 and -443,000, respectively. The unemployment rate unexpectedly ticked down by 0.1 percentage point to 9.4 percent in July (marking the first decrease since April 2008). However, that number may be misrepresenting true labor market slack, as 442,000 people exited the workforce, which might account nearly twice the decrease in the number of unemployed (267,000). The employment-to-population ratio was relatively stable in July, ticking down just 0.1 percentage point to 59.4 percent.

The diffusion index of employment change currently sits at 30.1, meaning only 30.1 percent of industries are increasing employment. While this is an improvement over recent months, it still sits well below the threshold of 50, which indicates an equal balance of industries expanding and contracting employment.

Payroll losses were still broadly spread across the major industries in July, although mostly at slower rates. Losses in goods-producing industries slowed to 128,000 from 223,000 in June. Within goods industries, construction employment declined by 76,000, compared to 86,000 last month. Manufacturing witnessed a large improvement, losing 52,000 jobs in July compared to 131,000 in June. This improvement occurred mostly within durable goods, as losses there fell to 32,000 from 105,000.

Service Industries saw losses fall from 220,000 in June to 119,000 in July. Education and health services, leisure and hospitality, and government all actually saw job growth in July. Government, in particular, added 7,000 jobs after losing 48,000 in June. On the other hand, while education and health services added jobs, fewer were added in July (17,000) than in June (37,000). Other in-

dustries lost fewer jobs than in previous months. Professional and business service payrolls slipped just 38,000 in July, much less than the average of -118,000 over the past six months. Retail trade was the one sector where no improvement occurred, as payrolls declined 44,000 in July, more than double the decline of 21,000 the month before.

Revisions to previous estimates indicated that service-providing industries did not lose nearly as many jobs in May and June as previously thought. A total of 40,000 jobs were added in service industries over those two months. Most of the upward revision was seen in professional business services, which added 21,000 jobs in May and 12,000 in June to previous estimates. Not all revisions were positive, however. Retail trade took another hit as the revision subtracted an additional 11,000 jobs from May's estimate.

## Labor Market Conditions and Revisions

	Average monthly change (thousands of employees, NAICS)				
	May current	Revision to May	June current	Revision to June	July 2009
Payroll employment	-303	19	-443	24	-247
Goods-producing	-221	3	-223	0	-128
Construction	-57	-9	-86	-7	-76
Heavy and civil engineering	-9.4	-1	-16	0	-10
Residential <sup>a</sup>	-13.5	-2	-33	-2	-27
Nonresidential <sup>b</sup>	-33.5	-6	-38	-5	-39
Manufacturing	-146	10	-131	5	-52
Durable goods	-130	10	-105	7	-32
Nondurable goods	-28	0	-26	-2	-20
Service-providing	-91	16	-220	24	-119
Retail trade	-28	-11	-21	0	-44
Financial activities <sup>c</sup>	-27	3	-29	-2	-13
PBS <sup>d</sup>	-27	21	-106	12	-38
Temporary help services	-1	7	-31	6	-10
Education and health services	40	-7	37	3	17
Leisure and hospitality	27	9	-18	10	9
Government	-11	-1	-48	4	7
Local educational services	-3	-2	8	5	-17

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).

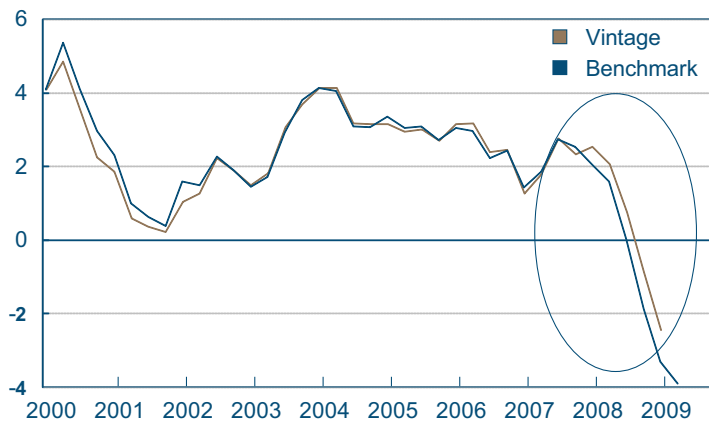
Source: Bureau of Labor Statistics.

# Real GDP: Second-Quarter 2009 Advance Estimate and Comprehensive Benchmark Revision

08.10.09  
by Brent Meyer

## Real GDP Growth

Four-quarter percent change

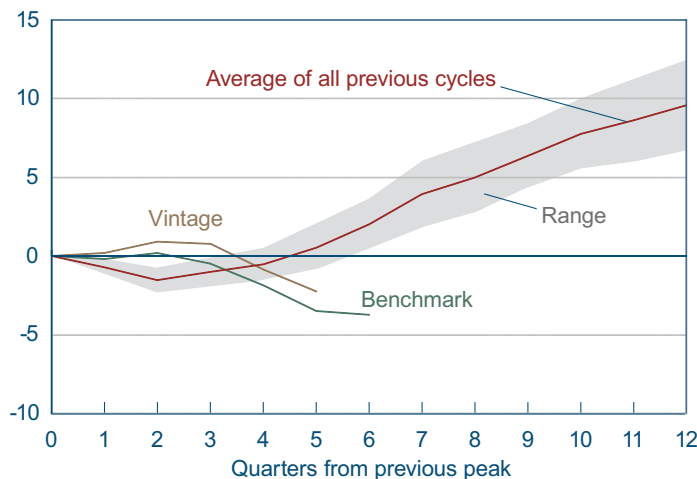


Source: Bureau of Economic Analysis.

