

# Economic Trends

**September 2009** (Covering August 14, 2009 to September 9, 2009)

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FEDERAL RESERVE BANK  
*of* CLEVELAND

# July Price Statistics

08.21.09

by Brent Meyer

## July 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	0.1	3.4	2.2	-2.1	2.6	0.3
Less food and energy	1.1	1.7	2.1	1.5	2.2	1.8
Median <sup>b</sup>	0.2	0.5	1.3	1.8	2.7	2.9
16% trimmed mean <sup>b</sup>	0.2	1.1	1.2	1.1	2.5	2.7
<b>Producer Price Index</b>						
Finished goods	-9.9	4.6	0.6	-6.8	3.1	0.2
Less food and energy	-1.4	1.4	1.3	2.6	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 was virtually unchanged in July, rising at an annualized rate of only 0.1 percent, as slight decreases in food and energy components were roughly balanced out by a 1.1 percent increase in the core CPI. Over the past 12 months, the CPI has fallen 2.1 percent (its lowest value since 1949), while the core CPI is up 1.5 percent. Price increases in new vehicles (up 5.9 percent), tobacco (up 30.3 percent), medical care services (up 3.4 percent), and women's and girls' apparel (up 15.8 percent) contributed to the increase in the core CPI. There was also a curious jump in airline fares. They were up 28.5 percent in July, after 10 consecutive monthly decreases.

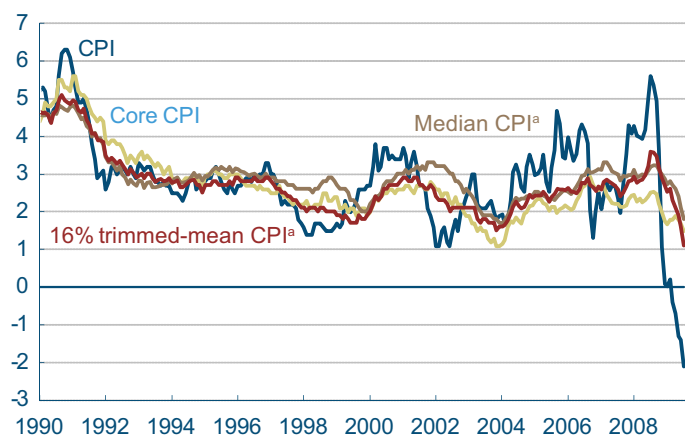
As mentioned last month, the severity of the business cycle seems to have “trumped” the usual seasonal adjustment for apparel prices (and perhaps new vehicle prices as well), leading to an overstatement in seasonally adjusted price increases for those goods. This, in turn, may be causing a slight upward bias to core CPI. It is also worth noting that both owner's equivalent rent (OER) and rent of primary residence were nearly unchanged and actually fell ever so slightly at an annualized rate, decreasing 0.3 percent and 0.4 percent, respectively. OER has turned negative in only one other instance since 1983, in September 1992 when it fell 0.8 percent. The 12-month growth rate in OER is at a series low of 1.7 percent.

Both of the measures of underlying inflation produced by the Federal Reserve Bank of Cleveland—the median CPI and 16 percent trimmed-mean CPI—rose just 0.2 percent in July, rising at slower rates than their all of their respective longer-term trends. Over the past 12 months, the 16 percent trimmed-mean is up only 1.1 percent, while the median has increased 1.8 percent.

Nearly half of the overall index (by expenditure weight) exhibited price decreases in July. Excluding food and energy items, that percentage declined

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

12-month percent change

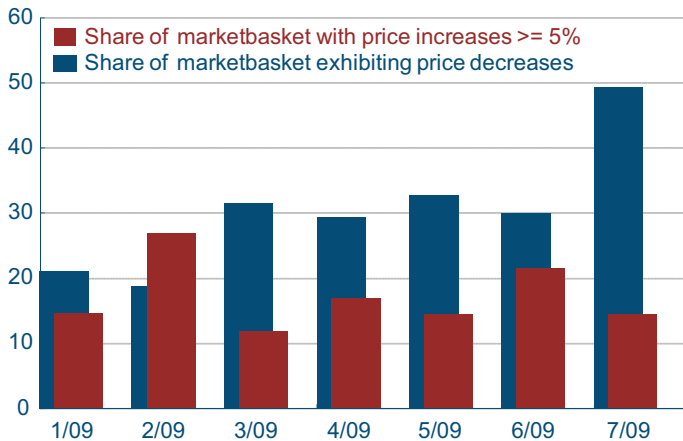


a. Calculated by the Federal Reserve Bank of Cleveland.

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

## CPI Component Price Change Distribution

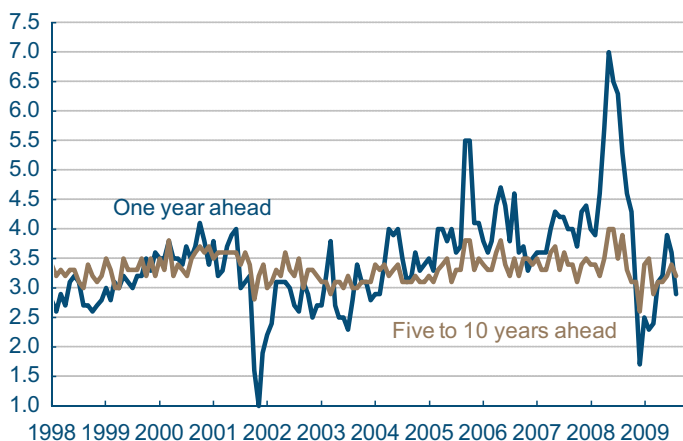
Weighted frequency



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

## Household Inflation Expectations

12-month percent change



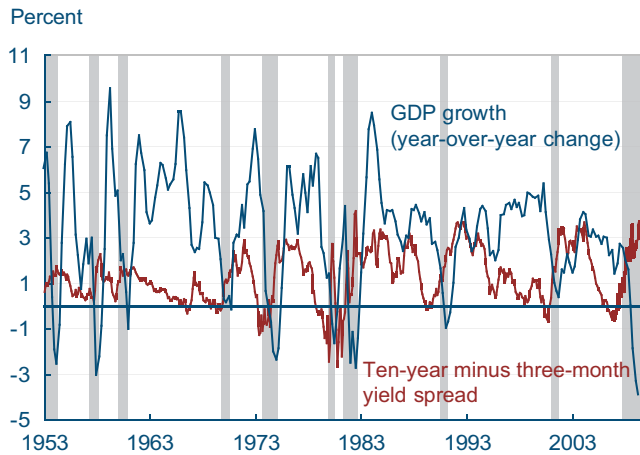
Note: Mean expected change as measured by the University of Michigan's Survey of Consumers.  
Source: University of Michigan.

only to 34.1 percent. On the other side of the distribution, just 15 percent of the consumer market basket rose in excess of 5 percent, leaving just 18 percent of the index in the broad “sweet-spot” between 1 percent and 3 percent. Underscoring the growing relative softness in the component price-change distribution, the share of the consumer market basket that is exhibiting monthly price decreases has grown from just above 20 percent in January to near 50 percent in July. On the other tail of the distribution, the share of the market basket rising at rates in excess of 5 percent has been relatively stable lately, averaging roughly 17 percent since the beginning of the year.

Both one-year-ahead and longer-term (5 to 10 years ahead) average inflation expectations from the University of Michigan's Survey of Consumers ticked down in early August. One-year-ahead expectations slipped down from 3.6 percent to 2.9 percent, while longer-term expectations decreased from 3.4 percent in July to 3.2 percent. While short-term expectations have bounced around over the past year (likely following food and energy prices), it is not clear that longer-term expectations have shifted in any meaningful way recently, as the series has remained close to its five-year average of 3.4 percent.

