



# Economic Trends

August 2008  
(Covering July 10, 2008 to August 14, 2008)

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# June Price Statistics

07.25.08

by Michael F. Bryan and Brent Meyer

## June Price Statistics

	Percent change, last					
	1mo. <sup>a</sup>	3mo. <sup>a</sup>	6mo. <sup>a</sup>	12mo.	5yr. <sup>a</sup>	2007 avg.
<b>Consumer Price Index</b>						
All items	13.4	7.9	5.5	5.0	3.6	4.2
Less food and energy	3.9	2.5	2.3	2.4	2.2	2.4
Median <sup>b</sup>	4.6	3.2	3.1	3.1	2.8	3.1
16% trimmed mean <sup>b</sup>	5.4	4.0	3.5	3.2	2.6	2.8
<b>Producer Price Index</b>						
Finished goods	23.8	14.1	12.4	9.1	5.0	7.1
Less food and energy	2.9	3.7	4.5	3.1	2.1	2.1

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 rose at an annualized rate of 13.4 percent in June, outpacing all of its longer-term trends and pushed up by a 116.3 percent spike in energy prices and a 9.6 percent increase in food prices. The CPI excluding food and energy (core CPI) rose 3.9 percent during the month, its largest monthly increase since November 2001. Both the median and trimmed-mean measures were elevated as well, rising 4.6 percent and 5.4 percent, respectively. Price pressures were not just restricted to consumers in June, as the Producer Price Index (PPI) jumped 23.8 percent during the month. Over the past 12 months, the PPI has increased 9.1 percent, its largest growth rate in 27 years. Excluding food and energy, the PPI increased 2.9 percent in June, compared to 4.5 percent over the past 6 months.

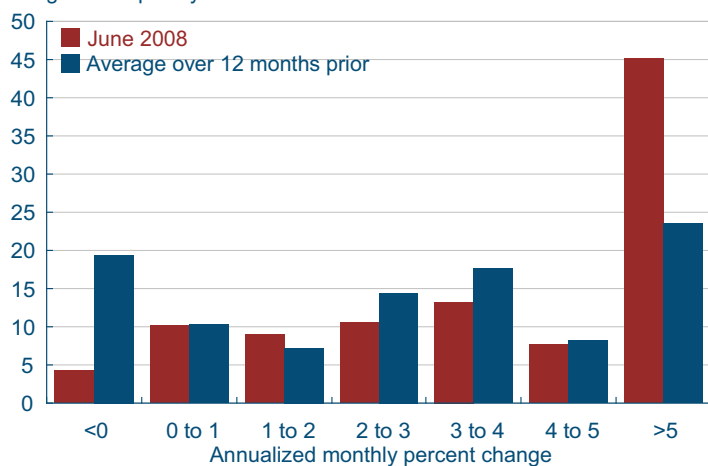
Digging deeper into the price-change distribution, we see that nearly two-thirds of the CPI's components increased at rates exceeding 3.0 percent, with 45 percent rising at rates greater than 5.0 percent. Over the 12 months prior to this report, only 23.6 percent of the CPI's components increased at rates greater than 5.0 percent on average. Of the 45 components that the Federal Reserve Bank of Cleveland uses to compute the median CPI, 10 increased at an annualized rate of 10.0 percent or greater.

The longer-term trend (the 12-month percent change) in all consumer price measures ticked up during the month. Since August 2007, the longer-term trend in the CPI has increased from 2.0 percent to 5.0 percent today. Over the past 12 months, the median CPI has increased 3.1 percent, while the 16 percent trimmed mean is up 3.2 percent.

The prices of both core goods (goods excluding food and energy commodities) and core services (services excluding energy services) jumped up in June, increasing 1.3 percent and 5.0 percent, respectively. Over the past 12 months, core services prices are up 3.3 percent, while core goods are only

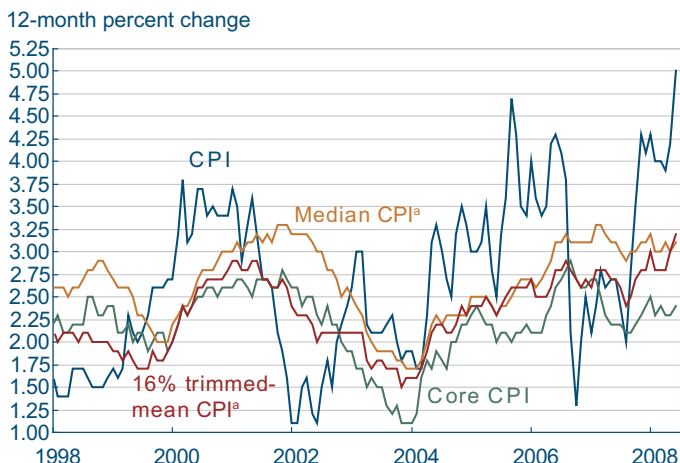
## CPI Component Price-Change Distributions

Weighted frequency



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

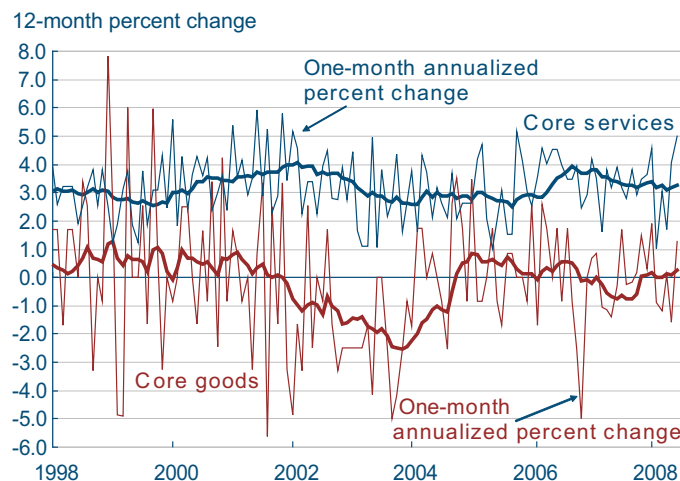
## CPI, Core CPI, and Trimmed-Mean CPI Measures



a. Calculated by the Federal Reserve Bank of Cleveland.

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

## Core CPI Goods and Core CPI Services

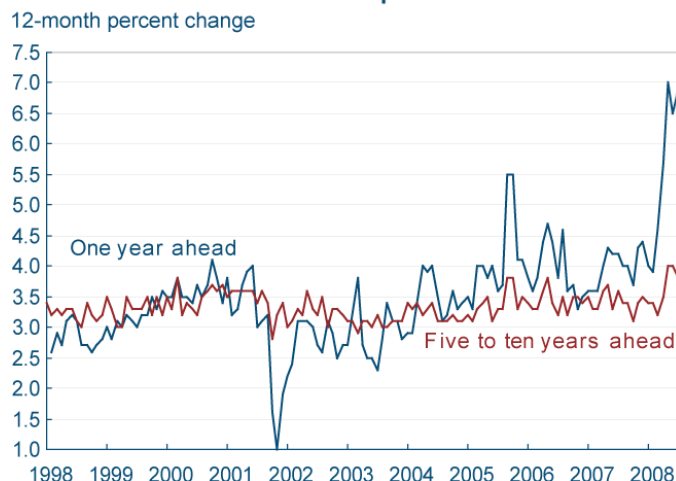


Sources: U.S. Department of Labor; Bureau of Labor Statistics.

up 0.2 percent on a year-over-year basis.

Average inflation expectations, as measured by the University of Michigan's Survey of Consumers, have been holding near recent highs. One-year-ahead average inflation expectations increased 0.4 percentage point to 6.9 percent, according to the preliminary report for July. Longer-term (5–10 year-ahead) average expectations ticked down to 3.8 percent in July from 4.0 percent in June, but this is still above the series' recent trend.

## Household Inflation Expectations



Note: Mean expected change.

Source: University of Michigan's Survey of Consumers.

## Money, Financial Markets, and Monetary Policy

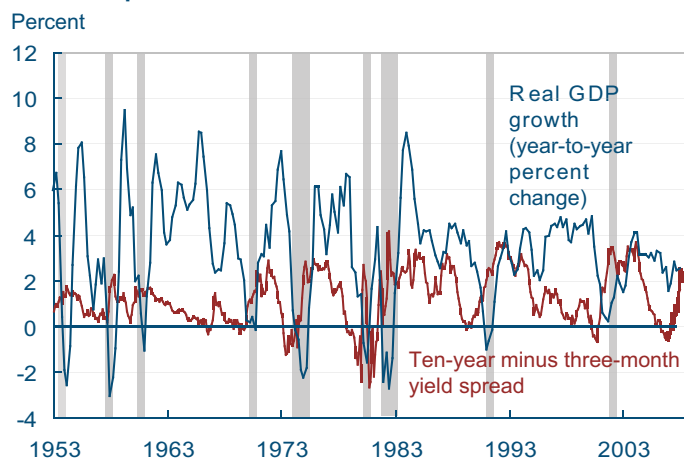
### What Is the Yield Curve Telling Us?

07.16.08

by Joseph G. Haubrich and Kent Cherny

Since last month, the yield curve has taken a parallel downward shift, with both short-term and long-term interest rates falling. One reason for noting this is that 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

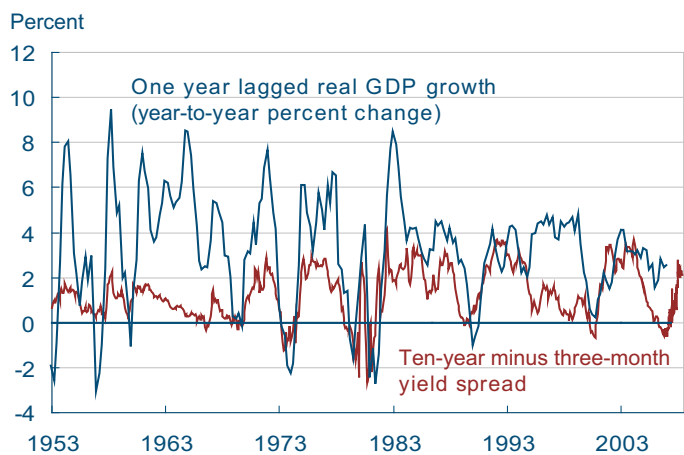
## Yield Spread and Real GDP Growth



Note: Shaded bars represent recessions.

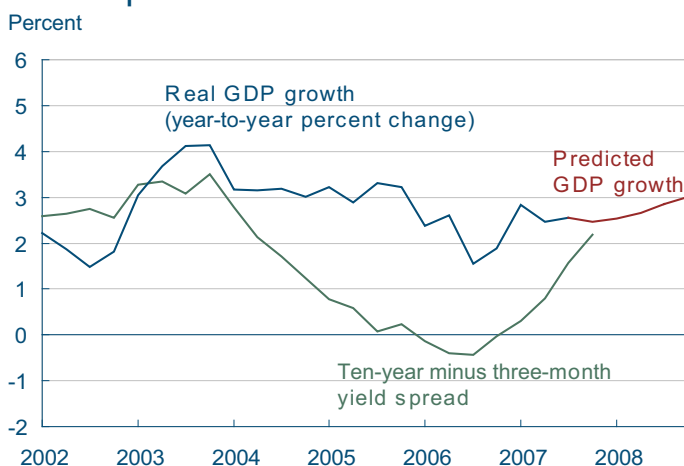
Sources: Bureau of Economic Analysis; Federal Reserve Board.