Real GDP decreased at an annualized rate of 1.0 percent in the second quarter, according to the advance release by the Bureau of Economic Analysis (BEA), beating expectations of a 1.5 percent decline. Though, due to the comprehensive revision, this decrease is coming off a downwardly revised first-quarter estimate of -6.4 percent (from 5.5 percent previously). In fact, from the start of the recession in the fourth quarter of 2007 to the first quarter of 2009, the annualized percentage change in real GDP was revised down from -1.8 percent to -2.8 percent. The weaker trajectory resulted in a year-over-year growth rate in real GDP of -3.9 percent through the second quarter, a post-World War II low.

## Real GDP

Percent change from previous peak



Source: Bureau of Economic Analysis.

Incorporating the new information from the comprehensive revision reveals that real GDP is now 3.7 percent below its level at the start of the recession, roughly 1.0 percentage point below the previous estimate (through the first quarter). The current cycle is much more severe (in length and depth) than the average of all the post-World War II cycles. Also, the current recession has reached a depth not seen even during the 1973–1975 recession, which at its deepest point was 3.2 percent below its peak level.

The rate of contraction slowed markedly from the first quarter to the second, due to a much smaller decrease in investment, a smaller decrease in inventories, stronger government spending, and a much less dramatic drop in exports. Real business fixed investment fell just 8.9 percent, compared with a 39.2 percent tumble in the first quarter, while the decline in residential fixed investment slowed from -38.2 percent in the first quarter to -29.3 percent in the second. The continued shedding of private inventories subtracted 0.8 percentage point (pp) from real GDP growth in the second quarter, compared to 2.4 pp in the first. Net exports added



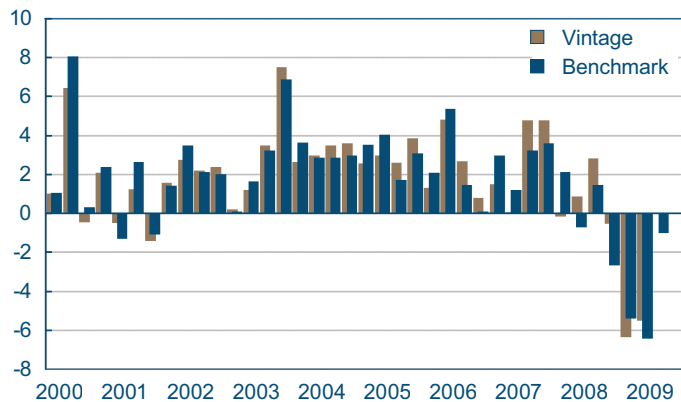
## Real GDP and Components, 2009:Q2 Advanced Estimate

	Quarterly change (billions of 2000\$)	Annualized percent change, last:	
		Quarter	Four quarters
Real GDP	-33.0	-1.0	-3.9
Personal consumption	-28.7	-1.2	-1.8
Durables	-19.7	-7.1	-9.2
Nondurables	-13.1	-2.5	-2.8
Services	1.3	0.1	-0.2
Business fixed investment	-30.6	-8.9	-19.6
Equipment	-20.6	-9.0	-21.0
Structures	-9.6	-8.8	-16.9
Residential investment	-30.5	-29.3	-27.1
Government spending	34.9	5.6	2.2
National defense	21.3	13.3	7.5
Net exports	47.2	—	—
Exports	-25.6	-6.9	-15.7
Imports	-72.8	-15.1	-18.6
Private inventories	-141.1	—	—

Source: Bureau of Economic Analysis.

## Real GDP Growth

Annualized quarterly percent change



Source: Bureau of Economic Analysis.

1.4 pp to output growth during the quarter, down from 2.6 pp in the first, as the decline in exports lessened from -29.9 percent to -7.0 percent and imports decreased 15.1 percent in the second quarter compared to a decrease of 36.4 percent in the first. These “improvements” were tempered by a 1.2 percent decrease in real consumption expenditures in the second quarter, following a 0.6 percent increase in the first (that was revised down from a 1.4 percent gain). The four-quarter growth rate in consumption fell to -1.8 percent, its deepest downturn since 1951.

The comprehensive revision incorporated (among other changes) a new classification system for personal consumption expenditures (PCE) and PCE prices (which resulted in food services being added to the core PCE price index), a new treatment of disasters, a reference year for chain-type aggregation to 2005 from 2000, and some new source data (notably the BEA’s 2002 benchmark input-output accounts, “which provide the most thorough and detailed information on the structure of the U.S. economy”). There were some very interesting developments that arose due to the revision and methodological changes.