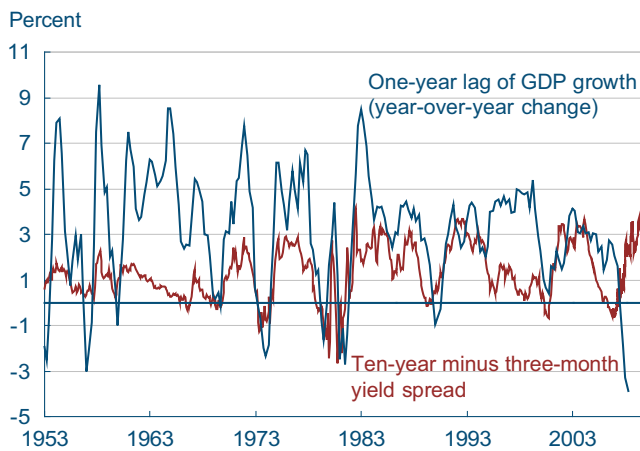
# The Yield Curve, August 2009

## Yield Curve Spread and Real GDP Growth



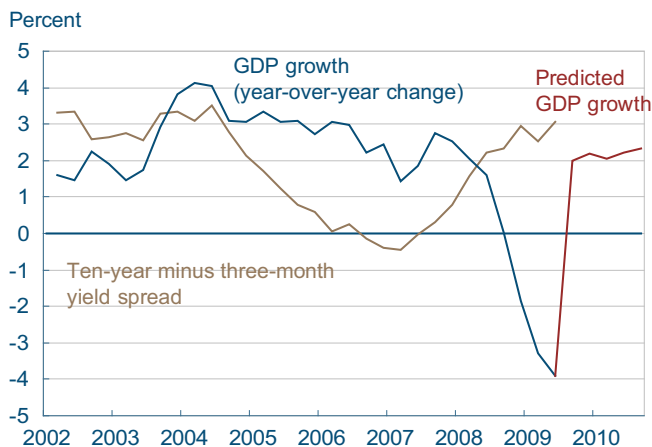
Note: Shaded bars indicate recessions.  
Sources: Bureau of Economic Analysis, Federal Reserve Board.

## Yield Spread and Lagged Real GDP Growth



Sources: Bureau of Economic Analysis, Federal Reserve Board.

## Yield Curve Predicted GDP Growth



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

08.27.09

by Joseph G. Haubrich and Kent Cherny

Since last month, the yield curve has flattened slightly, with long rates dropping a bit more than short rates, which barely changed. The difference between these short and long 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 dipped to 0.17 percent (for the week ending August 21), just down from July's 0.19 percent. The ten-year rate dropped to 3.48 percent, down 14 basis points from July's 3.62 percent. The slope dipped to 331 basis points, down from July's 343 basis points, and even further below June's 357 basis points. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.3 percent rate over the next year.

This estimate represents a drop since last month, when the estimate was for 2.6 percent growth, in part because revisions to GDP resulted in a slight change in the relation between the yield curve and real GDP. For more on the revisions, see this article. This estimate is a bit below, but not that far from other forecasts.

## 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	19	10

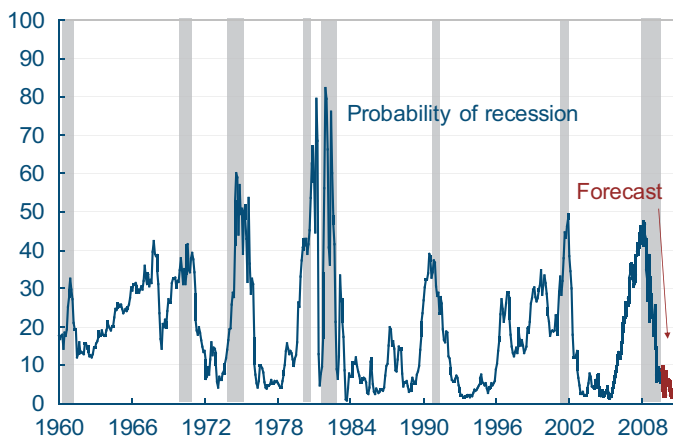
(through July 2009)

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

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

## Recession Probability from Yield Curve

Percent probability, as predicted by a probit model



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

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: whether or not the economy is in recession. Looking at that relationship, the expected chance of the economy being in a recession next August stands at 2.6 percent, up from July's very low 1.8 percent and June's 0.8 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.

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 table below makes the comparison for the recent period. The 1980 episode is anomalous, but in general, longer inversions tend to be followed by longer recessions. According to this pattern, the current recession is already longer than expected.

Of course, it might not be advisable to take these 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, they should be interpreted with caution.

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?"

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)

To read more on the revisions:

<http://www.clevelandfed.org/Research/trends/2009/0809/04ecoact.cfm>

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>

# The Changing Composition of the Fed's Balance Sheet

08.31.09

by John Carlson and John Lindner

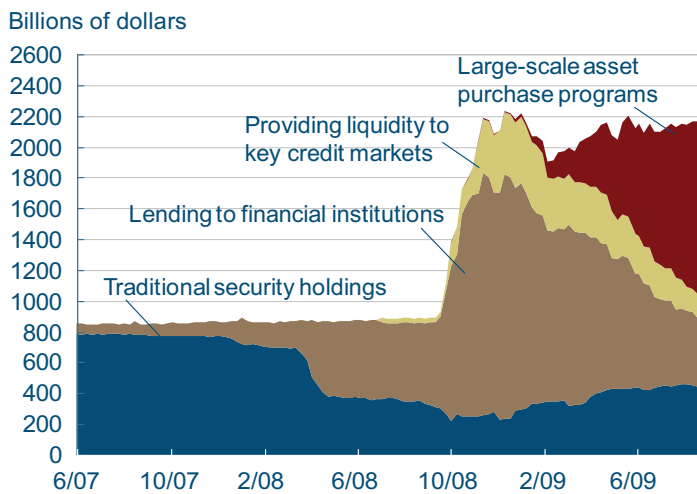
With the traditional tools of U.S. monetary policy sidelined in importance by the financial crisis, the Fed's balance sheet has become the focus of attention for those following the central bank's efforts to influence the economy and restore the functioning of credit markets. Since the onset of the crisis, the Fed has created and employed a new set of tools that involve the acquisition of financial assets and thus expand the asset side of the balance sheet.

While the sheer volume of assets acquired can be influential, the particular composition of those assets can have effects as well. By changing the mix of the assets it holds, the Fed is able to more effectively provide liquidity to troubled markets. Lending to financial institutions predominated in the early months after the crisis began, but large-scale asset purchases will be the bigger story going forward.

The unwinding of several lending facilities and the uptick in liquidity markets have caused large portions of the balance sheet to contract. In fact, since mid-March of this year, lending to financial institutions and key credit markets went from making up over 70 percent of the total balance sheet to constituting just under 30 percent of it. This contraction reflects improvement in the banking sector and in short-term securities markets. All of this occurred while the total value of the balance sheet remained fairly constant, growing less than one half of a percentage point over the same time period. The difference has been filled by growth in the large-scale asset purchase programs. They have gone from comprising just over 13 percent of the balance sheet to comprising a little less than 50 percent. With this trend predicted to continue through the end of the year, it is important to understand the newest focal point of Federal Reserve monetary policy.

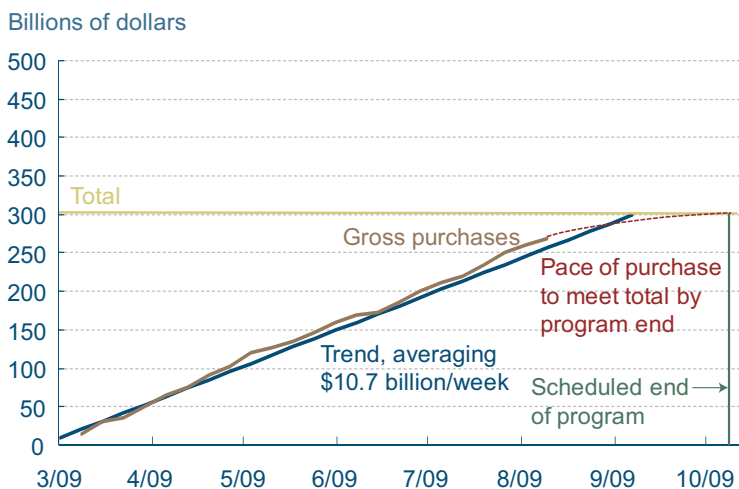
Long-term Treasury purchases were announced on March 18 of this year and have been climbing steadily. As of now, purchases are slightly ahead of the original pace that would achieve the purchase

## Credit Easing Policy Tools



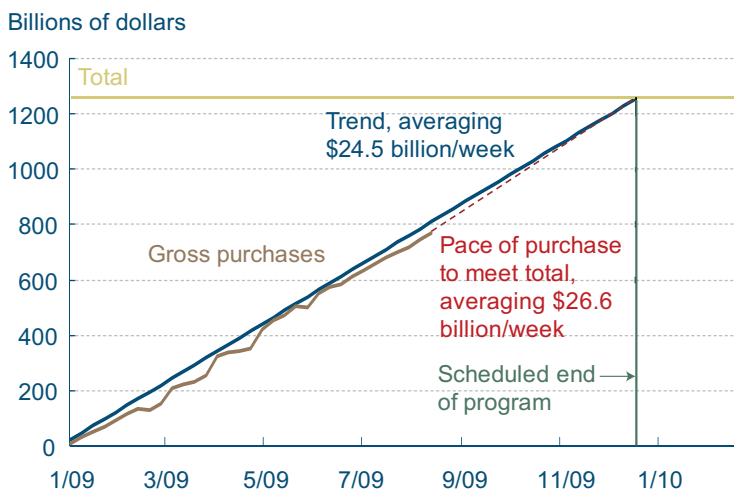
Note: Traditional security holdings is equal to securities held outright, less securities lent to dealers, less longer-term securities.  
Source: Federal Reserve Board.