## Yield Spread and One-Year Lagged Real GDP Growth



Sources: Bureau of Economic Analysis; Federal Reserve Board.

## Yield Spread and Predicted GDP Growth



Sources: Bureau of Economic Analysis; Federal Reserve Board.

have preceded each of the last six recessions (as defined by the NBER). Very flat yield curves preceded the previous two, and there have been two notable false positives: an inversion in late 1966 and a very flat curve in late 1998. More generally, though, 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.

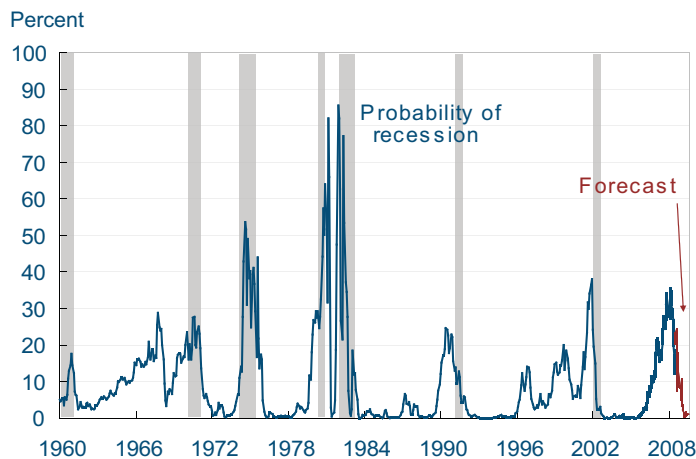
The yield curve slope became slightly flatter, with both long and short rates moving down. The spread remains positive, with the 10-year rate moving down 25 basis points to 3.90 percent and the 3-month rate down 20 basis points to 1.77 percent (both for the week ending July 11). Standing at 213 basis points, the spread is just below the 218 seen in June and the 221 in May. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 3.0 percent rate over the next year. This remains on the high side of 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 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 1.1 percent, equal to June's prediction and just above May's 0.9 percent.

The probability of recession is below several recent estimates, and perhaps seems strange in the midst of recent financial concerns. But one aspect of those concerns has been a flight to quality, which lowers Treasury yields. Also working to steepen the yield curve are the reductions in both the federal funds target rate and the discount rate by the Federal Reserve. Furthermore, the forecast is for where the economy will be next July, not earlier in the year.

To compare the 1.1 percent to some other probabilities, and learn more about different techniques of predicting recessions, head on over to the Econ-

## Probability of Recession Based on the Yield Spread



Note: Estimated using probit model.

Sources: Bureau of Economic Analysis; Federal Reserve Board; author's calculations.

browser blog.

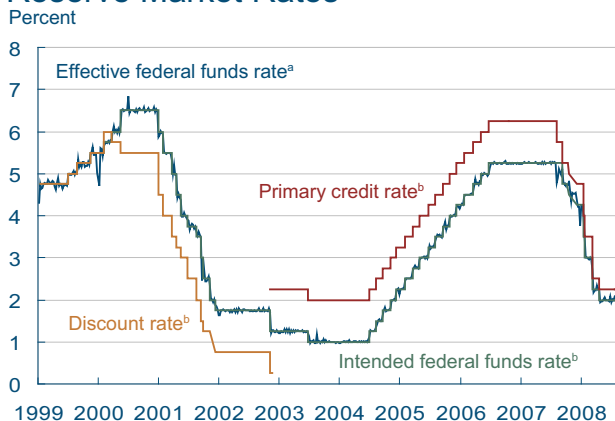
Of course, it might not be advisable to take this number quite so literally, for two reasons. First, this probability is itself subject to error, as is the case with all statistical estimates. Second, other researchers have postulated that the underlying determinants of the yield spread today are materially 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.

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?”

## Money, Financial Markets, and Monetary Policy

### Another Steady Rate Decision

#### Reserve Market Rates



a. Weekly average of daily figures.

b. Daily observations.

Sources: Board of Governors of the Federal Reserve System, “Selected Interest Rates,” *Federal Reserve Statistical Releases*, H.15.

08.07.08

by Charles T. Carlstrom and Sarah Wakefield

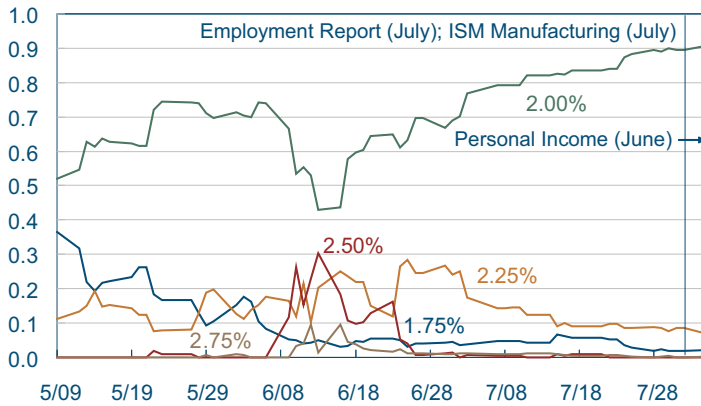
On August 5, 2008, the Federal Open Market Committee (FOMC) voted to keep its target for the federal funds rate at 2%. The committee’s statement noted that tight credit conditions, the ongoing housing contraction, and elevated energy prices are likely to weigh on economic growth over the next few quarters. However, it added that upside risks to inflation are also of significant concern.

The committee’s decision did not surprise market participants, who had placed the probability of the steady rate decision at 90%, whereas only 7% of participants had expected an increase of 25 basis points at the August meeting. The likelihood of a 25-point rate increase at the September 16 meeting is slightly above 20%, while the probability that rates will again remain at 2% is just under 60%.

Following the June 25 FOMC meeting, implied yields on federal funds futures reached nearly 3.25% for August 2009. Between the June and August meetings, implied yields for August 2009

## August Meeting Outcomes

Implied probability

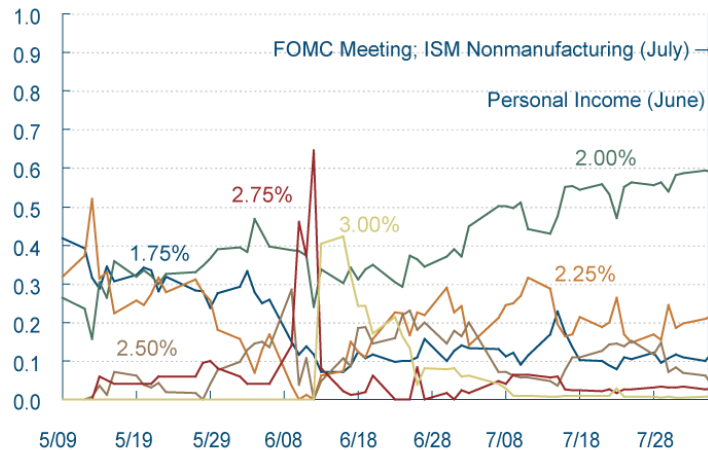


Note: Probabilities are calculated using trading-day closing prices from options on federal funds futures that trade on the Chicago Board of Trade.

Sources: Chicago Board of Trade and Bloomberg Financial Services

## September Meeting Outcomes

Implied probability

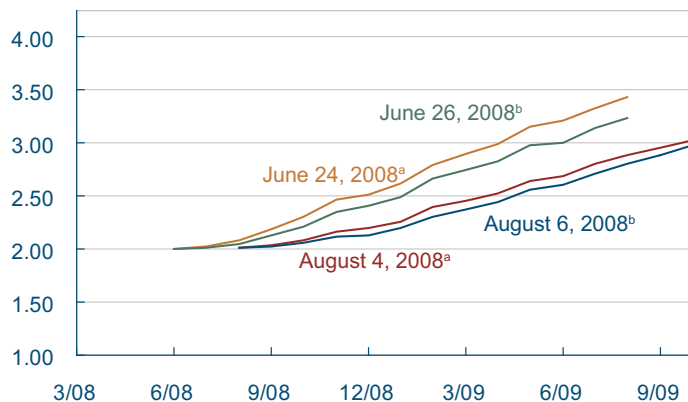


Note: Probabilities are calculated using trading-day closing prices from options on federal funds futures that trade on the Chicago Board of Trade.

Sources: Chicago Board of Trade and Bloomberg Financial Services

## Implied Yields on Federal Funds Futures

Percent



a. One day before FOMC meeting.

b. One day after FOMC meeting.

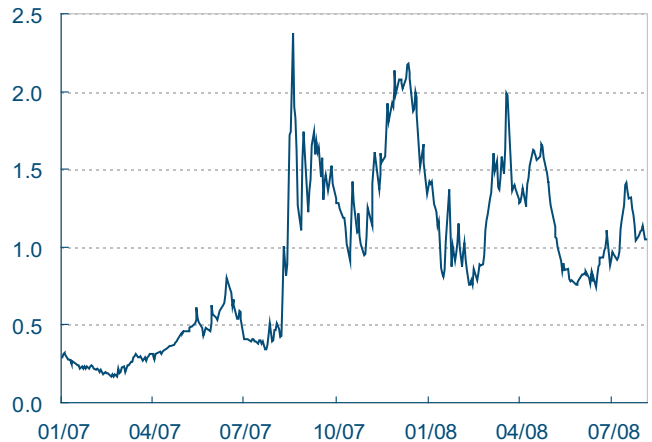
Sources: Chicago Board of Trade and Bloomberg Financial Services.

gradually fell nearly 50 basis points to just above 2.75%. After both the June and August meetings, implied yields dropped from their levels the day before the FOMC meeting.

Credit markets appear to be easing, as indicated by the spread between the 3-month LIBOR and the 3-month Treasury bill. The spread has moderated significantly since its high in August 2007, despite the spread's increase since June. The Federal Reserve has taken further actions to improve liquidity: On July 30, it announced that it will lengthen the maturity of the Term Auction Facility and extend the Primary Dealer Credit Facility and the Term Securities Lending Facility through January 30, 2009. In the days following this announcement, the spread declined, which indicates that credit markets are improving.

## 3-Month LIBOR Spread

Percent

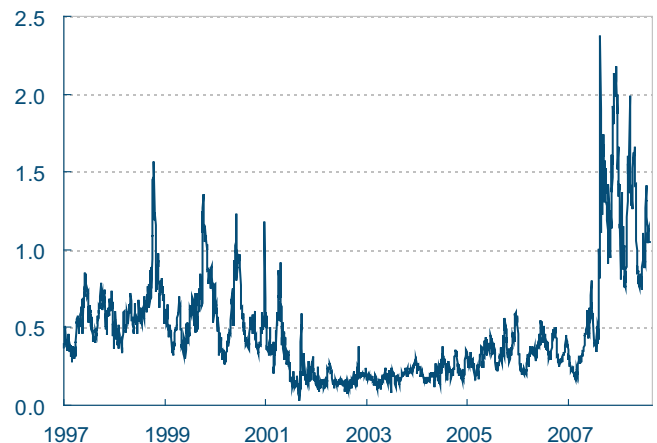


Note: LIBOR spread is the 3-month LIBOR minus the 3-month T-Bill.