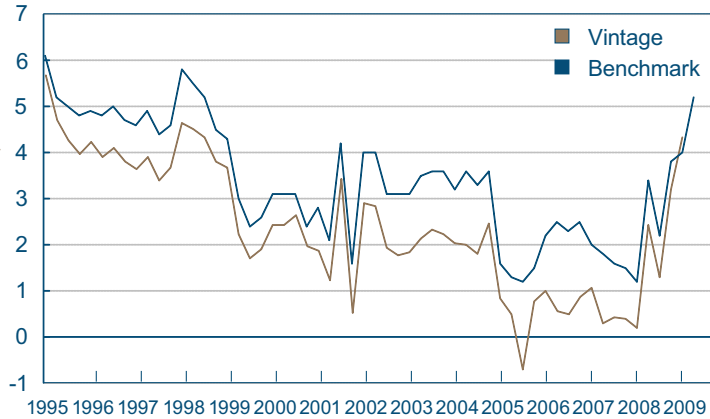
The first interesting revision was to real GDP during the 2001 recession, making the episode look even less like a recession. From the release: “For the contraction that lasted from the fourth quarter of 2000 to the third quarter of 2001, real GDP increased at an average annual rate of 0.1 percent in the revised estimates; in the previously published estimates, it had decreased by 0.2 percent.” The release also noted that previous cycles were left little revised.

Second, the personal savings rate was revised up substantially, on average roughly 1.0 pp per year since 1995. For example, the previous estimate of the personal savings rate for 2005 was 0.3 percent, which was revised up to 1.4 percent. As of the second quarter of 2009, the savings rate has now climbed to 5.2 percent, compared with 1.5 percent at the start of the recession.

Finally (and perhaps most importantly), even with the addition of food service prices, the core PCE price index is little changed. From the first quarter

## Personal Savings Rate

Four-quarter percent change

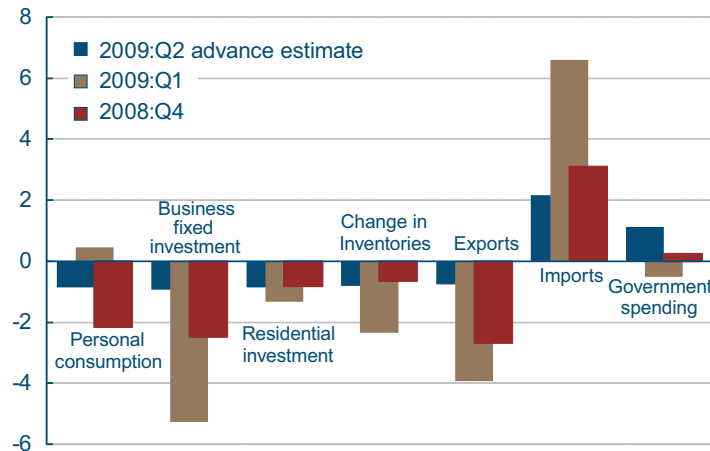


Source: Bureau of Economic Analysis.

of 1995 to the first quarter of 2009, the average difference in the annualized quarterly percent change is a little less than 0.1 pp. However, the revision to the last few quarters has been to the downside, leaving the four-quarter growth rate at 1.6 percent in the second quarter.

## Contribution to Percent Change in Real GDP

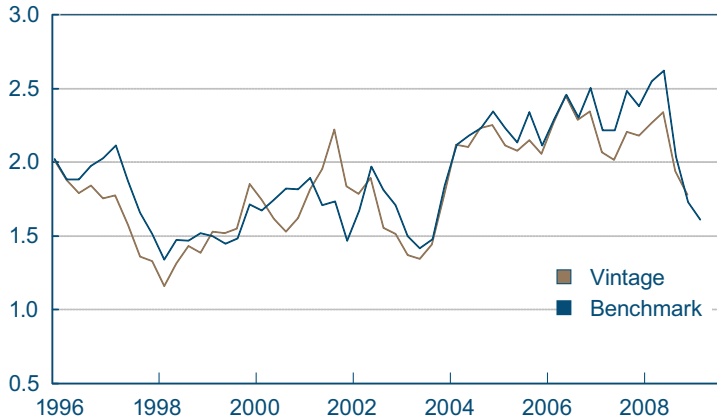
Percentage points



Source: Bureau of Economic Analysis.

## Core PCE Price Index

Four-quarter percent change

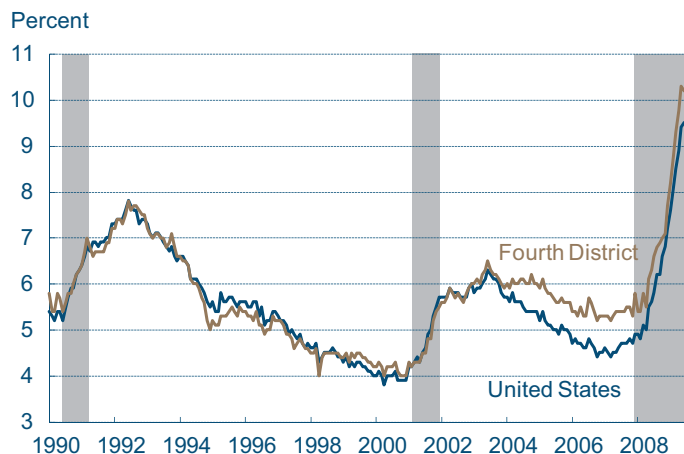


Source: Bureau of Economic Analysis.

