

# Economic Trends

October 2007

(Covering September 19, 2006–October 14, 2007)

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## Living in a World of Contingency...

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08.20.07

by Mark S. Sniderman

“I can see ... only one safe rule for the historian: that he should recognize in the development of human destinies the play of the contingent and the unforeseen.”

—H.A.L. (Herbert Albert Laurens) Fisher (1865–1940),  
British historian and politician, preface to *History of Europe*, 1935

We are well into what is now being called The Financial Turmoil of 2007, still without fully understanding how broad and deep the turmoil will be and without a clue to how it will end. We wish it would fade, as Wordsworth said, “...into the light of common day.” But wishing won’t make it so. We all need to accept the situation for what it is—one of many contingencies. We can estimate, but we don’t really know.

What don’t we know?

- No one knows how many of the mortgage loans now in foreclosure will result in losses for investors, how large the losses will be, which investors will bear them, and what consequences the losses will have.
- No one knows how many of the loans now in default will become tomorrow’s foreclosures.
- No one knows how many of today’s performing loans will become tomorrow’s defaulted loans.
- No one knows how much loan modification will take place, thereby forestalling loan defaults but also (possibly) aggravating investors’ losses.
- No one knows how the opacity of today’s structured financial products will affect investors’ appetites for these kinds of products in the future.
- No one knows how long it will take for borrowers’ and investors’ confidence in financial institutions and products to be restored or how much capital will have to be raised for the restoration process.
- No one knows what spillovers from housing to the broader economy, if any, will occur as our economic, legal, and financial systems grope for a new equilibrium.
- And no one knows how the cumulative effect of all these contingencies will feed back into the system that determines mortgage loan holders’ ability and willingness to pay their obligations in the future.

Here is an image that sums it up pretty well: In describing the time when quantum physics replaced classical Newtonian physics, the physicist Heinz Pagels said, “The world changed from having the determinism of a clock to having the contingency of a pinball machine.” (The Cosmic Code, 1982)

Policymakers clearly recognize that they are living in a far more uncertain world than they are used to; certainly the press statements and speeches of Federal Reserve officials have underscored this point. Heightened uncertainty does not mean, of course, that what can go wrong, will. In fact, it is probably human nature, in stressful times, to overestimate the likelihood of worsening outcomes, just as it is our habit to overestimate the likelihood of continued good outcomes in boom times.

In times such as these, it is natural for everyone affected by the financial turmoil to second-guess their own thoughts and decisions because the systems we are dealing with are so complex. What to do? As the British biologist Thomas Henry Huxley put it, “Patience and tenacity of purpose are worth more than twice their weight of cleverness.”

# August Price Statistics

09.27.07

by Michael F. Bryan and Brent Meyer

## August Price Statistics

	Percent change, last					2006 avg.
	1mo. <sup>a</sup>	3mo. <sup>a</sup>	6mo. <sup>a</sup>	12mo.	5yr. <sup>a</sup>	
<b>Consumer Price Index</b>						
All items	-1.7	0.7	3.8	2.0	2.8	2.6
Less food and energy	1.8	2.5	2.0	2.1	2.0	2.6
Median <sup>b</sup>	2.3	2.3	2.5	2.7	2.5	3.1
16% trimmed mean <sup>b</sup>	1.3	1.8	2.2	2.3	2.3	2.7
<b>Producer Price Index</b>						
Finished goods	-15.3	-4.0	3.4	2.2	3.6	1.6
Less food and energy	2.3	2.5	1.6	2.2	1.6	2.1

a. Annualized.

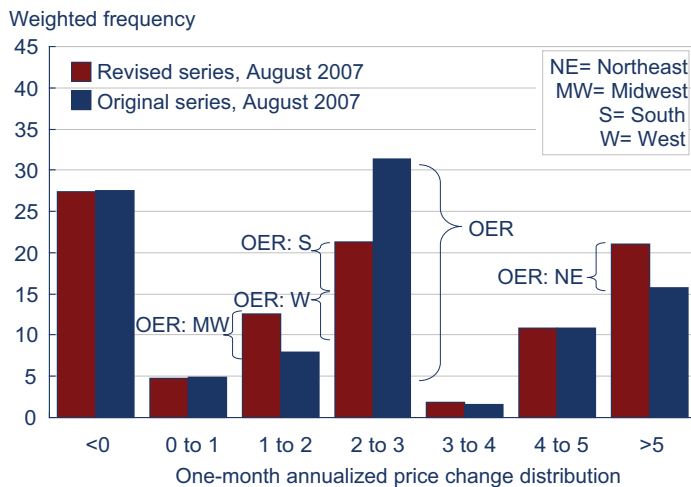
b. Calculated by the Federal Reserve Bank of Cleveland.