Source: Federal Reserve Board and Financial Times.

## 3-Month LIBOR Spread

Percent



Note: LIBOR spread is the 3-month LIBOR minus the 3-month T-Bill.

Sources: Federal Reserve Board and Financial Times

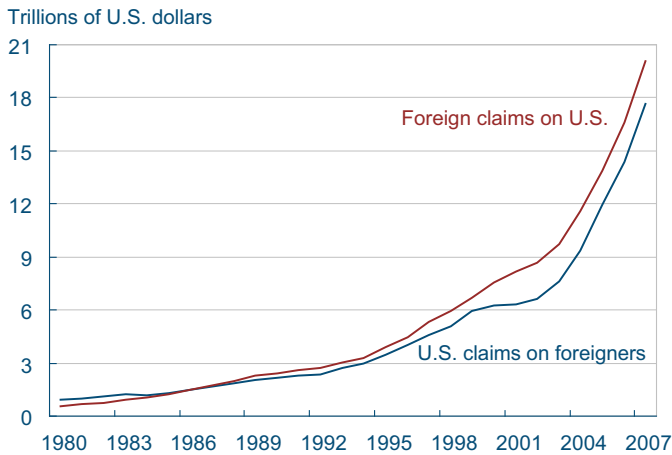


# The Net International Investment Position

08.06.08

Owen F. Humpage and Michael Shenk

## U.S. and Foreign Claims



Source: Bureau of Economic Analysis.

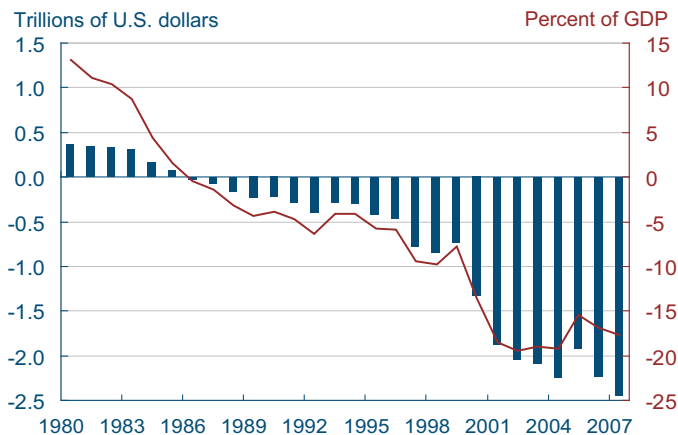
The United States has run a current account deficit almost continuously since 1982. We have financed this deficit by issuing financial claims, such as stocks, bonds, and bank accounts, to the rest of the world. Since 1986, foreigners have held more claims on the United States than U.S. residents have held on them, or, in the jargon of international finance, the United States has maintained a negative net international investment position. Last year, that negative position reached a record \$2.5 trillion.

These financial instruments give foreigners a claim on future U.S. output, so economists often gauge them as a share of GDP. Last year, our negative net international investment position reached 17.7 percent of GDP, down from a record 19.5 percent in 2002.

In addition to annual current-account deficits, year-to-year adjustments in the international investment position reflect changes in the valuation of previously issued, outstanding financial claims. Valuation changes can result from movements in the market price of the underlying assets, but in recent years a substantial proportion of the valuation changes also resulted from the dollar's depreciation. The dollar has depreciated approximately 26 percent on a trade-weighted basis against our key trading partners since early 2002. When the dollar depreciates, a fixed amount of foreign currency translates into a greater number of dollars. Because most U.S. claims on foreigners are denominated in dollars, a dollar depreciation increases the dollar value of U.S. claims on foreigners. On the other hand, that depreciation has little effect on the dollar value of foreign claims on the United States, which are typically denominated in dollars.

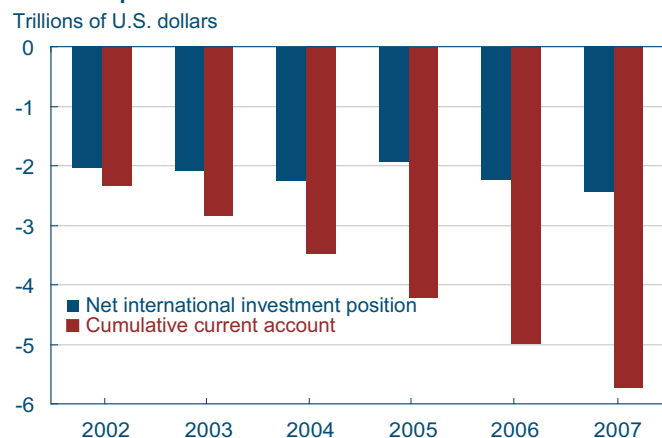
Valuation changes have had a profound effect on our net international investment position since the end of 2001: Our cumulative current-account

## Net International Investment Position



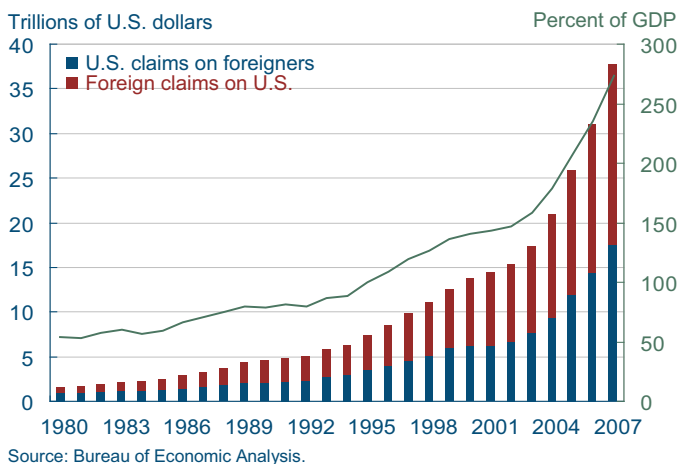
Source: Bureau of Economic Analysis.

## The Importance of Valuation Effects



Source: Bureau of Economic Analysis.

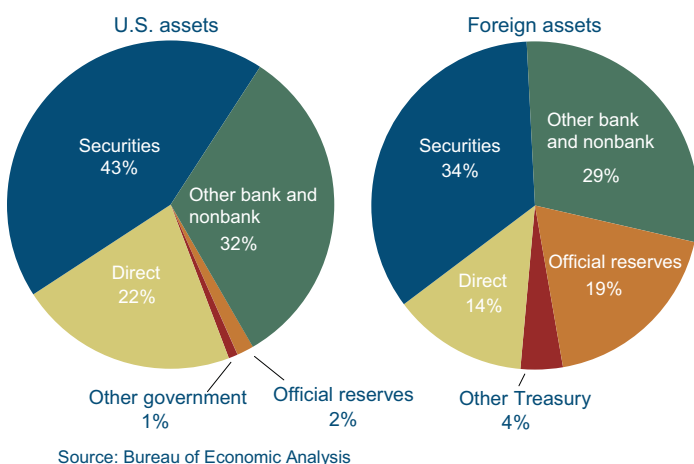
## Globalization of Financial Markets



deficit has increased nearly \$3.9 trillion, while our net international investment position has increased only \$0.6 trillion. The difference primarily reflects valuation changes that work in our favor.

Reflecting the increased integration of global financial markets, both U.S. and foreign financial claims have increased much faster than U.S. GDP since the mid 1990s, especially since 2001. Contrary to reports that some foreign governments have been diversifying out of dollars, foreign official holdings of U.S. assets have increased steadily by 5 percentage points since 2001. Official reserves accounted for 19 percent of foreign claims on the United States in 2007. U.S. holdings of foreign securities have also increased their share of total U.S. claims on foreigners in recent years; they now account for 43 percent of that total. Direct investments, however, have been shrinking as a share of both U.S. claims on foreigners and foreign claims on the United States.

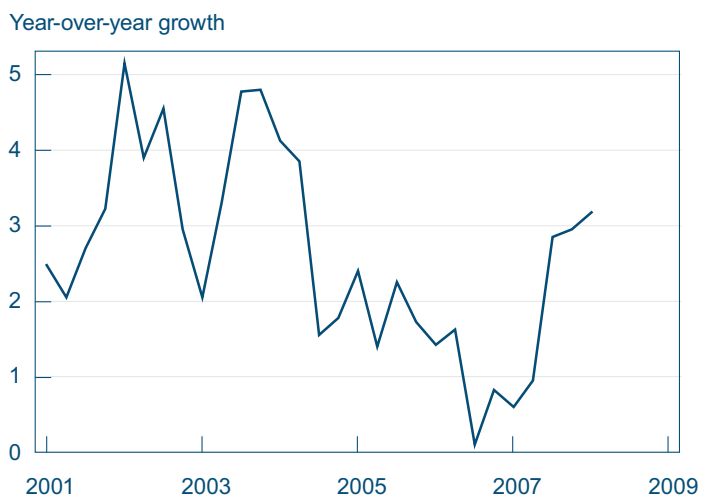
## U.S. and Foreign Asset Shares



## Economic Activity

### Will We Have Another “Jobless” Recovery?

#### Nonfarm Labor Productivity, Current Expansion



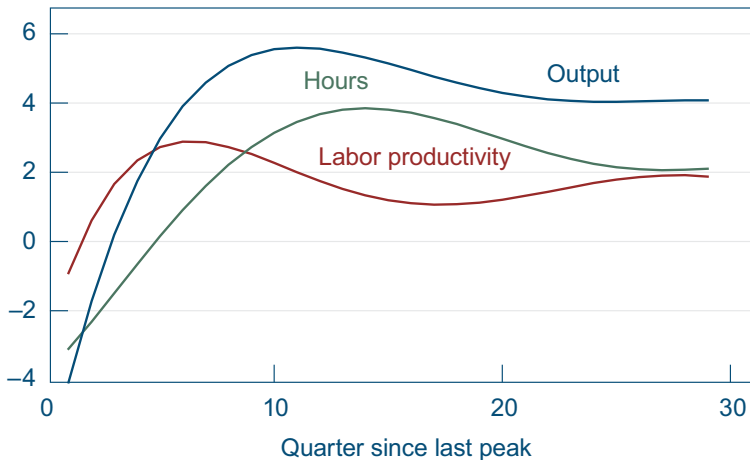
07.30.08  
by Paul W. Bauer

After the last business cycle peak—still officially March 2001—labor productivity remained strong, but employment took longer than usual to recover. Some of the labor productivity gains had come from the high-tech capital boom of the late 1990s, which in turn was partially fueled by the need to address potential y2k problems. As we continue through what is at least another soft economic patch, an important question is whether labor productivity will repeat the same relatively strong performance observed after the last business cycle peak. While this would be good for real wages and living standards in the long run, it could again lead



## Typical Postwar Expansion

Annual growth rate, seasonally adjusted



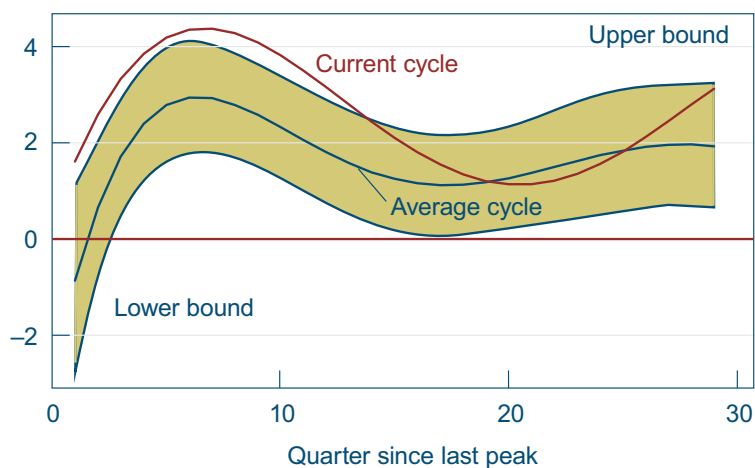
to a slow recovery in employment growth in the short run.