## Fourth District Employment Conditions

08.01.09  
by Kyle Fee

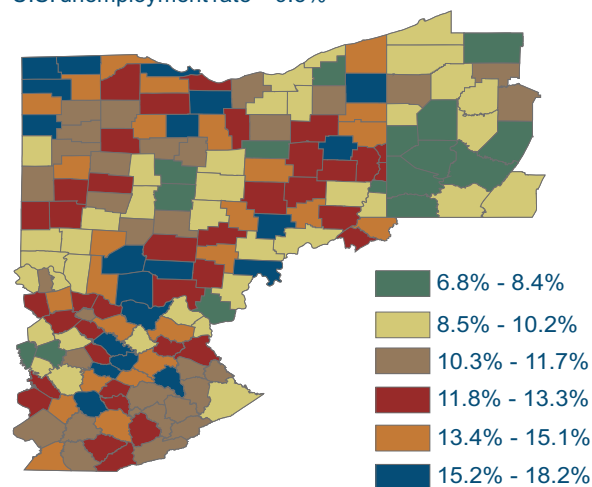
### Unemployment Rate



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

### County Unemployment Rates

U.S. unemployment rate = 9.5%



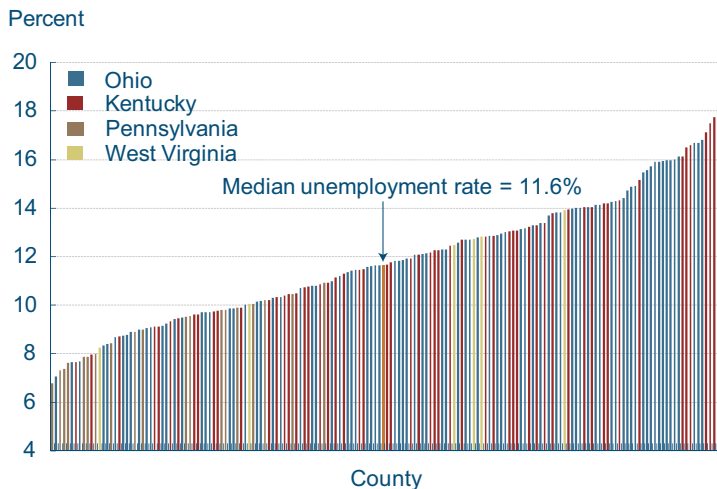
Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure. Sources: U.S. Department of Labor, Bureau of Labor Statistics.

The District's unemployment rate fell 0.1 percentage point to 10.2 percent for the month of June. The decrease in the unemployment rate is attributed to a decreases in the number of people unemployed (-1.1 percent), the number of people employed (-0.3 percent) and the labor force (-0.1 percent). Compared to the national rate in June, the District's unemployment rate stood 0.7 percentage point higher and has been consistently higher since early 2004. Since the recession began, the nation's monthly unemployment rate has averaged 0.7 percentage point lower than the Fourth District unemployment rate. From the same time last year, the Fourth District and the national unemployment rates have increased by 3.9 percentage points and 3.9 percentage points, respectively.

There are significant differences in unemployment rates across counties in the Fourth District. Of the 169 counties that make up the District, 66 had an unemployment rate below the national rate in June and 103 counties had a higher rate. There were 120 District counties reporting double-digit unemployment rates in June. Large portions of the Fourth District have high levels of unemployment. Geographically isolated counties in Kentucky and southern Ohio have seen rates increase as economic activity is limited in these remote areas. Distress from the 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 among Fourth District counties ranges from 6.8 percent (Allegheny County, Pennsylvania) to 18.3 percent (Williams County, Ohio), with the median county unemployment rate at 11.6 percent. Counties in Fourth District Pennsylvania generally populate the lower half of the distribution while the few Fourth District counties in West Virginia moved to the middle of the distribution. Fourth District Ken-

## County Unemployment Rates

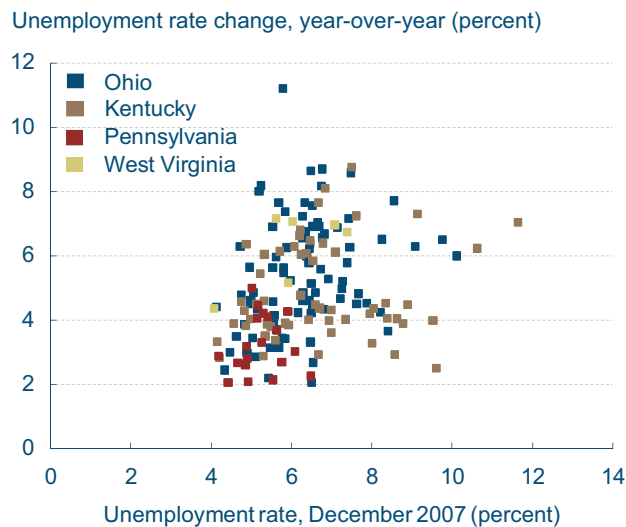


Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.  
Sources: U.S. Department of Labor, Bureau of Labor Statistics.

tucky and Ohio counties continue to dominate the upper half of the distribution. These county-level patterns are reflected in statewide unemployment rates as Ohio and Kentucky have unemployment rates of 11.1 percent and 10.9 percent, respectively, compared to Pennsylvania's 8.3 percent and West Virginia's 9.2 percent.

A scatter plot of county unemployment rates from December 2007 against year-over-year changes in county unemployment rates supports the observation of markedly different local labor markets within the Fourth District. Fourth District Pennsylvania counties all have had similar performance over the past year. On the other hand, Ohio and Kentucky have seen changes in unemployment rates vary significantly among counties. In general, those counties with higher unemployment rates tended to have larger increases in unemployment rates over the past year.