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

The Consumer Price Index (CPI) fell at a 1.7 percent annualized rate in August, decreasing for the first time since October 2006. A 32.3 percent (annualized) drop in energy prices accounted for most of the decrease. CPI excluding food and energy prices rose a modest 1.8 percent (annualized), coming down from longer-term trends. Also receding from longer-term trends, the 16 percent trimmed-mean inflation measure rose 1.3 percent (annualized), its smallest increase in nine months. The median CPI rose 2.3 percent (annualized) in August, down considerably from its 2006 average of 3.1 percent. All of the measures point to inflation moderating, at least for the moment.

Long-run inflation trends have also abated recently. The 12-month trend in the core CPI and the 16 percent trimmed-mean CPI have been decreasing since February and now range between 2.1 percent to 2.3 percent. The 12-month trend in the median CPI has fallen from May's recent high of 3.2 percent and now stands at 2.7 percent.

## CPI-Component Price-Change Distributions



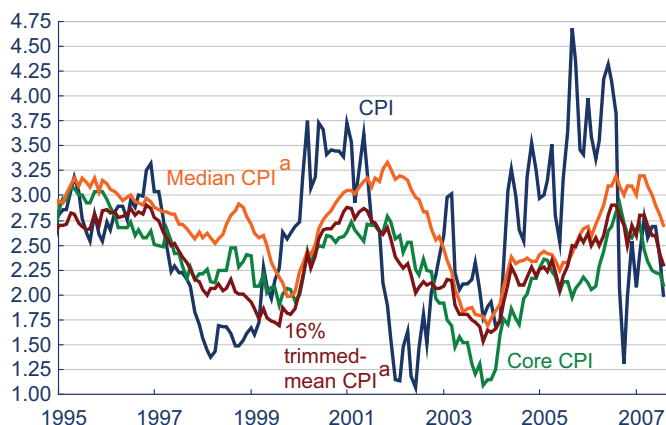
Source: U.S. Department of Labor, Bureau of Labor Statistics.

While energy prices have fallen over the past three months, contributing to an easing in the overall CPI, oil prices have started to creep up recently. On September 21, 2007, the spot price of West Texas Intermediate crude oil was \$83.36 a barrel, jumping nearly \$10 over August's average spot price to a record high in nominal dollars. We are closing in on a real record, however. After adjusting for inflation (in current dollars), \$80 a barrel is only about \$20 shy of the record spot price of \$101.43 set in April 1980. This could feed through to an elevated headline CPI number in the months ahead.

Frequent transitory swings in components such as energy and food lead to volatility in the headline inflation measure. In order to get a clearer picture of the underlying inflation trend, it is useful to trim certain unstable components out of the index. This is why the Federal Reserve Bank of Cleveland produces the median and 16 percent trimmed-

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

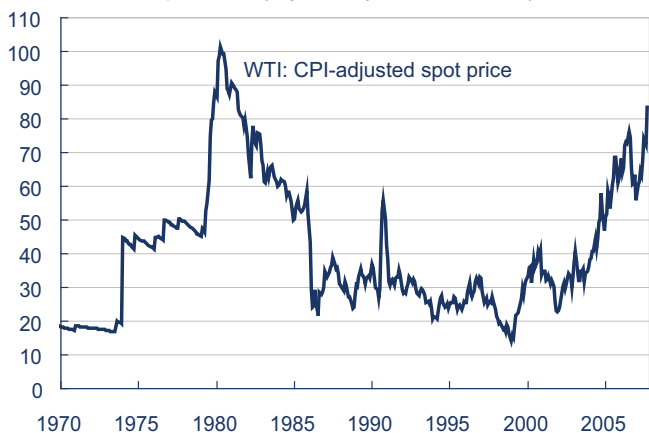
12-month percent change



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

## Real Oil Prices

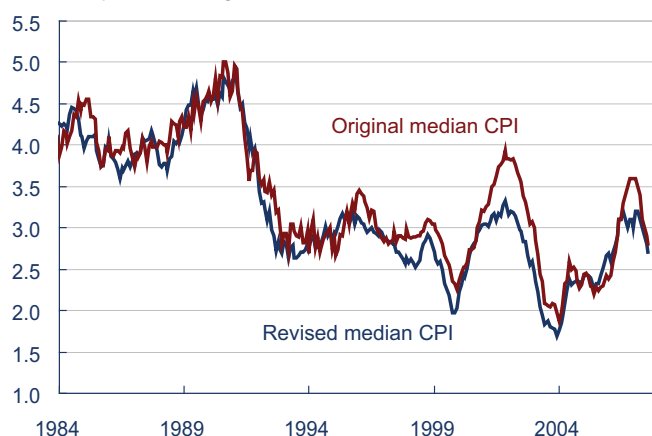
Constant dollars per barrel (adjusted by CPI 8/1/07=100)



Sources: *Wall Street Journal*, Bureau of Labor Statistics.