To answer this question, we look first at past trends. The first chart below plots growth in nonfarm labor productivity since the first quarter of 2001. As the chart shows, labor productivity is a fairly volatile series—even when viewed as year-over-year figures. Consequently, it is easier to tease out the underlying patterns if the raw data are statistically smoothed. The second chart plots the smoothed annualized quarterly growth rate for nonfarm labor productivity, output, and hours for a typical postwar expansion.

In a typical expansion, labor productivity, output, and hours all fall sharply after the peak but by different amounts. More significantly, they recover at different rates. Output growth plunges the most but then recovers quickly. It reaches its peak about 10 quarters after the previous peak, after which it tends to decline over the rest of the cycle. Growth in hours worked follows a similar path but does not tank quite as much. It recovers more slowly, about 14 quarters out. This slow recovery is evidence of a phenomenon called labor hoarding: Firms are reluctant to let skilled workers go during a temporary downturn because they may find other employment and thus not be available once conditions recover. The net result is that labor productivity (output per hour) recovers quickly at first (as output growth outpaces hours growth), but tends to slow once the recovery is well under way (as hours growth catches up with output growth).

## Nonfarm Labor Productivity Growth

Annual growth rate, seasonally adjusted

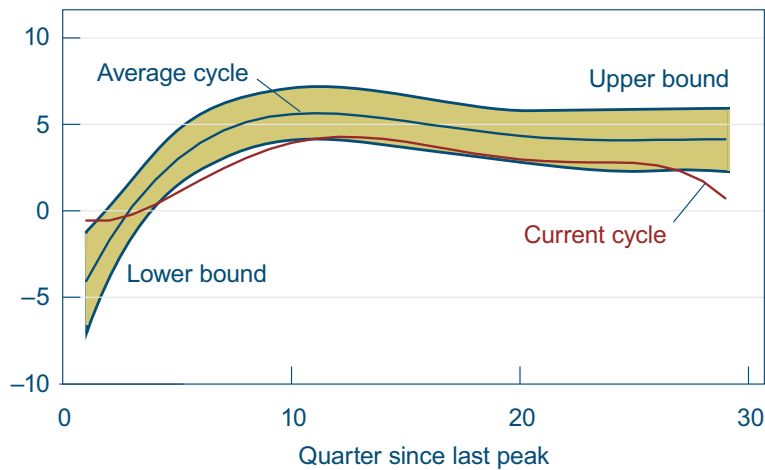


The next chart illustrates the unusual trend of the current cycle. A smoothed version of labor productivity growth in the current cycle is plotted, along with the average of the previous postwar cycles and a corresponding 95 percent confidence interval. Productivity growth through the first 15 quarters after the peak was abnormally strong, just above the upper end of the range of the 95 percent confidence interval. The latest available value for year-over-year growth in nonfarm business labor productivity (2008:Q1) is 3.3 percent, the largest since the 3.8 percent reported for the 2003:Q2–2004:Q2 period.

Note that this analysis treats the current period as

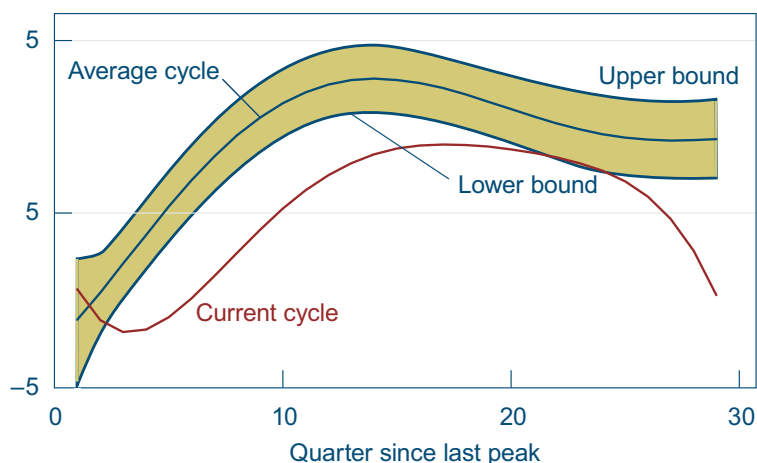
## Nonfarm Output Growth

Annual growth rate, seasonally adjusted



## Nonfarm Hours

Annual growth rate, seasonally adjusted



part of an ongoing expansion. This period would be even more unusual if it were treated as the beginning of the next period, as labor productivity has not dropped off as it usually does after a business cycle peak. Even though employment has declined for the past six months, real GDP has not fallen in any quarter, so it will be interesting to see how the NBER dating committee treats this period once all the data revisions are in.

How did this unusually strong labor productivity growth come about? First, output growth did not fall as much after the peak as it normally does, but over the cycle it has tracked at the lower bound of the 95 percent confidence interval. In the most recent observations it has even dropped below.

This weak output performance has been accompanied by even weaker growth in hours worked than normal. Some of this weaker-than-average growth is due to demographics: The labor force is growing more slowly this cycle than in previous postwar cycles—a trend that is likely to continue. Since the 1950s, labor force growth has averaged 1.6 percent, but it is widely expected to continue to slow to no more than 0.7 or 0.8 percent by the middle of the next decade.

Going forward, labor productivity's growth rate will depend, in part, on whether the economy continues to expand or whether it enters a recession. It will also depend on which sectors experience relatively more growth. Currently, exports, of which manufactured goods comprise a large share, are doing relatively well given the continued growth overseas and the weak dollar. As manufacturing's gains in labor productivity have tended to be stronger than the service sector's, this should result in at least a modest boost to overall labor productivity. With the economy in transition, adjusting to higher energy prices and lower housing prices, overall output demand is likely to be weak. Combined with robust labor productivity growth, this could lead to weak employment growth as well.

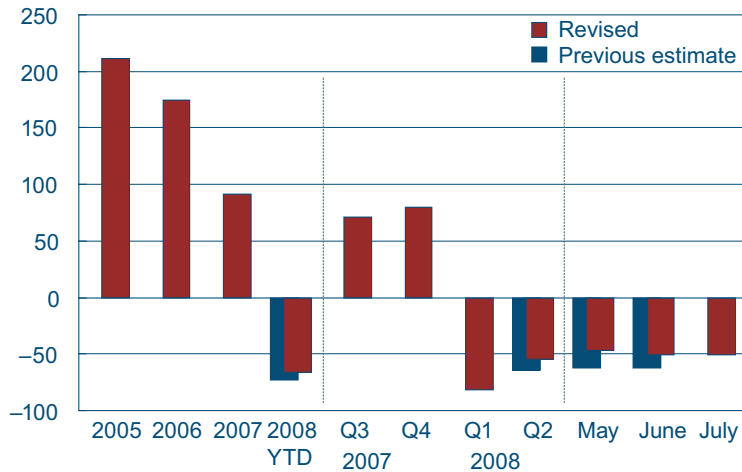
# The Employment Situation July

08.04.08

by Murat Tasci and Beth Mowry

## Average Nonfarm Employment Change

Change, thousands of jobs



Source: Bureau of Labor Statistics.

The economy lost a fewer-than-expected 51,000 jobs in July, marking the seventh consecutive month of payroll decline. Revisions for May and June also lessened those months' losses collectively by 26,000. The unemployment rate increased from 5.5 percent to 5.7 percent in July, reaching its highest point since March 2004. The diffusion index of employment change edged lower, from 42.2 to 41.2, having remained below 50 since November 2007. A reading below the 50 threshold indicates that a greater number of businesses are subtracting from payrolls than adding to them.

The goods-producing sector shed 46,000 jobs in July, compared to June's larger loss of 77,000. This improvement resulted even though the manufacturing industry lost the same number of jobs as last month (35,000), because construction lost fewer (22,000 versus 49,000) this month, and natural resources and mining added more (11,000 versus 7,000). Service-providing industries lost 5,000 jobs from their payrolls, despite the government's positive contribution of 25,000. However, June's initially reported gain of just 7,000 service jobs was revised up to a gain of 26,000, and May's loss of 8,000 was revised to a 4,000 gain.

Within the goods-producing sector, construction shed 22,000 jobs and manufacturing shed 35,000. Durable and nondurable goods manufacturing again faced similar losses amounting to 17,000 and 18,000 jobs, respectively. Leading the pack for losses in durables was transportation equipment (8,300) and wood products (3,900). Machinery had the most positive influence on durables, adding 6,100 jobs. Within the nondurable goods segment, the greatest losses were felt in food manufacturing (4,200), printing and related support activities (3,300), plastics and rubber products (2,900), and textile mills (2,600).

## Labor Market Conditions

	Average monthly change (thousands of employees, NAICS)				
	2005	2006	2007	2008	July 2008
Payroll employment	211	175	91	-66	-51
Goods-producing	32	3	-38	-75	-46
Construction	35	13	-19	-41	-22
Heavy and civil engineering	4	3	-1	-5	-1.3
Residential <sup>a</sup>	23	-5	-20	-27	-14.1
Nonresidential <sup>b</sup>	8	14	-1	-9	-6.7
Manufacturing	-7	-14	-22	-39	-35
Durable goods	2	-4	-16	-26	-17
Nondurable goods	-8	-10	-6	-13	-18
Service-providing	179	172	130	8	-5
Retail trade	19	5	6	-26	-16.5
Financial activities <sup>c</sup>	14	9	-9	-6	0
PBS <sup>d</sup>	56	46	26	-30	24
Temporary help services	17	1	-7	-27	-29
Education and health services	36	39	44	49	39
Leisure and hospitality	23	32	29	7	1
Government	14	16	21	27	25
Local educational services	6	6	5	9	2.2
Civilian unemployment rate	5.1	4.6	4.6	5.2	5.7

a. Includes construction of residential buildings and residential specialty trade contractors.

b. Includes construction of nonresidential buildings and nonresidential specialty trade contractors.