## Treasury Purchases



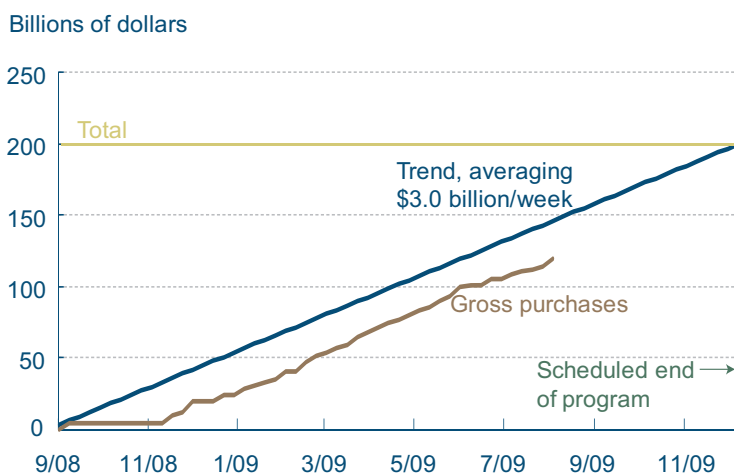
Source: Federal Reserve Bank of New York.

## Mortgage-Backed Securities Purchases



Source: Federal Reserve Bank of New York.

## Agency Debt Purchases



Source: Federal Reserve Bank of New York.

limit of \$300 billion by autumn (about \$10.7 billion each week). At this point, the average weekly purchase has been \$11.7 billion, meaning that an average of only \$3.5 billion can be purchased each week for the remainder of the program if the maximum stated allotment is to be met. The FOMC recently decided to taper off the purchases to reduce any ill effects that the Fed's removal from the Treasury market may have. For that reason, the goal of \$300 billion has been reset to expire at the end of October, and purchases will climb to that threshold at a decreasing rate from this point forward. This decision is intended to promote a more independent Treasury market, which will be utilized by more liquid investors.

Purchases of mortgage-backed securities (MBS) have been growing at a steady rate of around \$23.4 billion per week. The plan to purchase MBS was announced in November of last year, but it was originally set to acquire up to \$500 billion worth of securities over the course of several quarters. When long-term Treasury purchases were announced in March, an additional \$750 billion was allotted for MBS purchases, and the deadline was set for the end of the year. If the Federal Reserve made regular acquisitions from the start of the program to the end of the suggested period, they would need to purchase an average of \$24.5 billion each week. With purchasing having fallen slightly behind this schedule, the Federal Reserve would need to increase its average weekly purchase to \$26.6 billion to achieve the allotment by the end of the year. Signs of a recovery in the market can be seen in the rise in issuances of these securities, as well as a smaller percentage of these issuances being purchased by the Federal Reserve each month.

Purchases of government-sponsored enterprise (GSE) or "agency" debt are scheduled to hit their limit by the end of the year. November of last year marked the initial appropriation of \$100 billion, with an additional \$100 billion appropriated in March of this year. Again, using a simple analysis, if the Federal Reserve were to make regular purchases over this span, it would average \$3 billion in purchases each week. To date though, the weekly average has been only \$2.4 billion, leaving this program on track to be completed only by mid-April of next

year, a full quarter behind schedule. The Federal Reserve would have to ramp up weekly purchases substantially to make up for the slow pace and still meet the original deadline.



# Borrow Less, Owe More: The U.S. Net International Investment Position

08.27.09

by Owen F. Humpage and Caroline Herrell

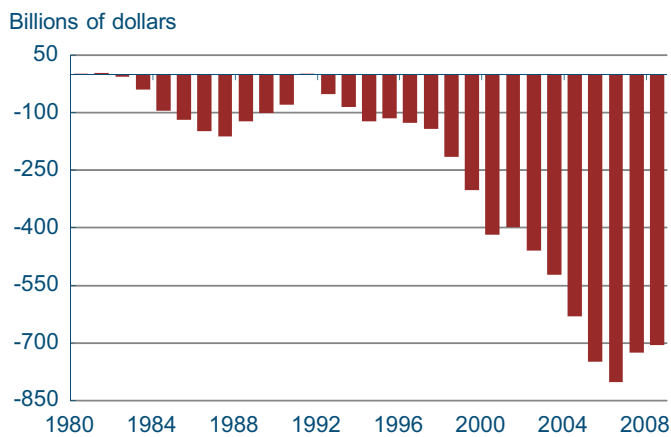
The United States has recorded a current-account deficit almost every year since 1982, as U.S. residents have imported more goods and services than they have exported. Over the past two years, the deficit has narrowed substantially. Still, we ended last year deeper in the red than ever before.

America pays for its excess imports by issuing financial claims, such as corporate stocks and bonds, Treasury securities, and bank accounts, to the rest of the world. These financial instruments represent claims on our future output. Since 1986, foreigners have held more claims against U.S. residents than U.S. residents have held against the rest of the world, or—as economists like to say—the United States has had a negative net international investment position.

The net international investment position is not a straight summation of all the financial instruments that we have issued to cover our past current-account deficits. The value of these outstanding claims also changes year-to-year as exchange rates, interest rates, and the prices of the constituent financial instruments rise and fall with market conditions. The sum of all our current-account deficits since 1986, for example, greatly exceeds our net international investment position. The difference—allowing us a bit of imprecision—reflects valuation adjustments that worked in our favor.

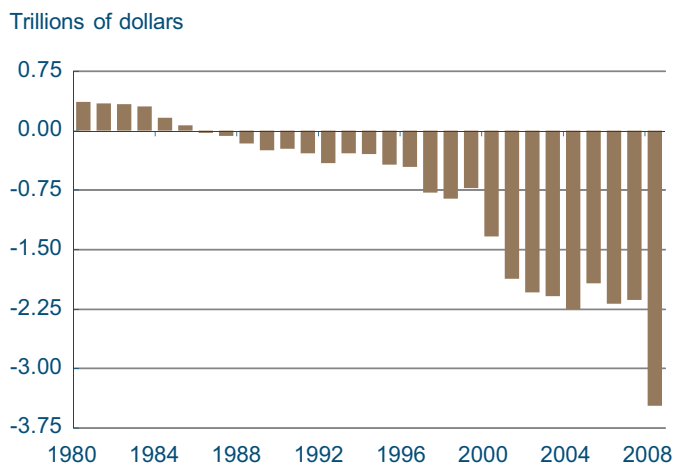
Last year, however, the tables turned. The U.S. current-account deficit shrank by \$20 billion, which we might have expected to improve our net international investment position, but instead, net foreign claims held against U.S. residents rose by a whopping \$1.3 trillion, a 62 percent jump. All of this reflects valuation adjustment. From the end of 2007 through the end of 2008, foreign stock prices fell more than U.S. stock prices, and the dollar appreciated against most major currencies. Hmm, maybe diversifying out of dollar-denominated assets isn't such a good idea!

## Current Account Balance



Source: Haver Analytics.

## Net International Investment Position of the U.S.



Source: Haver Analytics.

# Real GDP: Second-Quarter 2009 Revised Estimate

08.28.09

by John Lindner and Brent Meyer

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

	Quarterly change (billions of 2000\$)	Annualized percent change, last:	
		Quarter	Four quarters
Real GDP	-32.9	-1.0	-3.9
Personal consumption	-22.5	-1.0	-1.8
Durables	-16.0	-5.8	-8.9
Nondurables	-11.5	-2.2	-2.8
Services	2.7	0.2	-0.2
Business fixed investment	-37.6	-10.9	-20.0
Equipment	-19.3	-8.4	-20.9
Structures	-16.8	-15.1	-18.4
Residential investment	-23.1	-22.8	-25.5
Government spending	39.4	6.4	2.4
National defense	21.3	13.3	7.5
Net exports	54.7	—	—
Exports	-18.1	-5.0	-15.2
Imports	-72.7	-15.0	-18.6
Private inventories	-159.2	—	—

Source: Bureau of Economic Analysis.