## County Unemployment Rates

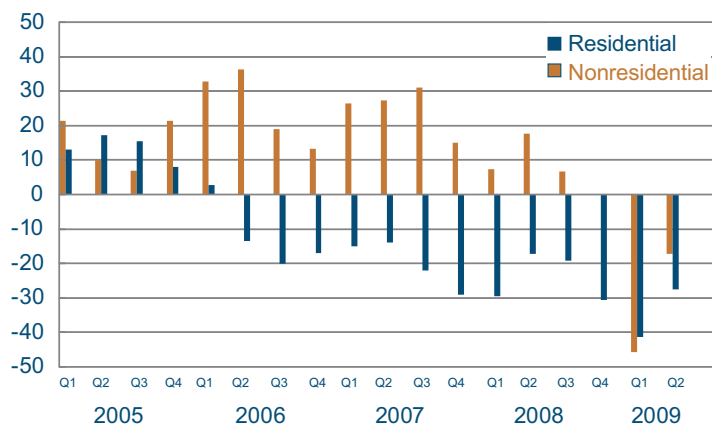


Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.  
Source: U.S. Department of Labor, Bureau of Labor Statistics.

# Private Nonresidential Construction Investment

## Real Investment in Structures

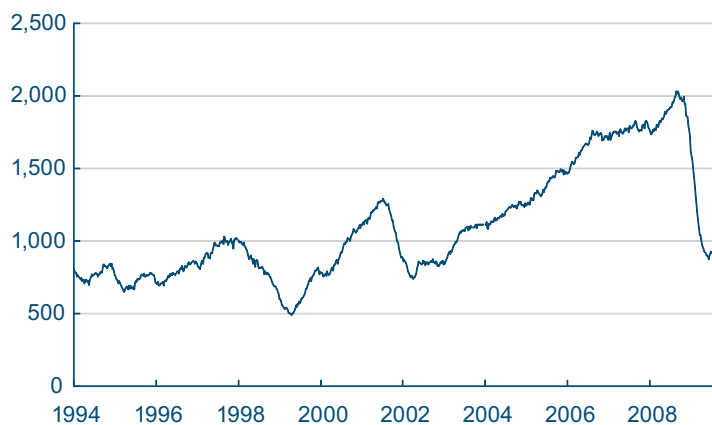
Annualized percent change



Source: Bureau of Economic Analysis.

## Baker Hughes Rig Count

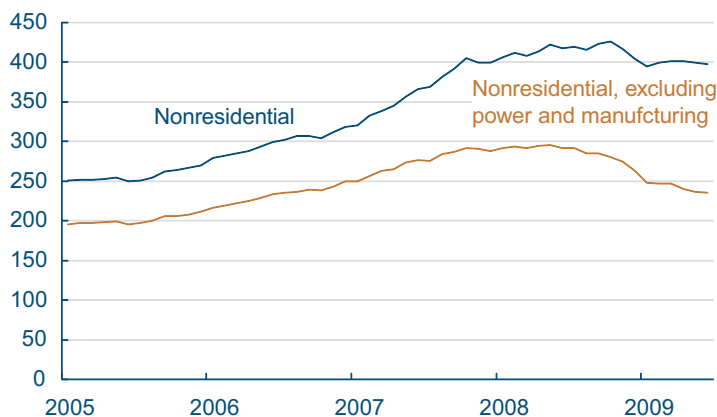
Number of rigs running



Source: Baker Hughes Corporation.

## Value of Construction Put in Place

Billions of dollars



Source: Census Bureau.

08.10.2009

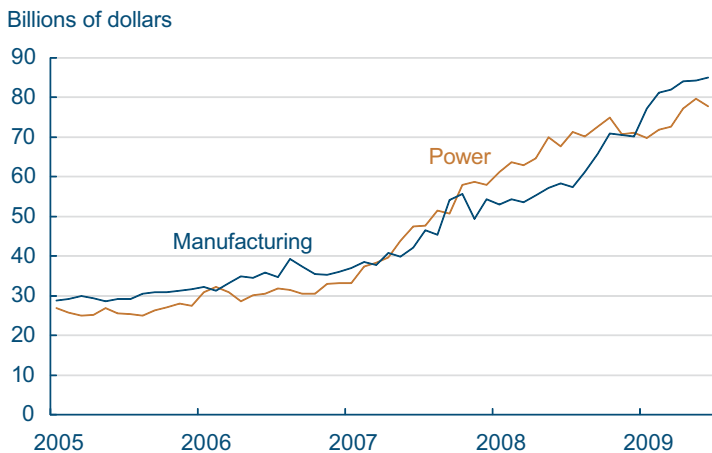
by Tim Dunne and Kyle Fee

During the current recession, investment in residential structures and investment in private nonresidential structures have experienced markedly different paths. The sharp fall in residential investment led the economy into recession, while private nonresidential investment held up relatively well until the last two quarters. The recent steep decline in the latter reflects both a drop in investment in traditional buildings such as commercial and office structures and a steep fall in drilling activity in the oil and gas industry.

Rig activity peaked in the third quarter of 2008 and then fell by half by the second quarter of 2009, according to the Baker-Hughes rig count. The drop-off in rig activity exerted a considerable drag on investment in nonresidential structures in the first two quarters of 2009; however, this has been offset by some relative strength in the value of construction put in place (VCPIP) over the past several months. Data on the VCPIP come from the Census Bureau, which tracks construction activity in the United States for both private and public projects. Nonresidential VCPIP (unadjusted for inflation) has held up reasonably well over the recession, though part of the growth in this measure reflects a rise in construction material prices (unadjusted for inflation) that occurred during much of 2008.