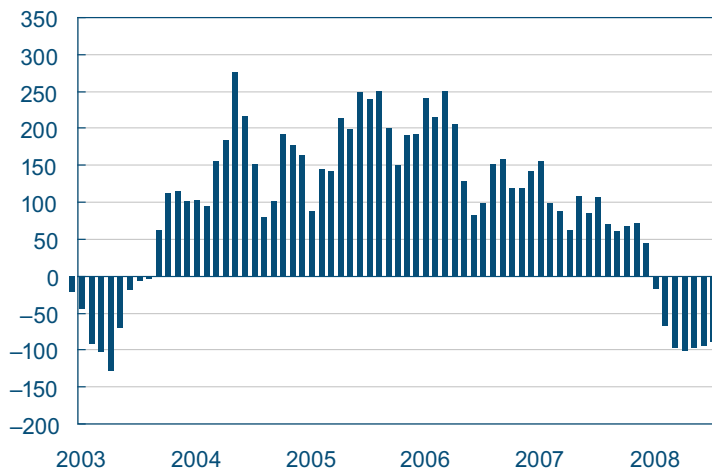
c. Financial activities include the finance, insurance, and real estate sector and the rental and leasing sector.

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.

## Private Sector Employment Growth

Change, thousands of jobs\*

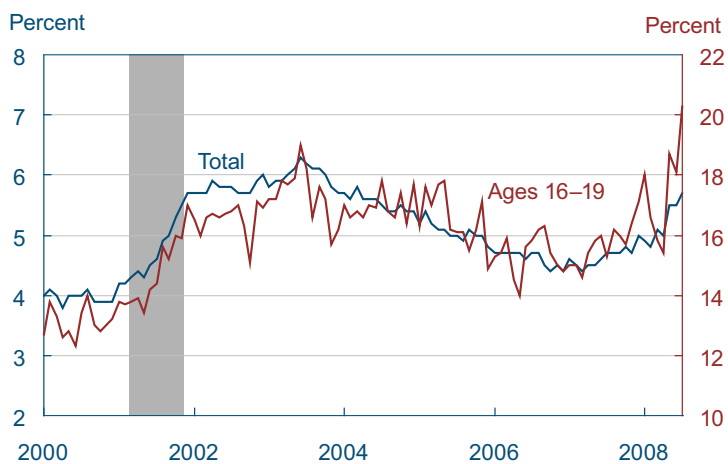


\*Three-month moving average.

Source: Bureau of Labor Statistics.

Education and health services continued to be a large, lone pillar of strength for the service-providing sector. Health services accounted for the bulk of the gain, adding 34,300 jobs last month, while education added 5,300. Leisure and hospitality (+1,000) and financial services (0) held their own, making no significant contribution either way. This virtual standstill in the two sectors marks both a slowdown of job gains in recent months for leisure and hospitality and an improvement over recent job losses in financial services. Service-industry losses were concentrated in professional business services (24,000), retail trade (16,500), and information services (13,000). Motor vehicles and parts dealers suffered the largest losses within retail trade, shedding 10,600 jobs. Temporary help services, considered a leading indicator of overall employment conditions, had yet another tough month in July, dropping 29,000 jobs.

## Unemployment Rate



Notes: Seasonally adjusted rates for the civilian population. Shaded bar indicates recession.

Source: Bureau of Labor Statistics.

The three-month moving average of private sector employment growth remains in the negative territory it entered back in January, sitting roughly unchanged from the previous report at -90,000. This moving average removes some of the volatility in monthly employment numbers and discounts the government's consistent addition of jobs.

The three-month moving average of the unemployment rate has been consistently increasing since the first quarter of 2007. It now stands at 5.56 percent relative to 4.46 percent in March 2007. For the past several months, the unemployment rate for teenagers (ages 16-19) was quite volatile and contributed to the rise in the overall unemployment rate. In July, the unemployment rate for this group increased to 20.3 percent from 18.1 percent in June, which might be partly responsible for the increase in the overall unemployment rate in July to 5.7 percent. However, household data suggest that most of the rise in unemployment could be due to a larger labor force. In July, the labor force increased by 213,000, while an additional 72,000 workers became unemployed, resulting in an increase of 285,000 in the unemployment pool.

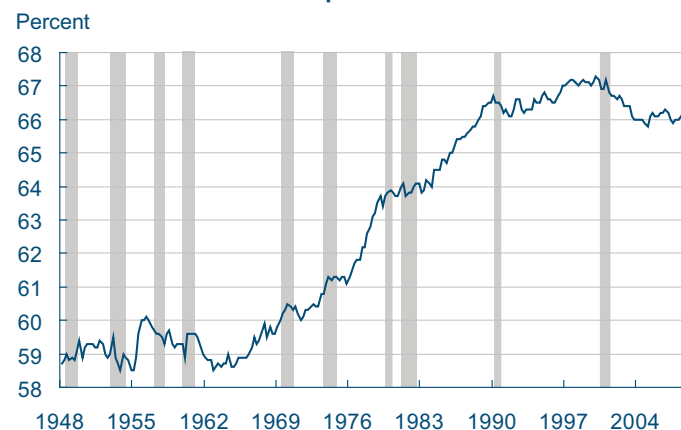
## Economic Activity

### Aggregate Labor Force Participation

08.14.08

by Yoonsoo Lee and Beth Mowry

### Labor Force Participation Rate, 1948-2008



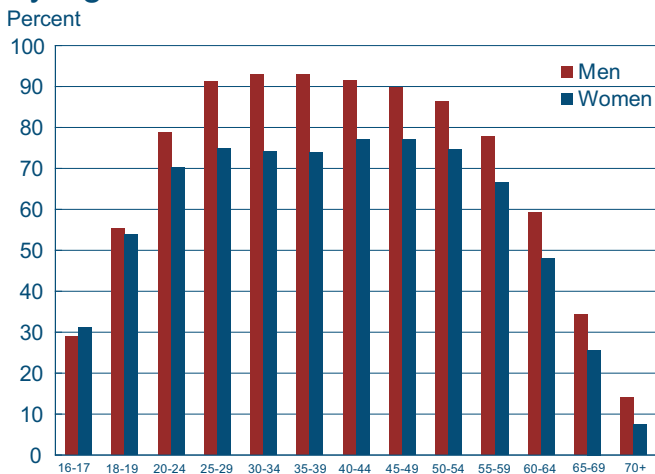
Notes: Data are quarterly and seasonally adjusted; Shaded bars indicate recessions.

Source: Bureau of Labor Statistics.

The labor force participation rate—the percentage of the working-age population (16 years and older) employed or looking for a job—rode an upward trend for 30 years, rising from less than 60 percent in the 1960s to about 67 percent in the late 1990s. After peaking at 67.3 percent in the first quarter of 2000, the participation rate fell steadily to around 66 percent by early 2005 and has remained at around 66 percent since then.

The aggregate labor force participation rate typically reported is a more complicated measure than a simple average. It is the weighted sum of the labor force participation rates of all the separate age groups tracked, where the weights are the population distributions of each age-specific group. Because participation rates vary substantially across

## Labor Force Participation Rate, by Age and Gender



Note: Data are 2007 annual data.  
Source: Bureau of Labor Statistics.

different age groups, compositional changes of the population can affect the aggregate participation rates.

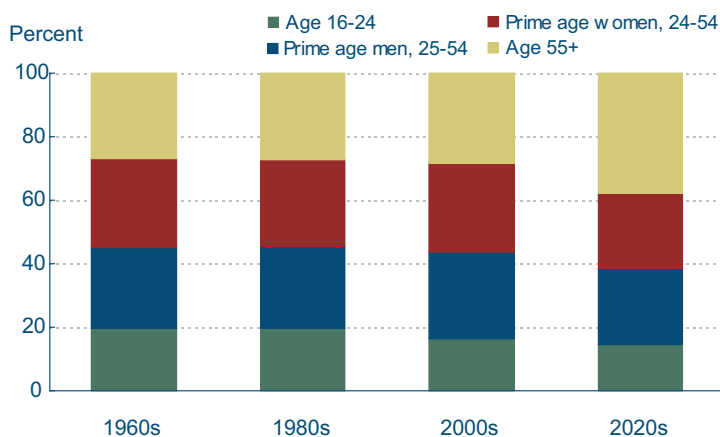
The aging of the baby-boom generation is causing a key change in proportions of the different age groups comprising the U.S. population. For most of the postwar period, the size of the labor force rose steadily, pushed up by baby boomers entering prime working age. As the baby-boom cohort starts to retire, the population will shift from people with higher participation rates toward older people with lower participation rates.

When the baby-boom cohort entered the labor force—from 1980 to 2000—the share of prime-age workers (ages 25 to 54) in the population increased from 53 percent to 56 percent. As this cohort starts retiring, the Census Bureau projects that the share of prime-age workers will decrease to 47 percent in the 2020s, and the share of older people will increase to 37 percent. Such a demographic change is expected to push down the aggregate labor force participation rate in the next decades.

Patterns in the labor force participation rates of different groups have changed in different ways over the past 30 years. The participation rate for men in their prime working years (25 to 54 years) has declined since the late 1970s. It has been fairly flat since 2002, after declining from 91.6 percent to 90.7 percent during the most recent labor market downturn. Meanwhile, prime-age women helped to drive up the aggregate labor force participation rate over the past 30 years, as their participation rate climbed. Since 1998, however, the rate for this group has stayed flat. From 2000 to 2005, their labor force participation rate fell relative to previous rates (from 76.9 percent to 75.1 percent), reflecting the sluggish labor market.

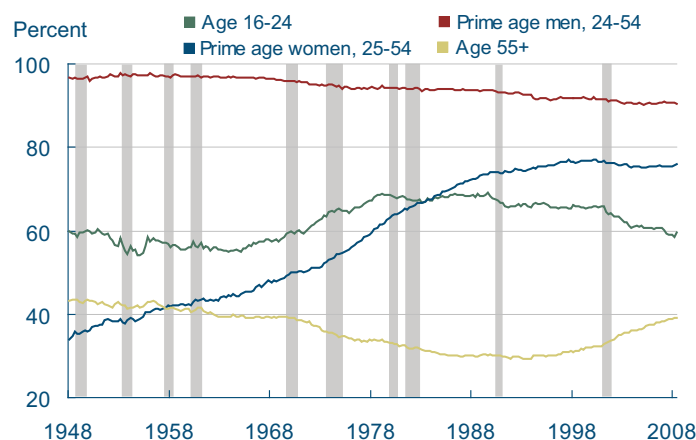
Workers at opposite ends of the age spectrum have been moving in different directions in recent years. The labor force participation rate of workers age 55 and older has been on the rise since the middle of the 1990s. In fact, it has risen 2.8 percentage points in the four years following the most recent recession. However, at below 40 percent, it is still lower than the aggregate participation rate. On the other hand, the rate for younger workers (16-24), which

## Population Share by Age and Gender



Note: Population shares for 2020s are based on Census Bureau projections.  
Source: Census Bureau.