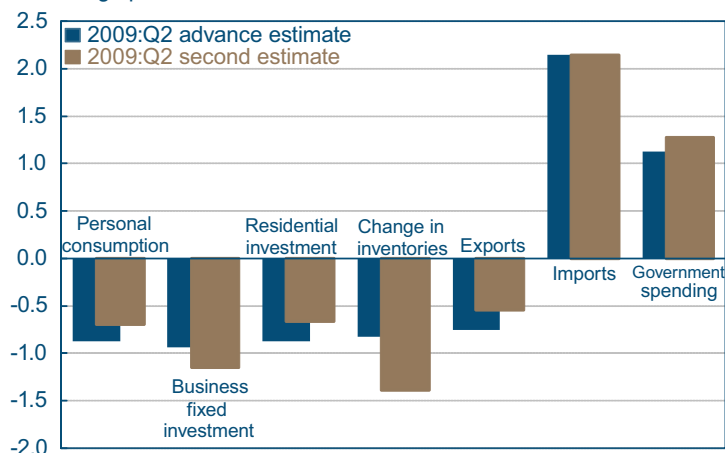
Real GDP was virtually unchanged in the latest revision of the second-quarter estimate, falling at an annualized rate of -1.0 percent. While the headline number was unchanged, there were some interesting moves in the components. Nonresidential investment in structures was revised down from an 8.8 percent decrease to a 15.1 percent decrease, helping to pull the growth rate in overall business fixed investment down by 2.0 percentage points (pp) to -10.9 percent (which is still a substantial improvement over the first quarter's 39.2 percent decrease). Conditions on the consumer side of things looked a little less dismal after the revision. Real personal consumption was revised up from -1.2 percent to -1.0 percent. Also, residential investment was revised up from -29.3 percent to -22.8 percent and looks to be less of a drag on overall output, given the recent indicators on housing.

There were also upward revisions to exports, residential investment, consumption, and government spending that were roughly offset by downward adjustments to inventories and business fixed investment. The downward revision to inventories subtracted an additional 0.6 pp from real GDP growth, but this may imply they will make more of a contribution to growth in the third quarter (assuming a tapering off in the inventory contraction). Personal consumption, residential investment, and exports all added 0.2 pp to output growth.

The consensus forecast for 2009 real GDP remained at -2.6 percent during the August survey, though the consensus forecast for the second half of 2009 increased (likely a result of the downward revision to the first-quarter GDP estimate during the BEA's benchmarking process). The consensus estimate for 2010 growth ticked up again, this month by 0.3 pp to 2.3 percent, its third upward revision in four months. Looking ahead through the rest of the year, even pessimists are predicting

## Contribution to Percent Change in Real GDP

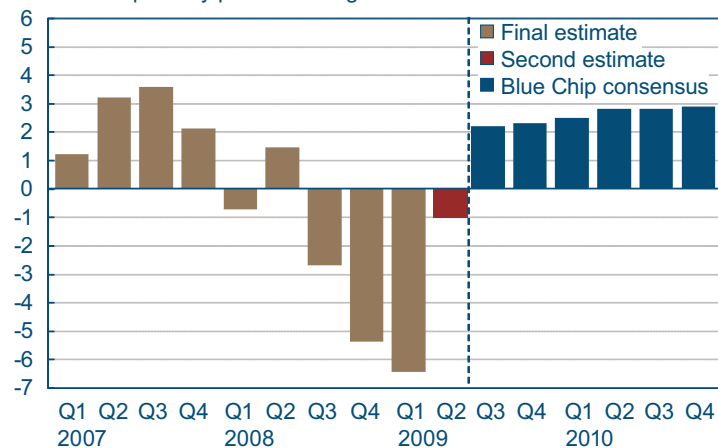
Percentage points



Source: Bureau of Economic Analysis.

## Real GDP Growth

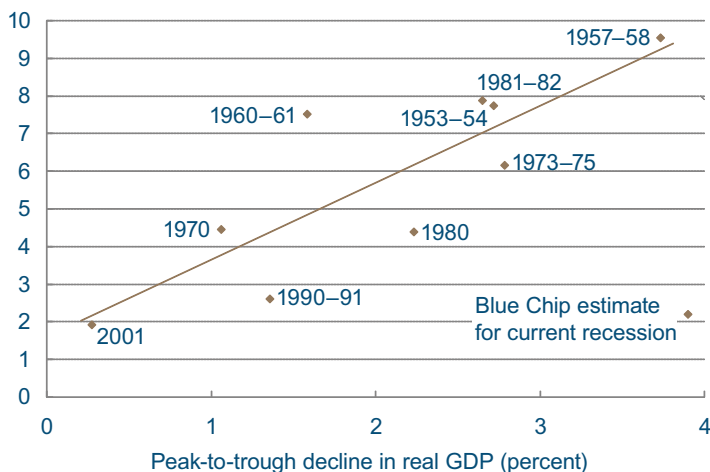
Annualized quarterly percent change



Sources: Blue Chip Economic Indicators, June 2009; Bureau of Economic Analysis.

## Strength of Recovery and the Depth of Recession

Four-quarter percent change



Note: Estimate for current recession is based on the Blue Chip four-quarter growth estimate and assumes that the second quarter of 2009 is the last quarter of negative GDP growth.

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

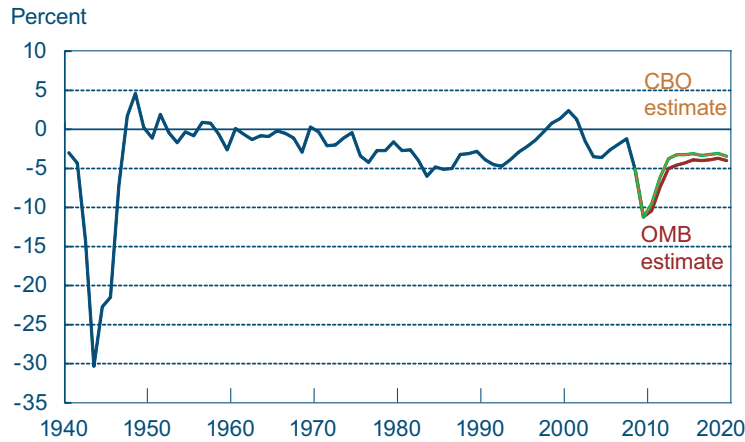
positive GDP growth for the rest of this year and into 2010.

Results from two special questions on the Blue Chip survey lend support to the view that this recovery will be slower than postwar trends would suggest. Nearly 90 percent of the respondents believe that the U.S. recession will come to an end by before the third quarter closes, but their expectations for the path of recovery are noteworthy. Two-thirds of the respondents predict a U- or an L-shaped economic recovery, which would result in a slower than normal upturn. Assuming that the second quarter is the trough, or the end of the decline in output, real GDP has fallen nearly 4.0 percent from the beginning of the recession. Historical trends have shown that deeper recessions have typically led to sharper recoveries, yet the consensus growth path derived from the Blue Chip survey calls for a much more sluggish rebound. The Blue Chip responses suggest that professional forecasters see some sort of structural difference—a failure of the consumer to return to prior spending habits, for example—between this recession and those of the past. This is consistent with research by Reinhart and Rogoff (2008), which finds that recoveries from recessions caused by financial panics are more muted than others.

For more on the *Economic Trends* article “The Credit Environment for Business Loans” visit <http://www.clevelandfed.org/research/trends/2009/0609/01banfin.cfm>

## Recent Forecasts of Government Debt

### Federal Budget Surplus or Deficit as a Percentage of GDP



Note: Negative values indicate budget deficits.  
Sources: U.S. Treasury; Office of Management and Budget; Congressional Budget Office; Bureau of Economic Analysis.

08.31.09

by Kyle Fee and Filippo Occhino

The Office of Management and Budget has recently released its new forecasts. The 2009 federal budget deficit is now anticipated to be 11.2 percent of GDP, by far the largest value of the postwar period. Forecasts for the longer horizon are even more alarming, with the deficit expected to be consistently around 4 percent of GDP over the next decade. Congressional Budget Office forecasts tell a similar story.