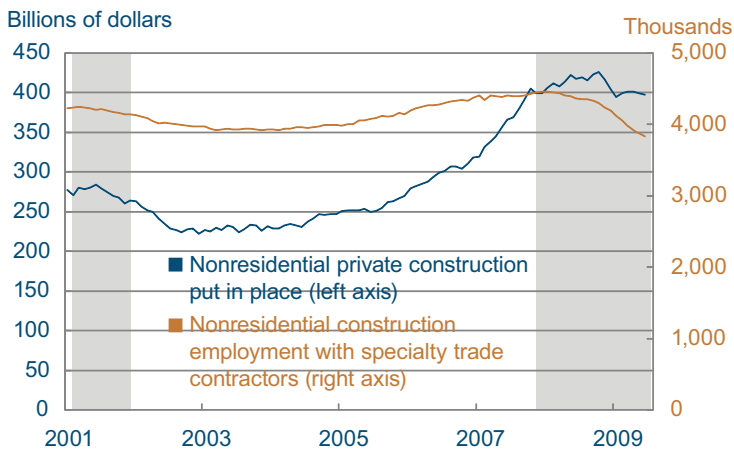
A key reason why private nonresidential VCPIP has held up so well during this recession is the strength of power and manufacturing construction. Since December 2007 (the start of the recession), spending on power construction projects has risen 35 percent, while spending on manufacturing construction has increased 56 percent (both unadjusted for inflation). This is quite remarkable growth in a recession. Indeed, non-inflation-adjusted spending on other types of projects has declined by 18 percent since the start of the recession. Moreover, the strength in this type of construction spending continued into late 2008 and the first part of 2009, even as the economy slipped further into recession

## Value of Construction Put in Place



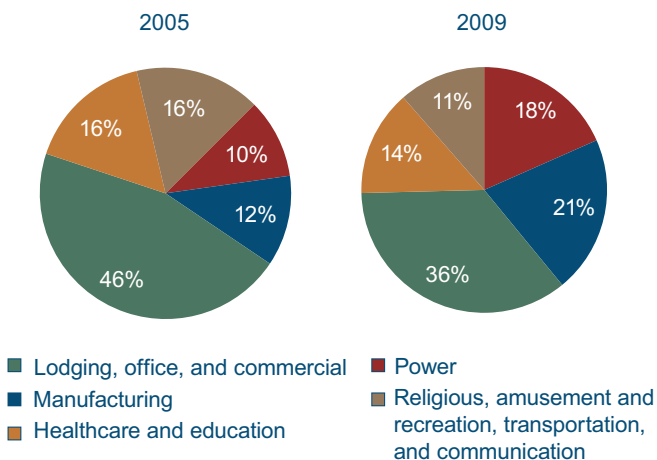
Source: Census Bureau.

## Nonresidential Construction: Value Put in Place and Payroll Employment



Note: Shaded bars represent recessions.  
Sources: Census Bureau; Bureau of Labor Statistics.

## Nonresidential Construction: Value of Construction Put in Place



Source: Census Bureau.

and the prices for construction material inputs fell (which should lower non-inflation-adjusted values).

Most of this continued strength in nonresidential construction spending stems from energy-related projects that were initiated prior to the recession. Some of these projects represent multibillion dollar investments with long lead times and multiyear construction timelines.

In the power sector, construction spending is spread across a range of project types, including electric utility infrastructure; oil and gas exploration, drilling, and investments; and pipeline construction. In manufacturing, the petroleum and coal products industry is responsible for most of the sector's growth in VCPIP, while primary metals contributed to a lesser extent. Combined, these industries accounted for about 58 percent of manufacturing VCPIP in May 2009. Overall, the power and manufacturing sectors' share of VCPIP has expanded markedly, rising from 22 percent in 2005 to 39 percent in 2009.

These investment trends in nonresidential construction are surprising, especially when compared to the sector's employment rate, which has fallen 14 percent since the start of the current recession. To put this drop in perspective, note that it is similar in magnitude to the decline observed in manufacturing employment. It is also important to note that this employment series includes public sector construction projects, and VCPIP on public sector projects has actually held up even better than VCPIP for private projects.

Going forward, it is likely that there will be some retrenchment in construction spending for energy-related projects, as capacity utilization in both power and petroleum and coal products remains at low levels with additional capacity coming online. This may already be happening in the petroleum and coal industry, as there have been several recent announcements detailing the delay or postponement of a number of large ongoing and planned refinery expansion projects.