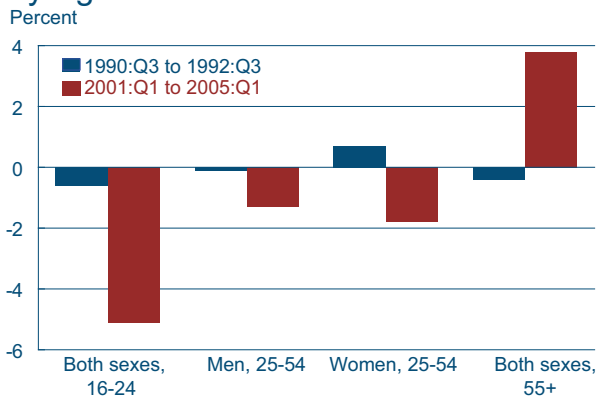
## Labor Force Participation Rate, by Age and Gender



Notes: Data are quarterly and seasonally adjusted; Shaded bars indicate recessions.  
Source: Bureau of Labor Statistics.



## Changes in the Labor Force Participation Rate during Economic Downturns, by Age and Gender



Source: Bureau of Labor Statistics.

rose in the 1970s, has dropped dramatically since the 2001 recession.

In fact, the sharpest decline in labor force participation since the 2001 recession occurred among persons aged 16 to 24—a 5.1 percentage point drop between the first quarter of 2001 and the first quarter of 2005. According to a recent study, while the share of this group in the aggregate labor supply is relatively small (4.2 percent), it has played a large role in aggregate labor force participation, accounting for almost two-thirds of its fall since 2000.

## Economic Activity

# Real GDP: Second-Quarter Advance Estimate and Benchmark Revisions

08.11.08

by Brent Meyer

## Real GDP and Components 2007: Fourth-Quarter Advance Estimate

	Quarterly change (billions of 2000\$)	Annualized percent change, last:	
		Quarter	Four quarters
Real GDP	54.6	1.9	1.8
Personal consumption	31.4	1.5	1.3
Durables	-9.3	-3.0	-1.2
Nondurables	23.8	4.0	1.3
Services	13.1	1.1	1.8
Business fixed investment	8.2	2.3	4.2
Equipment	-9.4	-3.4	0.1
Structures	11.1	14.3	12.9
Residential investment	-15.9	-15.6	-22.2
Government spending	17.2	3.4	2.5
National defense	9.3	7.4	5.9
Net exports	66.8	—	—
Exports	33.5	9.2	10.2
Imports	-33.4	-6.6	-1.7
Change in business inventories	-52.0	—	—

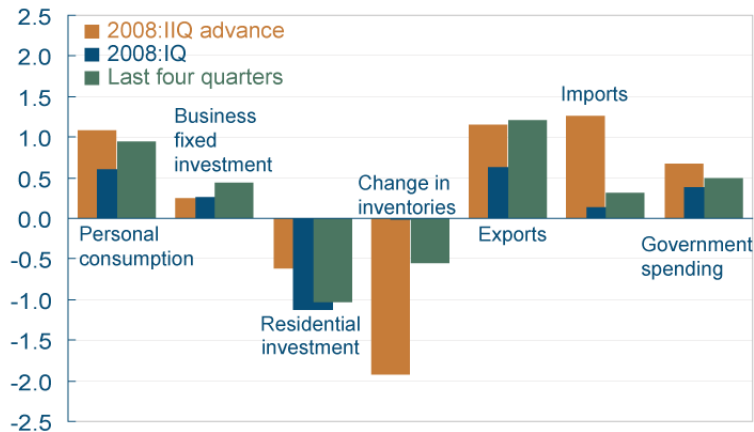
Source: Bureau of Labor Statistics.

Real GDP increased at an annualized rate of 1.9 percent in the second quarter of 2008, according to the advance estimate released by the BEA, 0.1 percentage point higher than its growth over the last four quarters. Personal consumption, aided by the stimulus checks and driven mostly by consumption of nondurables, rose 1.5 percent during the quarter. Durable goods consumption fell 3.0 percent during the second quarter, slightly less than the 4.3 percent loss experienced in the first quarter. Business fixed investment posted its smallest quarterly gain since the fourth quarter of 2006, rising 2.3 percent. Even though residential investment fell 15.6 percent in the second quarter, this is much better than last quarter's 25.0 percent loss.

Real imports and real exports were the largest contributors to real GDP growth in the second quarter, adding 1.3 percentage points and 1.2 percentage points to growth, respectively. It has been nearly 28 years since net exports contributed that much to growth. Business inventories shrank by \$52 billion in the second quarter, subtracting 1.9 percentage points from growth. Stimulus-aided consumption added 1.1 percentage points to real GDP growth, slightly higher than its contribution over the past four quarters.

## Contribution to Percent Change in Real GDP

Percentage points



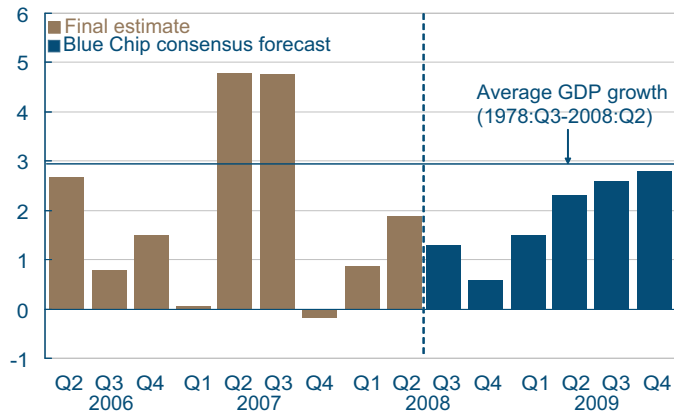
Source: Bureau of Economic Analysis

Looking forward, professional forecasters are expecting a slightly weaker second half of 2008, before a rebound in 2009 toward trend GDP growth. Compared to the June Blue Chip Economic Forecast, 28 of the 50 respondents marked down their 2009 forecast.

The annual BEA benchmark revisions, which cover the past three years (back to the first quarter of 2005), were released along with the second-quarter advance estimate. Over the entire time period, real GDP growth was revised slightly down. The revision to the fourth quarter of 2007, from 0.6 percent to -0.2 percent, garnered far more interest and renewed some recession speculation.

## Real GDP Growth

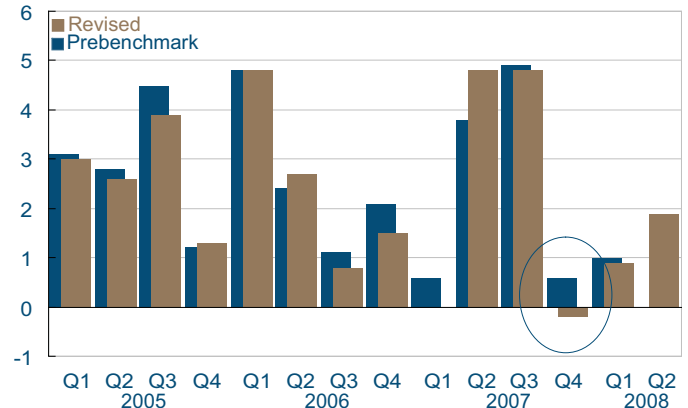
Annualized quarterly percent change



Source: Blue Chip Economic Indicators, July 2008; Bureau of Economic Analysis

## Benchmark Revisions—Real GDP

Annualized quarterly percent change



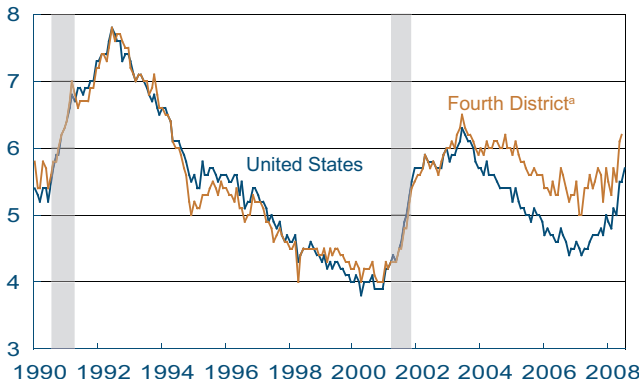
Source: Bureau of Economic Analysis.

## Regional Activity

### Fourth District Employment Conditions

#### Unemployment Rates

Percent



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

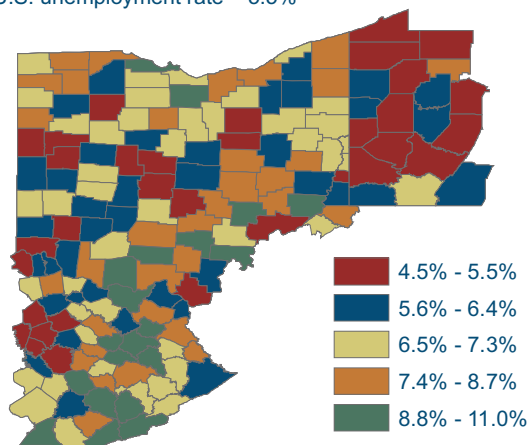
08.11.08

by Tim Dunne and Kyle Fee

The Fourth District's unemployment rate notched up 0.1 percent in June, reaching 6.2 percent. The increase can be attributed to monthly increases in the number of people unemployed (0.6 percent) along with a decrease in the number of people employed (-0.3 percent). The District's rate was 0.7 percent higher than the nation's in June, and it has been consistently higher since early 2004. Since the same time last year, the Fourth District's unemployment rate has increased 0.6 percentage point, while the nation's has increased 1.1 percentage points.

## County Unemployment Rates

U.S. unemployment rate = 5.5%



Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.

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

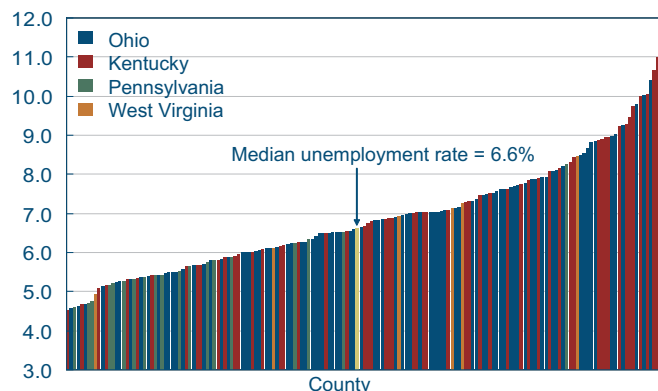
There are considerable differences in unemployment rates across counties in the Fourth District. Of the 169 counties that make up the District, 29 had an unemployment rate below the national average in June, and 140 had a higher unemployment rate than the national average. Rural Appalachian counties continue to experience higher levels of unemployment, while counties along the Ohio-Michigan border have begun to see rising rates of unemployment.

Unemployment rates in Fourth District counties range from 4.5 percent to 11.0 percent, with a median county unemployment rate of 6.6 percent. Only one of Pennsylvania's Fourth District counties lies in the upper half of the distribution, compared to 69 percent of Ohio counties and 63 percent of Fourth District Kentucky counties.

The distribution of monthly changes in unemployment rates shows that the median county's unemployment rate increased 0.07 percentage point from May to June. The rise in county-level unemployment rates was concentrated in Ohio in the May to June period. In fact, 83 percent of Ohio's counties experienced an increase in the unemployment rate. On the other hand, the unemployment rate in 75 percent of Pennsylvania's and Kentucky's Fourth District counties actually fell or remained the same from May to June.