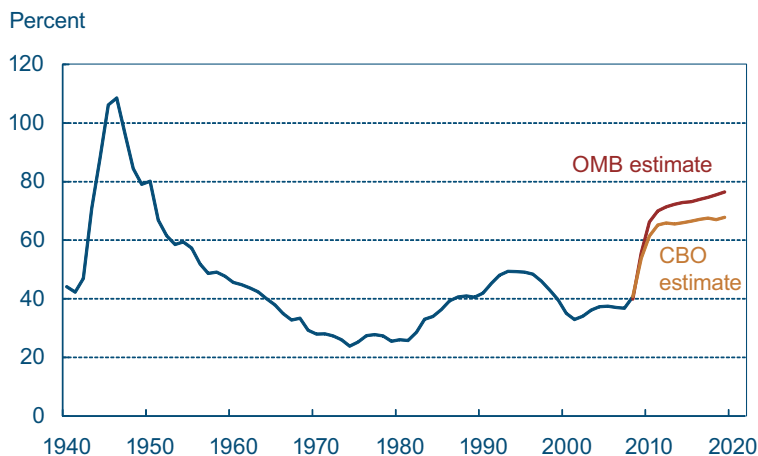
As a result of the large projected budget deficits, the expected path of the government debt has been revised upward substantially. The federal debt held by the public is now expected to reach 76.5 percent of GDP by 2019. Again, one needs to go back to the years immediately following World War II to see levels of government debt so high.

To investigate what drives these forecasts, we look at the composition of revenues and expenditures. On the revenue side, projections are mainly driven by the forecasts of economic activity. Revenues from most types of taxes are anticipated to be below trend in the near term and then to gradually return to their trend values as the economy recovers. Keep in mind, however, that there is some uncertainty about these trend values, given the uncertainty about the long-run growth rate of the economy over the next decade.

On the expenditure side, the long-run decrease of defense spending relative to GDP is more than compensated for by the long-run increase in the entitlement programs, Medicare and Medicaid in particular, and of interest payments. Due to increases in the average age of the population and in health care costs, spending for Medicare and Medicaid is expected to reach 5.9 percent of GDP by 2019. Interest payments will reach 3.4 percent of GDP by 2019, accounting for about 85 percent of the projected deficit.

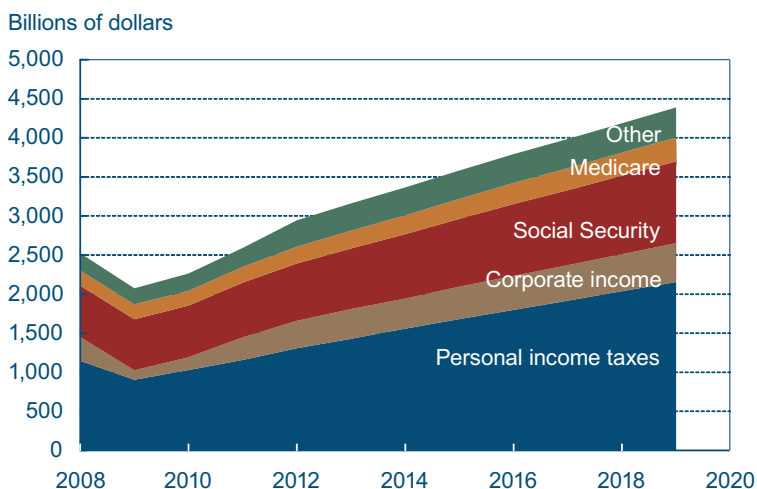
The scenario depicted in these forecasts poses tighter constraints on the fiscal authority. On one hand,

### Federal Debt Outstanding Held by the Public as a Percentage of GDP



Sources: U.S. Treasury, Office of Management and Budget; Congressional Budget Office; Bureau of Economic Analysis.

## OMB Projections of Federal Tax Revenue

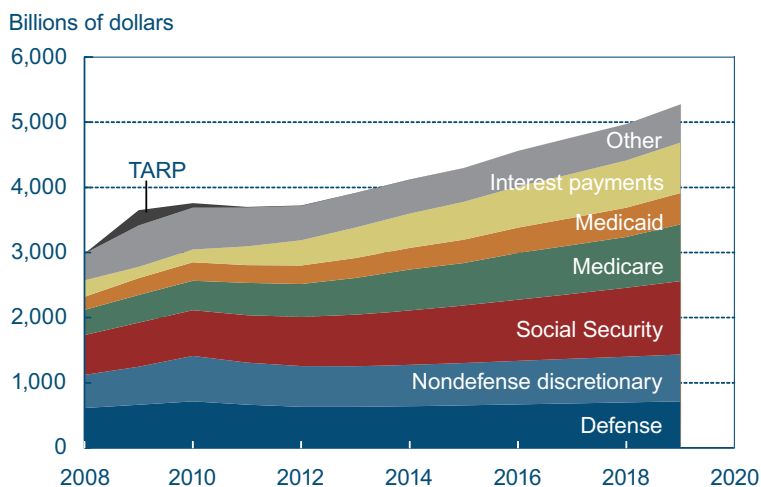


Source: Office of Management and Budget.

because the recovery has just begun and may be still vulnerable to adverse shocks, the fiscal authority would rather avoid a sudden reversal of its current expansionary stance.

On the other hand, there is an evident need to decrease the long-run budget deficit. Levels of government debt as high as the ones forecasted by the OMB have several adverse consequences. First, without a correction on the spending side, more tax revenue will need to be raised, with the consequence of subjecting the economy to greater tax-associated inefficiencies. The risk of default may also increase, leading to higher risk premiums, higher interest payments, and a greater cost to be sustained in the future to address the fiscal imbalance. In addition, a sustained demand for funds by the government sector will likely put upward pressure on future real interest rates, with adverse consequences for private investment and growth. The increase in domestic interest rates will likely attract further financial flows from countries with higher saving rates, which may lead to a dollar appreciation and a worsening of our current account deficit.

## OMB Projections of Federal Outlays



Source: Office of Management and Budget.

## The Incidence and Duration of Unemployment over the Business Cycle

09.01.09

by Murat Tasci and Kyle Fee

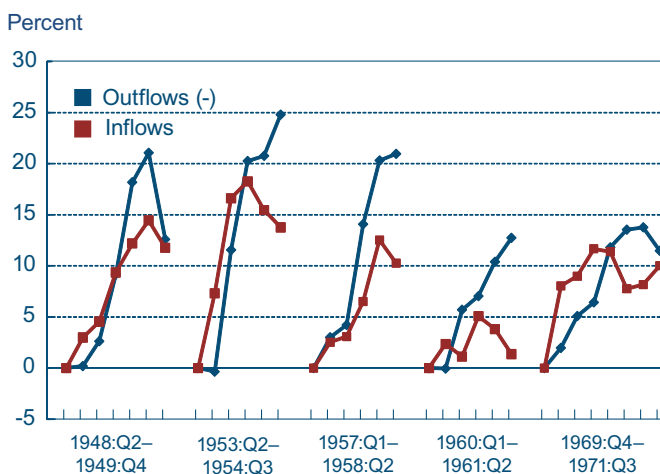
The unemployment rate provides information on the number of people who are unemployed as a fraction of the labor force at any given point in time, but when it rises, it doesn't tell us much about why. We can't tell by looking at the rate whether people who are unemployed are staying unemployed longer or whether more workers have lost their jobs.

This distinction could be important because each of these causes could result in a different set of problems for the labor force. Long-term unemployment, for example, might lead to a deterioration in workers' general or occupation-specific skills, which would reduce their productivity if they ever do find jobs. An economy in which 10 percent of the labor force was unemployed for three months and 90 percent was unemployed for one month would have the same unemployment rate as one in which 10 percent of the labor force was permanently unemployed all year round, but the implications for human capital would be quite different in each scenario.

To understand how much each of these factors contributes to a rise in the unemployment rate, we looked at inflows into unemployment (job separation rate) and outflows from the unemployment pool (job finding rate) for all postwar recessions. In general, we found that as the economy enters a downturn, separations start rising and unemployment durations start getting longer (job findings decrease). After some adjustment in terms of employment by firms, separations usually start to fall before the unemployment rate peaks. What accounts for most of the subsequent rise in the unemployment rate is the longer unemployment durations of those who are still unemployed. Once the economy finally starts recovering, durations get shorter as firms create new jobs and absorb some of the unemployed.