## Bank Exposure to Commercial Real Estate

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08.11.09

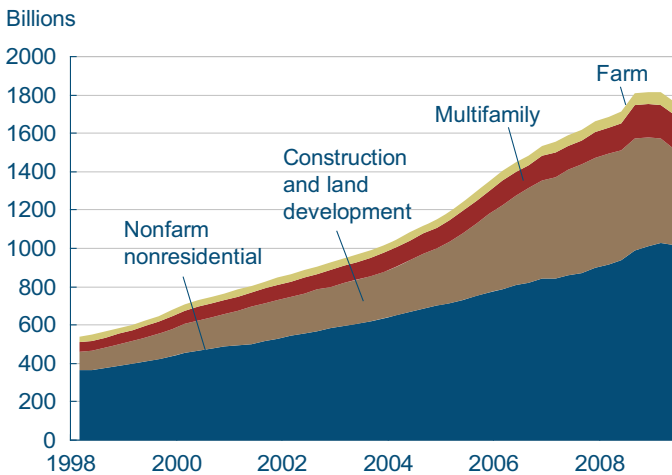
by Yuliya Demyanyk and Kent Cherny

As rising home foreclosures and delinquencies continue to undermine a financial and economic recovery, an increasing amount of attention is being paid to another corner of the property market: commercial real estate (CRE). Commercial mortgages are those that have been secured by property owned or occupied by business enterprises or more than four families. Typically, bank balance sheets break these loans into four categories: property loans secured by farms; loans secured by “multifamily” properties, such as apartment buildings or condos; construction and land development loans, which are used to acquire land and build new commercial structures; and nonfarm, nonresidential loans, which are often associated with already-constructed industrial and office buildings.

Although commercial mortgage-backed securities (securitized CRE loans), have garnered their own significant amount of attention, they account for only 20 percent of outstanding commercial mortgage debt. Loans held by banks, meanwhile, account for 60 percent of the CRE debt market—much more than any other institutional holder. Also, unlike the residential mortgage market (where a majority of lending has been done by a few large banks), the array of banks holding large concentrations of commercial mortgage debt is broad and diverse. This distribution means tremors in this market can affect banks of all sizes heavily, both nationally and in the Fourth Federal Reserve District.

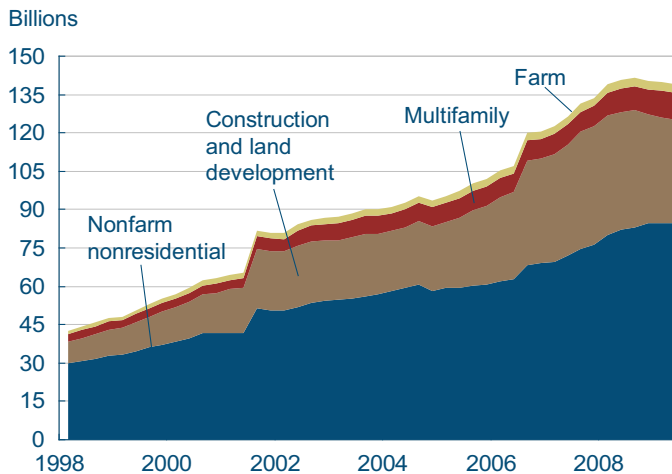
The economic downturn has hit bank CRE loan portfolios particularly hard. The total volume of commercial mortgages held by banks more than tripled in the last decade both nationally and in the Fourth District. Nationally, the volume at commercial banks peaked at approximately \$1.8 trillion last year. Note that the most significant growth nationally occurred in construction and development loans, suggesting that a sizable portion of CRE growth over the past few years was in speculative new properties. Without the requisite demand for

## Outstanding CRE Loans at All U.S. Banks



Source: Bank Call Reports.

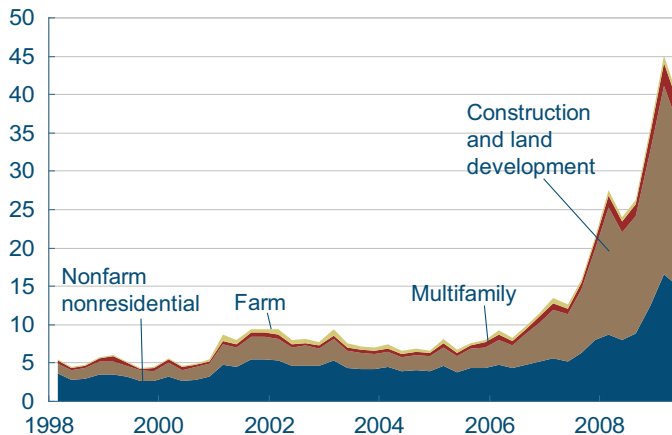
## Outstanding CRE Loans at Fourth District Banks



Source: Bank Call Reports.

## Past-Due CRE Loans at All Banks

30+ days delinquent and accruing, in billions



Source: Bank Call Reports.

these properties (and with the possibility of significant overcapacity), ongoing construction may be halted, or existing buildings may be unable to find tenants—both situations that would result in loans going delinquent or defaulting. For the first time in the last few years, most CRE loan types are seeing a stabilization or contraction in the volume held at commercial banks.

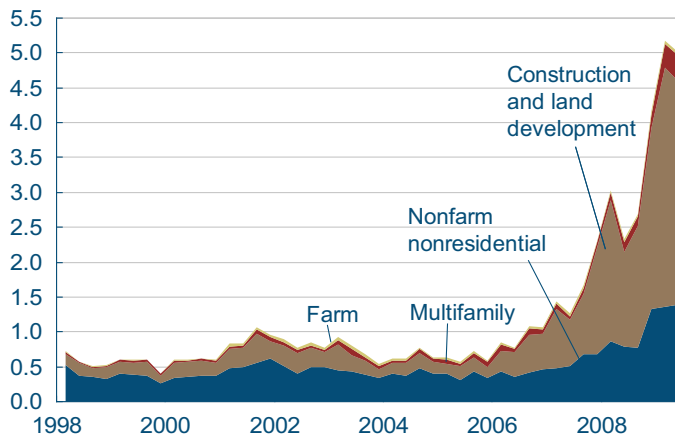
If we take a look at actual past-due loans—those 30 or more days delinquent but still accruing interest—we see that construction and land development loans do in fact account for the majority of souring loans. However, nonfarm, nonresidential loans have also experienced a significant uptick in delinquencies since the onset of the financial crisis last fall. Note that the total volume of delinquent CRE loans fell last quarter both regionally and nationally, following the dramatic climb of previous quarters. This is a positive development, signaling that CRE loans are going bad at a much slower rate, or that banks are acting more aggressively to take losses on these loans by charging them off, or both. Examining the difference between 30 to 60-day delinquencies and more than 60-day delinquencies shows that the latter have risen since last quarter but that the former have fallen, indicating a slowdown in new delinquencies but little improvement in previously delinquent loans.