## County Unemployment Rates

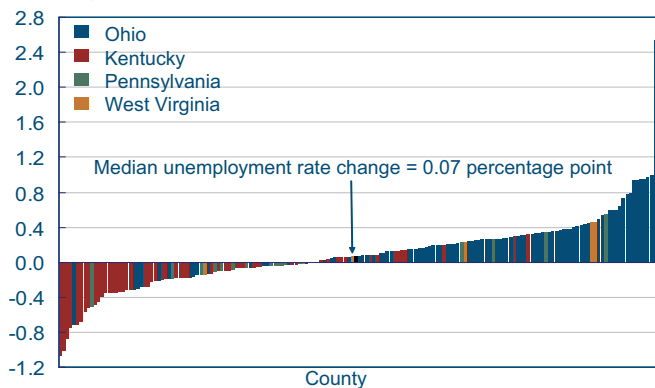
Percent



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

## Change in County Unemployment Rates, May 2008–June 2008

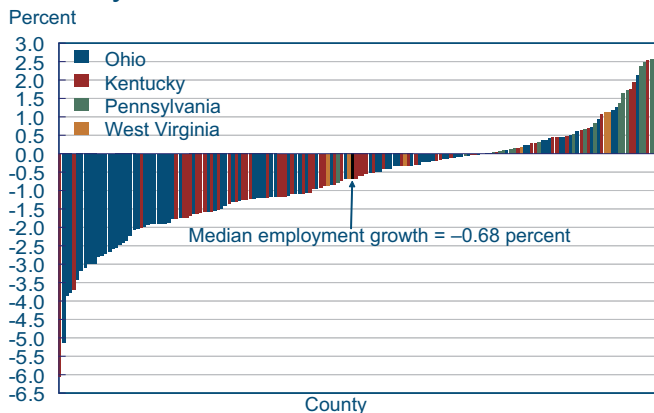
Percentage points



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

Since the beginning of 2007, employment in most counties in the Fourth District has fallen. Of the 169 counties in the Fourth District, employment fell in 120 and increased in only 49. The median growth in county-level employment was  $-0.68$  percent. Ohio counties experienced the weakest employment growth over the period, with 80 percent of those counties losing employment. Moreover, 21 counties in Ohio had employment declines of more than 2.0 percent, whereas only 3 counties in Fourth District Kentucky, and no counties in Fourth District Pennsylvania or West Virginia, experienced similarly large employment declines. In fact, only 16 percent of Fourth District Pennsylvania counties showed a decline in employment from January to June.

## Growth in County Employment, January 2008–June 2008



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

## Regional Activity

### State Labor Markets

08.15.08

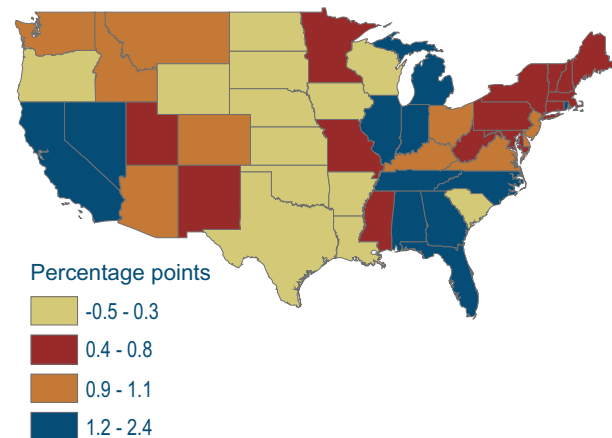
by Kyle Fee and Tim Dunne

Since the start of the credit crisis, labor markets in the 50 states have generally weakened. As the national unemployment rate rose from 4.7 percent to 5.5 percent from September 2007 to June 2008, the vast majority of U.S. states also saw rising unemployment rates. Rhode Island led the country with an increase of 2.4 percentage points, followed by Tennessee and Illinois, each with 1.5. Regions of the country that saw the largest percentage point increases were in the Midwest and Southeast. In the West, California and Nevada—states relatively hard-hit by the housing slump—also saw relatively sharp increases in unemployment rates.

Underlying these changes in state unemployment rates is both an expansion in the number of people unemployed as well as a contraction in the number of people employed. According to household survey data, U.S. employment declined 0.26 percent between September 2007 and June 2008, with 28 states experiencing a decline in the number of people employed. Within the Fourth District, Pennsylvania was the only state adding employment over the period.

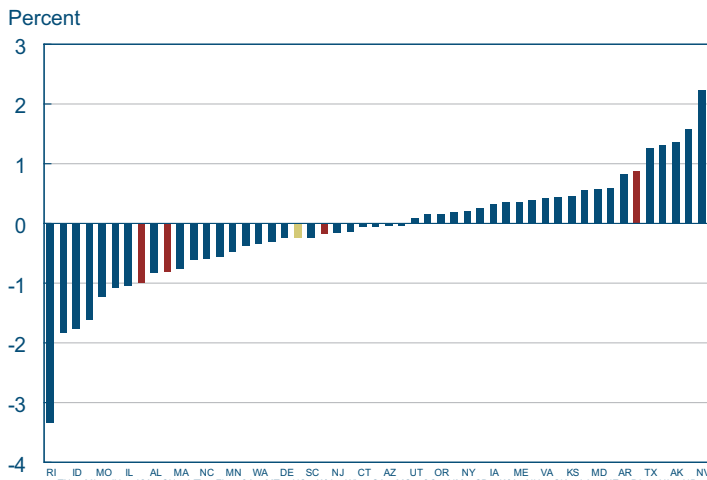
While employment growth was mixed across the 50 states, there has been a substantial rise in the

## Change in the Unemployment Rate, September 2007 to June 2008

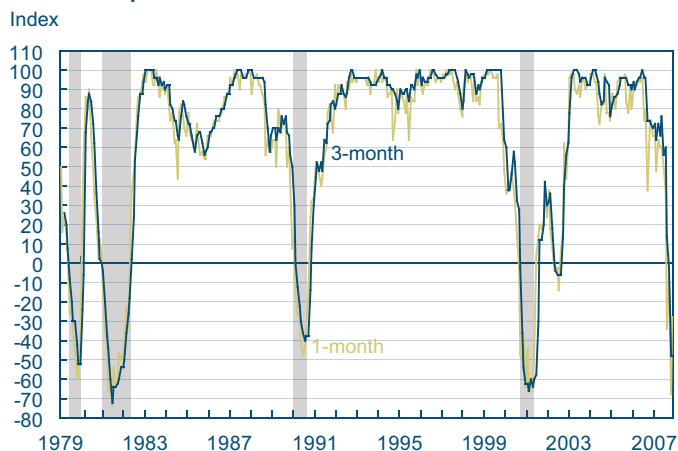


Source: Bureau of Labor Statistics.

## Growth in the Number of People Employed, September 2007 to June 2008



## Philadelphia Fed Diffusion Index for the 50 States



Note: Shaded bars represent recessions.  
Source: Federal Reserve Bank of Philadelphia.

range of  $-40$  to  $-70$ . The one-month index turned negative in March, and the three-month index turned negative in April. The June 2008 readings of the one- and three-month diffusion indexes are  $-28$  and  $-48$ , respectively. Given that these indexes are based primarily on labor market data, they show that labor market weakness spread across states, especially during the second quarter of 2008.

## Banking and Financial Markets

### Fourth District Bank Holding Company Conditions

07.30.08

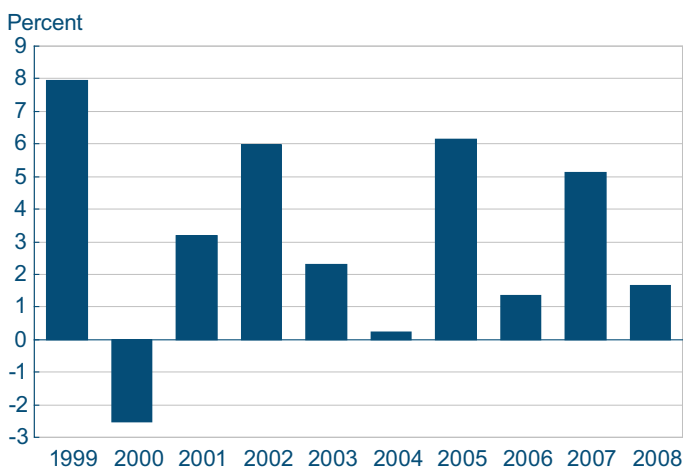
by Joseph G. Haubrich and Saeed Zaman

A BHC is an organization that consists of a parent company and one or more commercial bank subsidiaries. Other depository institutions and nonbank subsidiaries may also be included. As of the first quarter of 2008, there are 21 bank holding companies (BHCs) headquartered in the Fourth District whose consolidated assets total more than \$1 billion, including five of the top fifty BHCs in the United States.

As a consequence of the ongoing consolidation in the banking system, the number of BHCs in the Fourth District with assets over \$1 billion fell from 24 to 21 from 1999 to 2008, but their total assets have increased every year with one exception. That was in 2000, when Charter One Financial was acquired by a BHC headquartered in another Federal Reserve District (Citizens Financial Group in the First District).

The largest five BHCs in the Fourth District rank in the top 50 of the largest banking organizations in the nation. Fourth District BHCs of all asset sizes account for roughly 4.5 percent of BHC assets nationwide, and BHCs with over \$1 billion in assets make up the majority of the assets held by Fourth District BHCs.