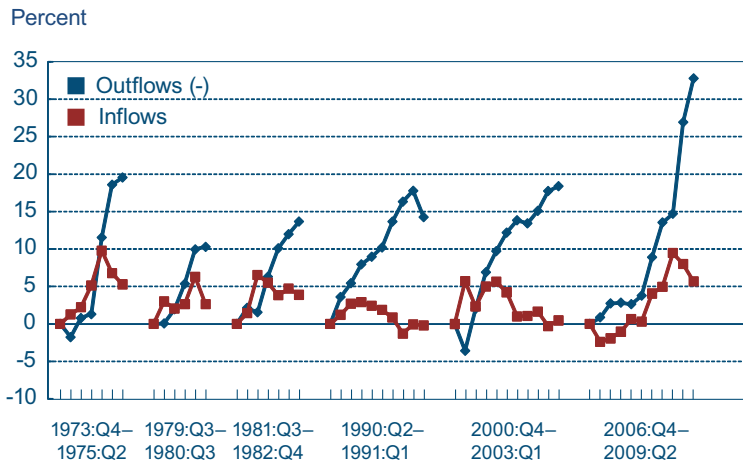
It seems though, especially since the 1990s, that longer spells of unemployment have become more

### Changes in Inflow and Outflow Rates by Recession, 1948–1971



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover survey (JOLTS).

## Changes in Inflow and Outflow Rates by Recession, 1973–present

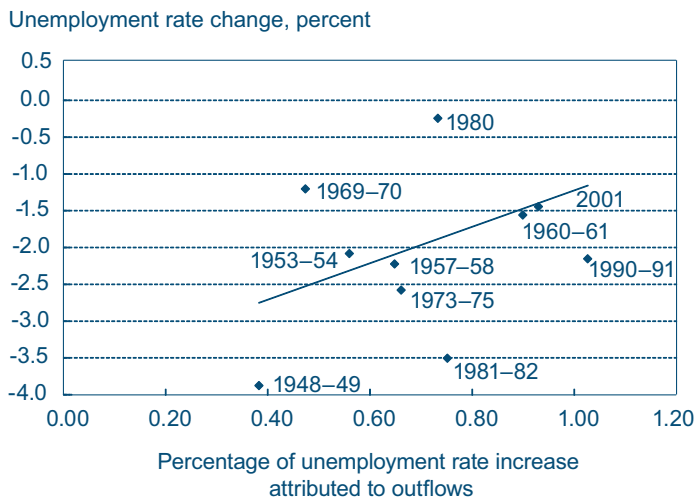


Source: Bureau of Labor Statistics, Job Openings and Labor Turnover survey (JOLTS).

important in explaining levels of unemployment than a rising incidence of separations. The “jobless” recovery of the early 2000s and the current downturn are two cases in point. In the past three recessions, the percentage decline in the outflow rate during the cycle has been well above the respective percentage rise in the inflow rate.

Alternatively, we can measure how much unemployment would have increased due to each factor separately. Since the beginning of the current recession, the unemployment rate has doubled, and almost 95 percent of this change is explained by the decline in outflows rather than the increase in inflows. Said differently, the sharp rise in unemployment that we have seen is not due primarily to a sharp rise in separations but rather to the fact that once unemployed, the chance of finding employment has fallen dramatically. This means that unemployment durations are getting longer.

## Unemployment during Recovery



Source: Bureau of Labor Statistics, Job Openings and Labor Turnover survey (JOLTS).

One might argue that longer durations as a result of lower outflows may reflect a permanent mismatch of skills among the unemployed. Workers who are out of a job for a long time lose skills, and their human capital in general deteriorates. To the extent that this is true, we might expect to have an unemployment rate that stays relatively higher even after the recession. As a matter of fact, looking at every recessionary episode in the post-World War II era, we do see a positive relationship between the fraction of the unemployment increase that is due to a decline in outflows and the magnitude of the decline in unemployment during the recovery. Recessions where declines in labor outflows have been the dominant source of change in the unemployment rate exhibit somewhat more muted recoveries, though the relationship is imprecise. The correlation between these two measures is 0.31.

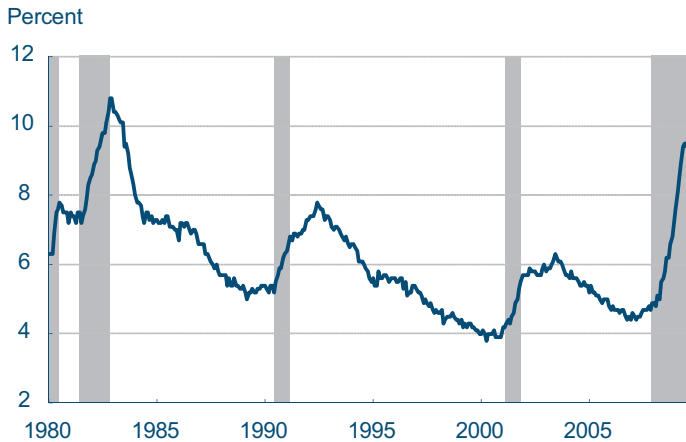
However, the exceptionally large declines in the outflow rate during the current downturn might just be due to the sheer magnitude and the duration of the contraction. By many different measures, the current downturn might end up being one of the most severe recessions we have experienced in the labor market. Similarly, it is likely to become one of the longest contractions in employment, hence longer unemployment durations might just be due to the duration of the recession.

# The Employment Situation, August 2009

09.08.09

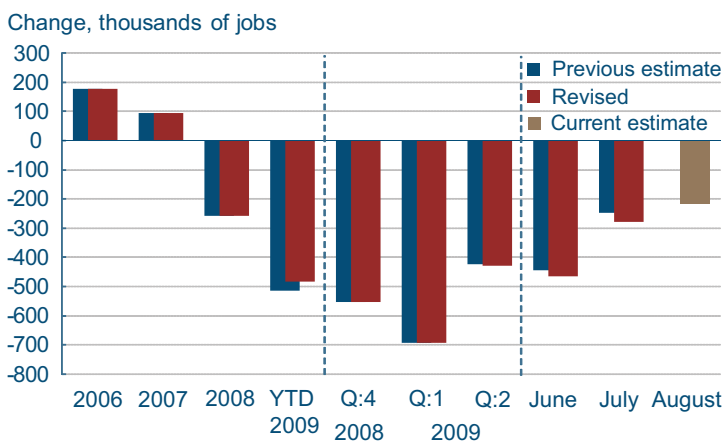
by Beth Mowry

## Unemployment Rate



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

## Average Nonfarm Employment Change



Source: Bureau of Labor Statistics.

Payroll losses continued to moderate in August, as net nonfarm employment declined by 216,000 compared to an average loss of 405,000 jobs over the past six months. However, revisions tacked an extra 49,000 losses onto June and July figures, leaving those months' respective declines at 463,000 and 276,000. The added declines were almost entirely due to downward revisions to government payrolls.

The unemployment rate climbed 0.3 percentage point to 9.7 percent in August as the number of unemployed persons jumped up 466,000. July's slight unemployment rate decline of 0.1 percentage point was caused by 422,000 people exiting the labor force. A less volatile measure of labor market stress is the employment-to-population ratio, which reached its lowest level since 1984, 59.2 percent. Although the labor market has come a long way since 741,000 payrolls were cut in January, the August cuts were still large by historical standards.

The diffusion index of employment change rose to 35.2, a substantial improvement from March's record low of 19.6, but still far below the expansionary threshold of 50. The current reading means that only 35.2 percent of industries are expanding employment, while the rest are still announcing layoffs or holding tight.

The moderation in payroll decline last month applied to most major industries, although goods-producing industries as a whole worsened, dropping from 122,000 losses in July to 136,000 losses in August. Within goods industries, manufacturing losses picked up to 63,000, while construction losses lessened to 65,000. While manufacturing losses grew in August, they were still much better than average losses of about 170,000 jobs over the first two quarters of the year. Furthermore, manufacturing payrolls in September are likely to continue improving as auto manufacturers resume production in the aftermath of the cash-for-clunkers program.



Payroll losses in service-providing industries lessened considerably, from 154,000 in July to just 80,000 in August. The only industries not contributing to the overall improvement in services were financial activities, in which losses nearly doubled to 28,000, and leisure and hospitality, in which a 1,000 payroll gain in July turned to a 21,000 loss in August. All other service industries moved closer to positive territory. Trade, transportation and utilities shed just 28,000 jobs last month compared to 85,000 in July, professional and business services lost 22,000 jobs compared to 33,000 in July, information services decreased its losses from 14,000 to 10,000, and the government shed 18,000 jobs compared to 28,000 in July. Retail trade losses shrank from 43,000 to just 9,600, marking this sector's best performance since January 2008. Although government losses were smaller in August, the sector has declined for four consecutive months now after solidly contributing to labor market growth throughout most of the earlier months in this recession. Education and health was the lone sector to outright add jobs, increasing its payroll count by 52,000 compared to 21,000 in July.