A smaller volume of delinquent loans has also improved a key metric regarding the amount of bank exposure to CRE loans. Ratios of past-due loans to banks' Tier 1 capital fell last quarter because of lower delinquencies and banks' efforts to raise new capital both from private investors and through the Treasury Department's TARP capital program. Much of this capital raising occurred after stress tests were performed in the spring. Banks in the Fourth District have roughly three times the exposure to past-due CRE loans relative to their Tier 1 capital (43.5 percent) than all U.S. banks taken together (12.4 percent).

The degree to which problems in the CRE market will further hinder financial stability and macroeconomic recovery depends on the actions of individual financial institutions and the uncertain performance of the broader economy. Because the

## Past-Due CRE Loans at Fourth District Banks

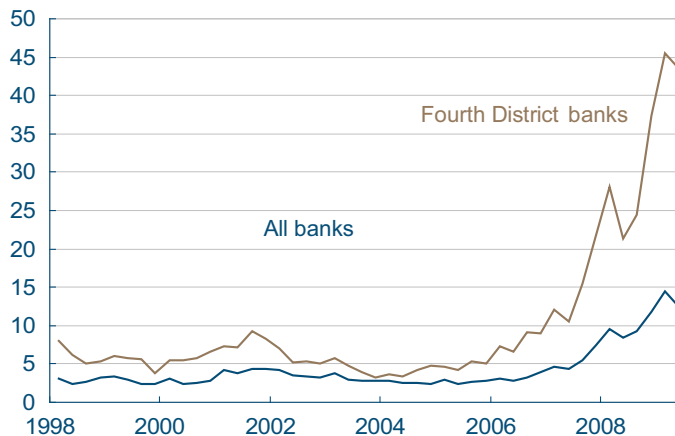
30+ days delinquent and accruing, in billions



Source: Bank Call Reports.

## Past-Due CRE Loans as a Percentage of Bank Capital

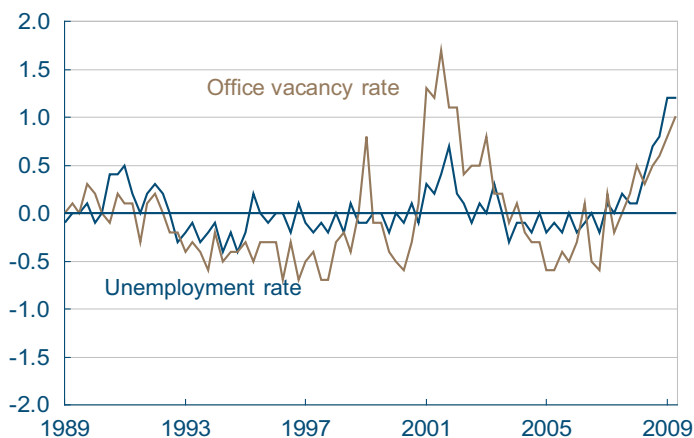
Percentage of Tier 1 capital



Source: Bank Call Reports.

## Unemployment and Office Vacancy Rates

Absolute change in rate, quarterly



Sources: C.B Richard Ellis, Bureau of Economic Analysis.

latter is ultimately out of the hands of individual economic actors, banks that continue to recapitalize or remain well capitalized possess the best chance of enduring further economic contraction (should it occur), diversifying their loan portfolios, and extending new credit.

That said, adequate capitalization and aggressive approaches to delinquent loans may be countermanded by a flagging real economy, in particular a continued rise in the unemployment rate. The office vacancy rate is highly correlated with the unemployment rate, since shrinking or failing businesses do not need to rent or own additional commercial space. As tenants or owners disappear, the cash flow necessary to pay debt service on CRE loans disappears with them.

Finally, the very terms of many existing CRE loans impede the flexibility necessary for restructuring them. Whereas a typical residential mortgage amortizes the principal over the life of the payments, many commercial mortgages amortize only a portion of the principal and therefore require a balloon payment at maturity. This necessitates either a refinancing at maturity or delivery of the remaining principal. If neither of these options is feasible, the loan defaults.

As long as economic uncertainty, rigid loan structures, and constricted bank credit remain issues, policymakers and credit market participants can mitigate the danger of systemically significant CRE defaults. The Federal Reserve is supplying liquidity to the market through the commercial mortgage-backed securities component of its TALF program, which works to stabilize demand and financing for commercial mortgage-backed securities and (indirectly) loans at a time when many financial institutions are still reluctant to lend. At the same time, the continued raising of capital by banks and other financial institutions cushions them against losses, promotes investment in new and existing commercial real estate transactions, and contributes to the gradual deleveraging of the CRE market and financial system.

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