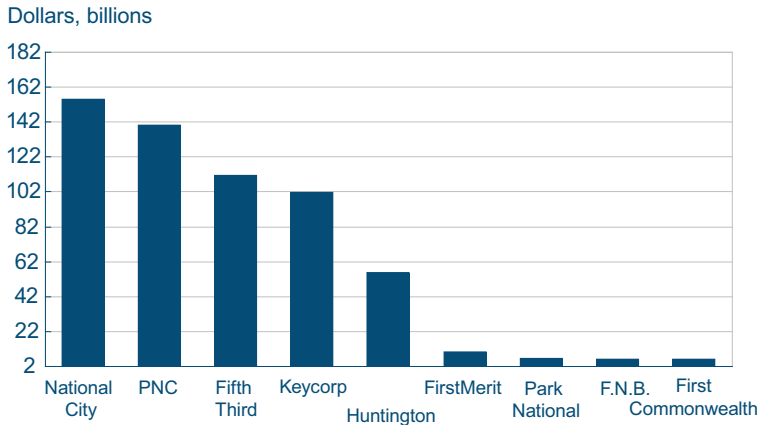
## Annual Asset Growth



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

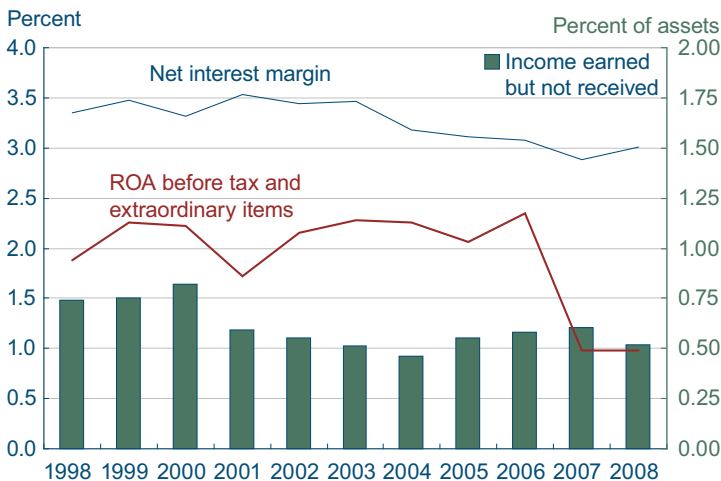


## Largest Fourth District Bank Holding Companies by Asset Size



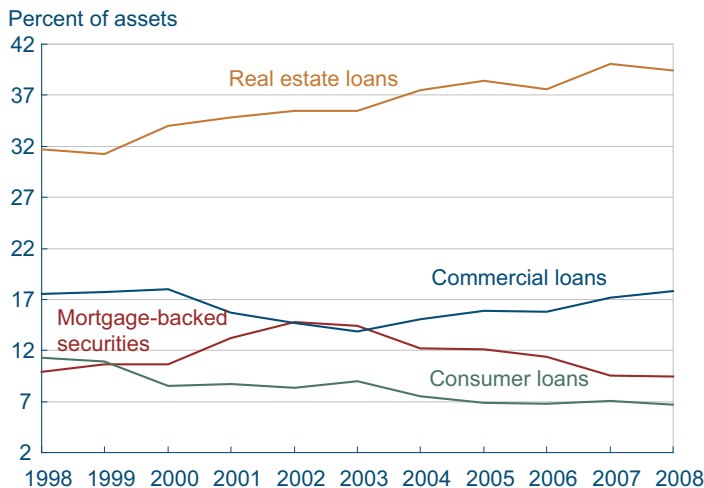
Note: Rank is as of first quarter 2008.  
 Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

## Income Stream



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

## Balance Sheet Composition



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

The income stream of BHCs in the Fourth District stabilized somewhat in first quarter of 2008. The return on assets (which is measured by income before tax and extraordinary items because a bank's extraordinary items can distort the true earnings picture) remained flat after having declined to its lowest level in the fourth quarter of 2007. The net interest margin (interest income minus interest expense divided by earning assets) increased slightly to 3.0 percent.

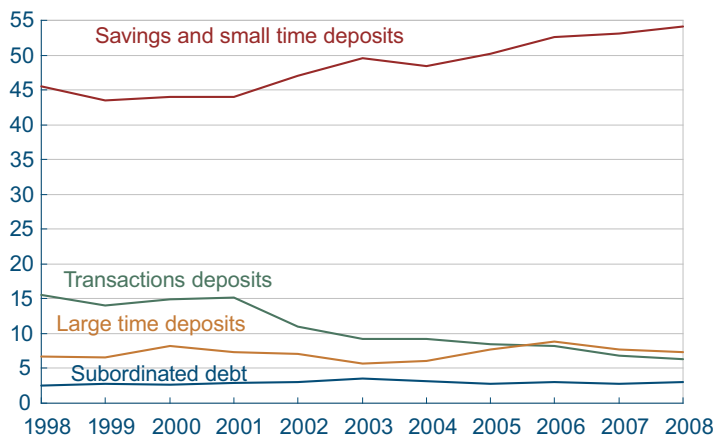
Another indicator used to measure strength of earnings is income earned but not received, which has been low for some time for BHCs in the District. If a loan allows the borrower to pay an amount that does not cover the interest accrued on the loan, the uncollected interest is booked as income even though there is no cash inflow. The assumption is that the unpaid interest will eventually be paid before the loan matures. However, if an economic slowdown forces an unusually large number of borrowers to default on their loans, the bank's capital may be impaired unexpectedly. Despite a slight rise over the past three years, income earned but not received fell slightly from 2007 to the first quarter of 2008, reaching 0.52 percent, which is well below the recent high of 0.82 percent set at the end of 2000.

Fourth District BHCs are heavily engaged in real-estate-related lending. As of the first quarter of 2008, about 40 percent of their assets are in loans secured by real estate. Including mortgage-backed securities, the share of real-estate-related assets on the balance sheet is 49 percent.

Deposits continue to be the most important source of funds for Fourth District BHCs. Savings and small time deposits (time deposits in accounts less than \$100,000) made up 54 percent of their liabilities in the first quarter of 2008. Core deposits—the sum of transaction, savings, and small time deposits—made up more than 60 percent of their liabilities, the highest level since 1998. Finally, total deposits made up about 70 percent of funds. Despite the requirement that large banking organizations must have a rated debt issue outstanding at all times, subordinated debt represents only 3.0 percent of funding.

## Liabilities

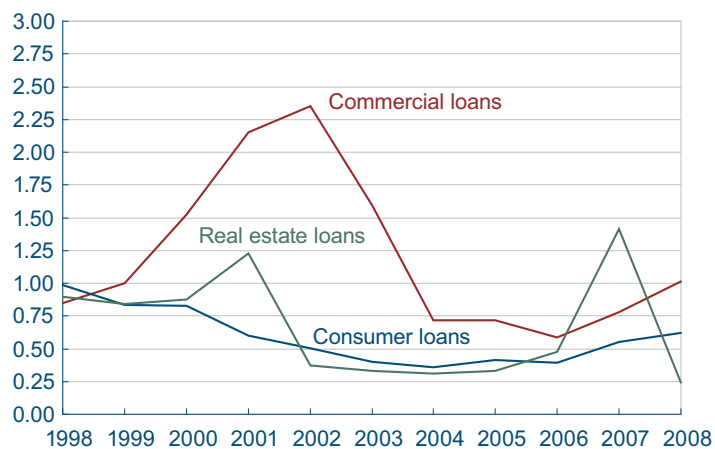
Percent of liabilities



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

## Problem Loans

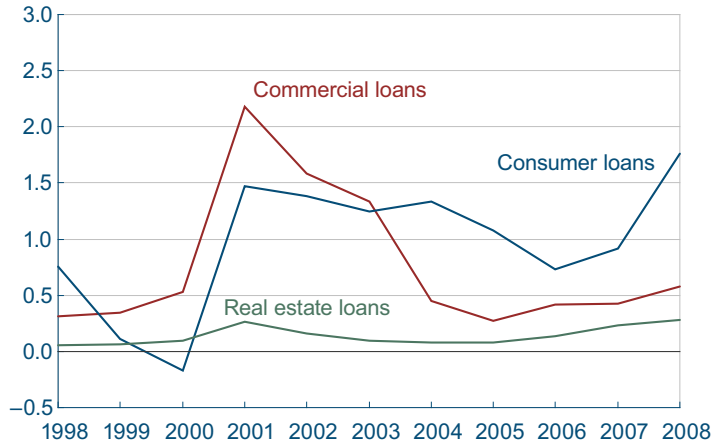
Percent of loans



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

## Net Charge-Offs

Percent of loans



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

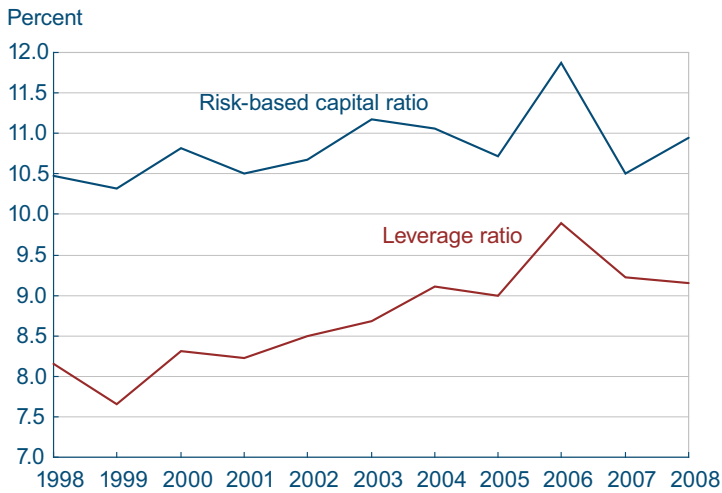
Problem loans are loans that are more than 90 days past due but are still receiving interest payments, as well as loans that are no longer accruing interest. Problem commercial loans rose sharply for Fourth District BHCs starting in 1999, peaked in 2002, and settled below 0.75 percent of assets in 2004. As of the first quarter of 2008, 1.01 percent of all their commercial loans were problem loans. Problem real estate loans, which peaked in 2007, decreased to 0.24 percent. Problem consumer loans (credit cards, installment loans, etc.) edged up slightly to 0.62 percent.

Net charge-offs are loans removed from the balance sheet because they are deemed unrecoverable, minus the loans that were deemed unrecoverable in the past but are recovered in the current year. As of the first quarter of 2008, net charge-offs for the BHCs' consumer loans increased significantly, for real-estate loans they increased slightly, and for commercial loans they remained flat. Net charge-offs were limited to 1.76 percent of outstanding consumer loans during the quarter, 0.57 percent of outstanding commercial loans, and 0.28 percent of outstanding real estate loans.

Capital is a bank's cushion against unexpected losses. The risk-based capital ratio (a ratio determined by assigning a larger capital charge on riskier assets) jumped to 11 percent for the Fourth District BHCs in the first quarter of 2008 from 10.5 percent at the end of 2007. The higher the capital ratio, the more protected is the bank. The leverage ratio (balance sheet capital over total assets) fell slightly, to 9.1 percent.

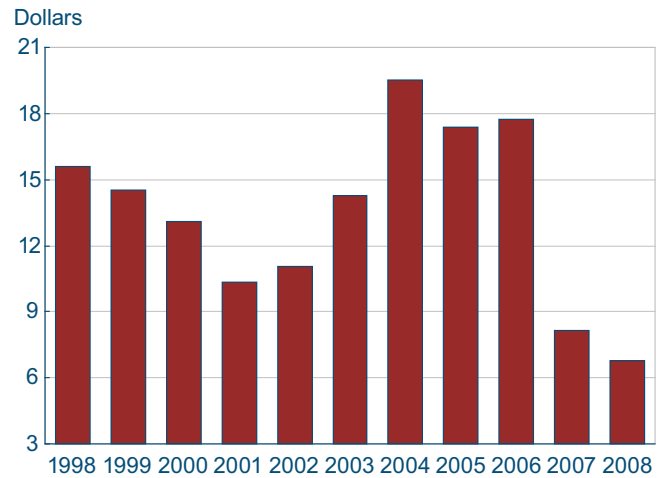
An alternative measure of balance sheet strength is the coverage ratio. The coverage ratio measures the size of the bank's capital and loan-loss reserves relative to its problem assets. This ratio has been falling since 2006, and as of the first quarter of 2008, Fourth District BHCs have \$6.80 in capital and reserves for each \$1 of problem assets.

## Capitalization



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

## Coverage Ratio



Note: The coverage ratio is the ratio of capital and loan-loss reserves to problem assets.

Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, first quarter 2008.

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