## Labor Market Conditions and Revisions

	Average monthly change (thousands of employees, NAICS)				
	June current	Revision to June	July current	Revision to July	August 2009
Payroll employment	-463	-20	-276	-29	-216
Goods-producing	-212	11	-122	6	-136
Construction	-79	7	-73	3	-65
Heavy and civil engineering	-14	2	-8	2	-8
Residential <sup>a</sup>	-24.8	8	-23	3	-23
Nonresidential <sup>b</sup>	-40.2	-3	-41	-3	-35
Manufacturing	-123	8	-43	9	-63
Durable goods	-101	4	-24	8	-51
Nondurable goods	-22	4	-19	1	-12
Service-providing	-251	-31	-154	-35	-80
Retail trade	-20	1	-43	1	-10
Financial activities <sup>c</sup>	-33	-4	-17	-4	-28
PBS <sup>d</sup>	-101	5	-33	5	-22
Temporary help services	-30	2	-8	2	-7
Education and health services	33	-4	21	4	52
Leisure and hospitality	-19	-1	1	-8	-21
Government	-72	-24	-28	-35	-18
Local educational services	-8	-16	-31	-14	-9

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.

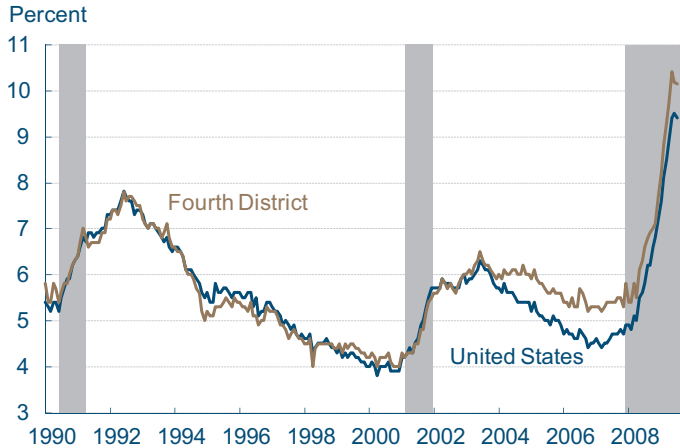
d. PBS is professional business services (professional, scientific, and technical services, management of companies and enterprises, administrative and support, and waste management and remediation services).

Source: Bureau of Labor Statistics.

# Fourth District Employment Conditions

09.03.09  
by Kyle Fee

## Unemployment Rate

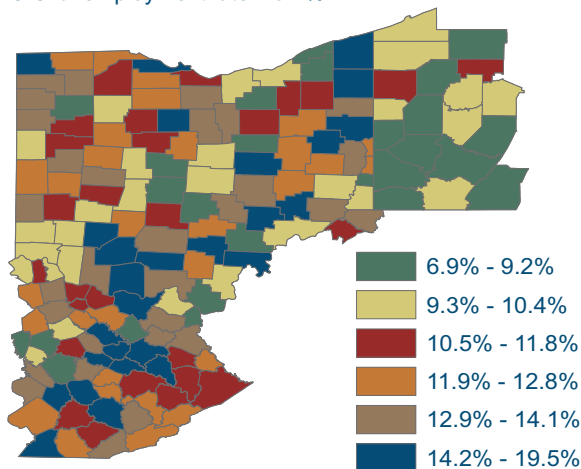


Notes: Seasonally adjusted using the Census Bureau's X-11 procedure. Shaded bars represent recessions. Some data reflect revised inputs, reestimation, and new statewide controls. For more information, see <http://www.bls.gov/lau/launews1.htm>. Sources: U.S. Department of Labor, Bureau of Labor Statistics.

The District's unemployment rate fell 0.1 percentage point to 10.1 percent for the month of July. The decrease in the unemployment rate is attributed to a decrease in the number of people unemployed (-0.6 percent), the number of people employed (-0.4 percent) and the labor force (-0.2 percent). Compared to the national rate in July, the District's unemployment rate stood 0.7 percentage points 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 3.6 percentage points and 3.6 percentage points, respectively.

## County Unemployment Rates

U.S. unemployment rate = 9.4%

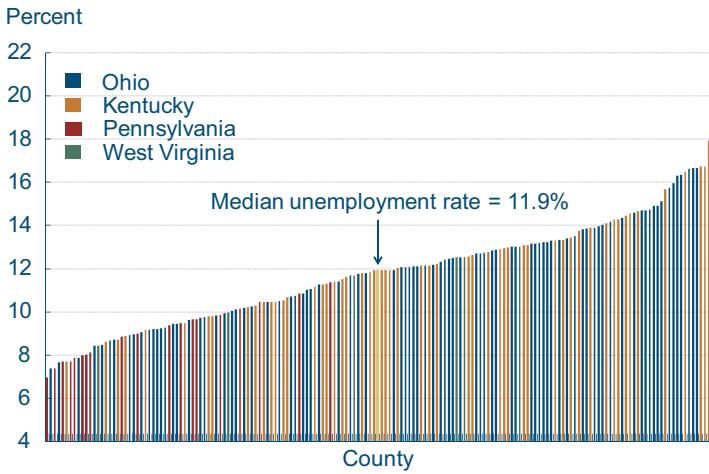


Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure. Source: U.S. Department of Labor, Bureau of Labor Statistics.

There are significant differences in unemployment rates across counties in the Fourth District. Of the 169 counties that make up the District, 32 had an unemployment rate below the national rate in July and 137 counties had rate higher than the national rate. There were 122 District counties reporting double-digit unemployment rates in July. 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.

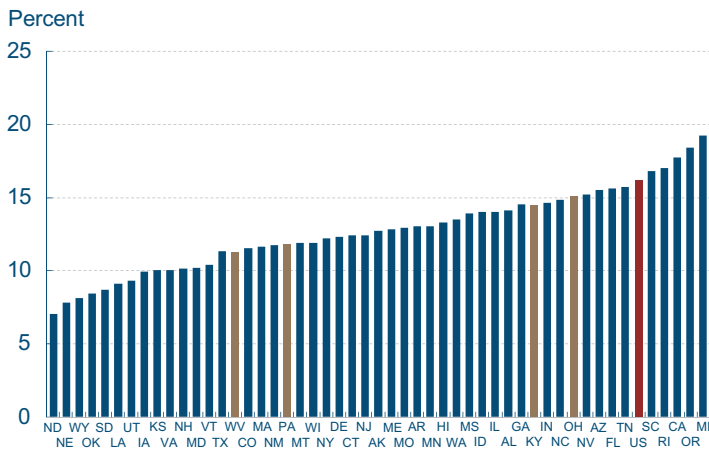
The distribution of unemployment rates among Fourth District counties ranges from 7.0 percent (Allegheny County, PA) to 19.5 percent (Magoffin County, KY), with the median county unemployment rate at 11.9 percent. Counties in Fourth District Pennsylvania generally populate the lower half of the distribution while the few Fourth District counties in West Virginia moved to the middle of the distribution. Fourth District Kentucky and

## 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.

## U-6 Unemployment Rate, Q2:2009



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

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 11.2 percent and 11.0 percent, respectively, compared to Pennsylvania's 8.5 percent and West Virginia's 9.0 percent.

An alternative measure of labor market conditions is the U-6 rate, which serves as an estimate for labor underutilization. Often labeled "true unemployment," the U-6 rate counts total unemployed persons, part-time employees and all marginally attached workers as a percentage of the civilian labor force plus all marginally attached workers. The U-6 measure also supports the hypothesis that labor market conditions differ markedly across the Fourth District.

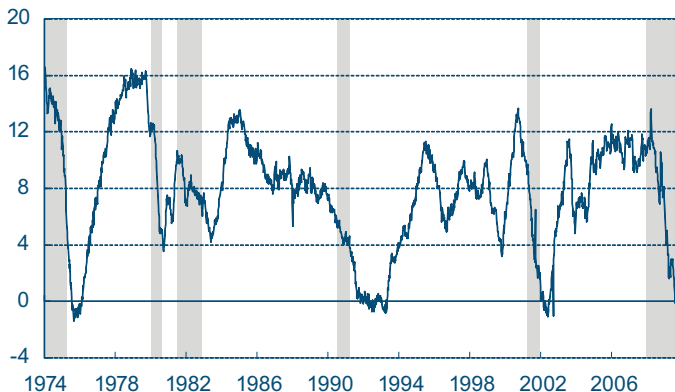
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**Marginally attached workers:** Persons not in the labor force who want and are available for work, and who have looked for a job sometime in the prior 12 months (or since the end of their last job if they held one within the past 12 months), but were not counted as unemployed because they had not searched for work in the 4 weeks preceding the survey. Discouraged workers are a subset of the marginally attached.

## Bank Lending, Capital, Booms, and Busts

### Loans and Leases in Bank Credit

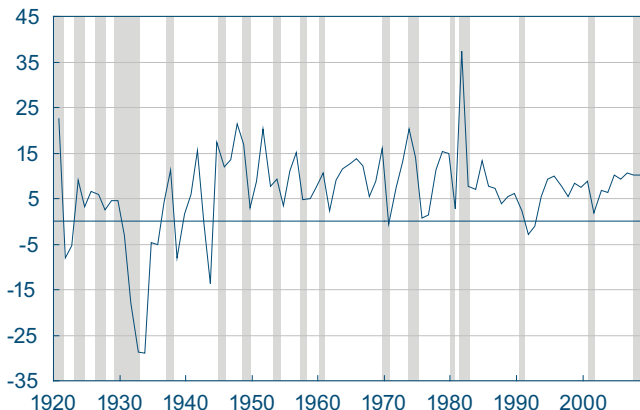
Year-over-year log difference



Notes: Data are weekly. Shaded bars indicate recessions.  
Source: Federal Reserve Board.

### Commercial Banks Loans

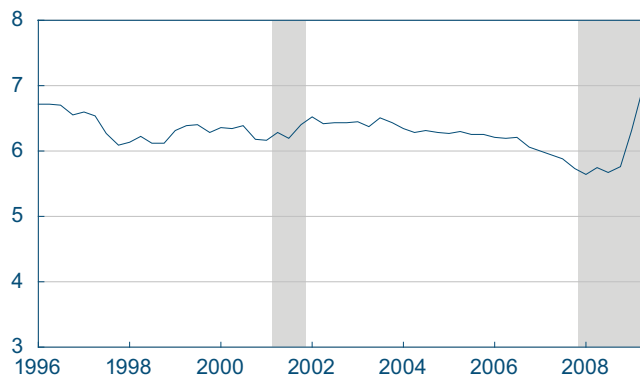
Log change



Note: Shaded bars indicate recessions.  
Sources: Balke and Gordon; NBER; Federal Reserve Board; FDIC; Friedman and Schwartz; authors' calculations.

### Ratio of Tier 1 Capital to Assets for Foreign and Domestic Banks

Percent



Note: Shaded bars indicate recessions.  
Source: Bank Call Reports.

08.24.2009

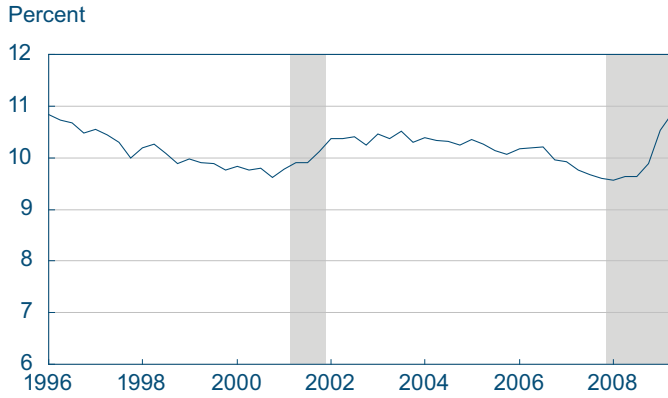
by Timothy Bianco and Joseph G. Haubrich

The volume of bank loans outstanding grows and shrinks with the business cycle. Growth slows just before a recession, and total volume shrinks after the recovery begins, typically bottoming out a few months later. In economist's jargon, the amount of bank loans outstanding is a lagging indicator. Recent weekly data indicate that loan growth has already reached negative territory, meaning that total lending is now contracting. Over the past 30 years, this occurrence has indicated that the turn-around point in the business cycle has already been reached, but as they say in forecasting, past results are no guarantee of future success. While the procyclical pattern is evident with a longer range of annual data, a look at the 1930s shows that loans can contract for years before the bottom arrives.

Certainly many factors contribute to the cyclical pattern of loan growth. Both supply and demand contribute: investments look riskier to banks in a recession, and they tighten standards. Firms see fewer prospects for growth and they borrow less. (For more on this, see this *Economic Trends* article.) The current crisis has brought a lot of attention to the sometimes obscure role that bank capital plays in lending levels. One concern is that bank capital, which is intended to serve as a buffer against losses, tends instead to accentuate booms and busts. The theory is that capital requirements allow banks to increase their leverage in good times because loans look safe and risk measures decrease. But when times get worse and risk measures increase, capital requirements increase and make loans more expensive. So rather than lean against the wind, policy runs with the prevailings.

Bank capital, though, is a complex subject, and there are a variety of capital measures and related ratios, all measuring slightly different things. The simplest is common equity to total assets. Also popular is leverage, which is just the inverse ratio, that is, total assets to common equity. A somewhat broader definition of capital adds in some forms of

## Ratio of Tier 1 Capital to Risk-Weighted Assets for Foreign and Domestic Banks



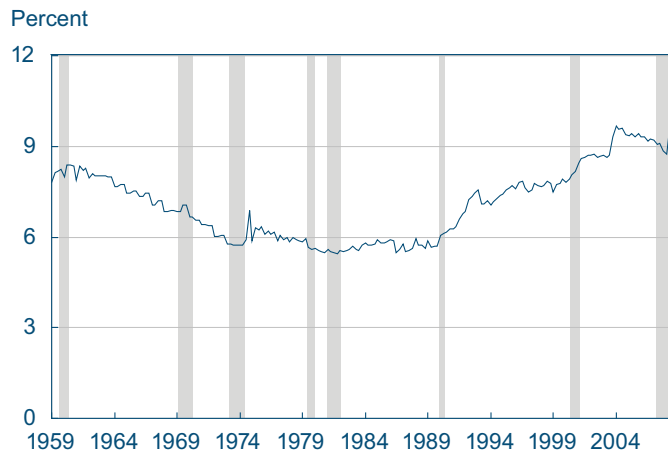
Note: Shaded bars indicate recessions.  
Source: Bank Call Reports.

preferred stock, resulting in Tier 1 capital. Adding in other liabilities, such as subordinated debt and the loan-loss reserve, defines Tier 2 capital. Assets might be simply summed up, or they might be weighted by a risk factor (gold bullion gets a zero risk factor, most commercial and consumer loans get a 100 percent risk weight).

The Tier 1 risk-based capital ratio shows stronger cyclicity, repeating that pattern in both recessions.

For the period over which we have good data (slightly more than a decade), the ratio of Tier 1 capital to assets does not have a strong cyclical component, though it drops before the current recession and rises later on.

## Ratio of Equity to Assets

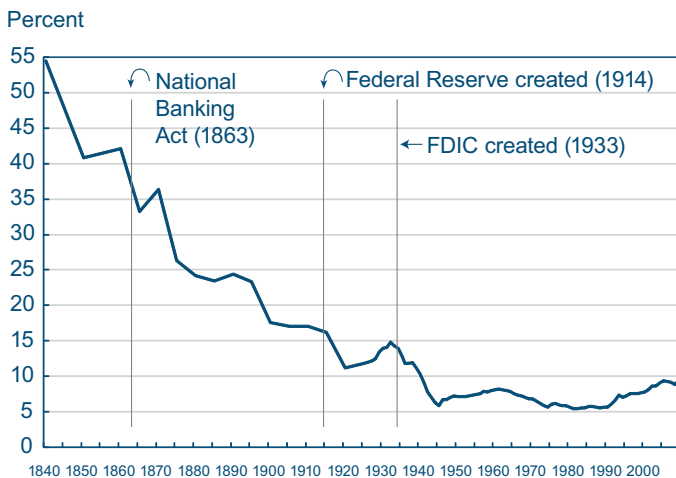


Note: Shaded bars indicate recessions.  
Source: Bank Call Reports.

Looking at leverage, for which we have a longer data series, however, this pattern has been hard to detect. Any cyclical changes are dominated by longer-run shifts. This does not necessarily mean that capital is unimportant for explaining bank lending behavior, just that the effects may be more subtle.

Over the very long run, bank capital has been decreasing, with major drops following the creation of national banks and the introduction of deposit insurance. Movement since the 1950s has been smaller, with perhaps a slight upward trend in the 1980s.

## Major Shifts in the Ratio of Equity to Assets



Sources: Statistical Abstracts (1840–1960); Bank Call Reports (1960–2009).

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