## Revised and Original Median CPI

12-month percent change



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

mean measures of inflation. However, in the same way that core CPI (which excludes food and energy from the CPI) picks up fleeting movements in other components like medical care, the median CPI was being unduly influenced by Owners' Equivalent Rent (OER). Because of the relative size of OER (it comprises 24 percent of the index, while the next-largest component, food away from home, comprises only 6 percent), and its stability, OER was often the median good. Very recently (September 19, 2007), the way both of these measures are constructed was revised to lessen the influence of OER. The revised measures disaggregate OER into four regional subcomponents (Northeast, Midwest, South, and West). The result is a clearer near-term indicator of inflation trends.

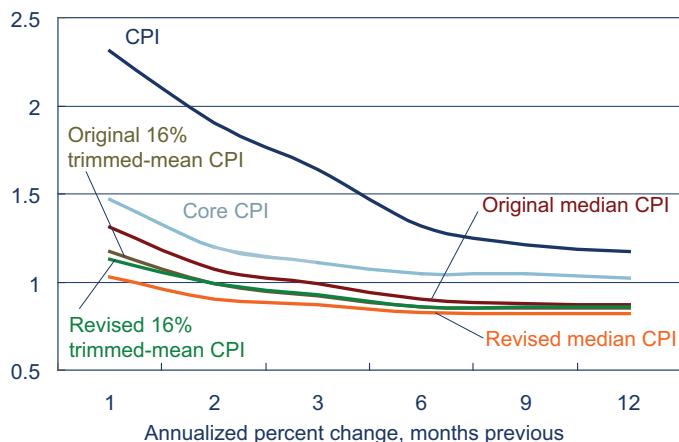
The difference between the revised series (with the regional OER components) and the original series is easily viewed in the context of the component price-change distribution. OER was the median good for the original series in August, and rose 2.8 percent (annualized). The revised series rose 2.3 percent (annualized), and the median component was the regional OER for the West (OER: West).

The differences emerging from the revision can be seen in longer-term trends as well. In January 2002, the 12-month percent change in the original median CPI was 3.8 percent, 0.6 percentage point higher than the revised median CPI's growth of 3.2 percent. A more in-depth look at the changes to the median CPI can be found at Inflation Central.

Another indicator of these estimators' performance is root mean-squared error (RMSE). It is frequently used to measure the difference between an estimator's predicted values and the values actually observed (in this case, the growth in the CPI over the next three years). The estimator with the smallest RMSE is judged to have superior predictive capabilities, and in the case of these CPI-derived measures, that means it is a better measure of future inflation trends. The change in methodology improved the median's RMSE, while the change seems to have improved only slightly the performance of the 16 percent trimmed-mean measure over the one- to three-month range.

# Forecasting Accuracy for CPI Inflation over the Next 36 Months

Root mean-squared error

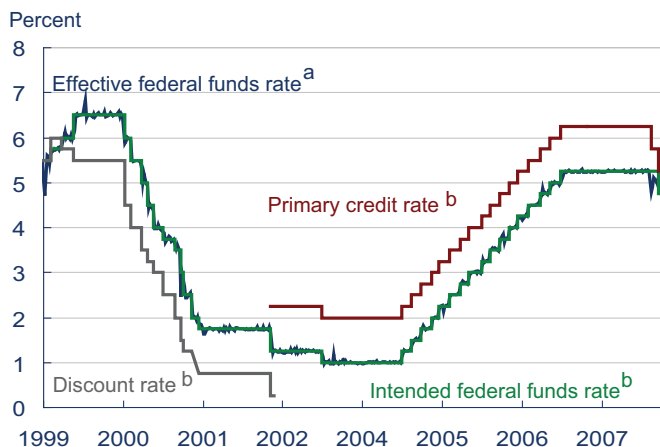


Sources: U.S. Department of Labor, Bureau of Labor Statistics, and Federal Reserve Bank of Cleveland.

## Money, Financial Markets, and Monetary Policy

### Reserve Market Rates and Discount Window Lending

#### 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.

10.11.07

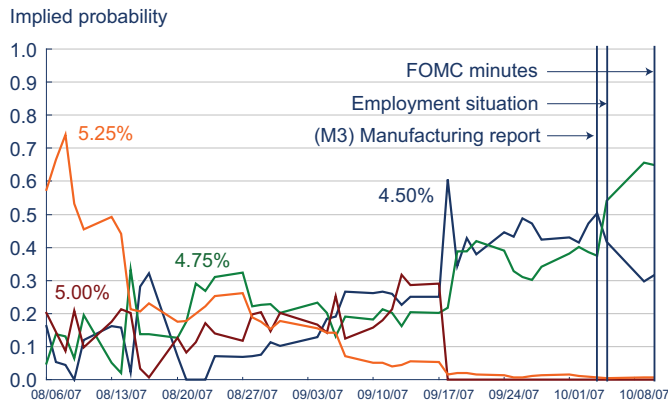
by Bruce Champ and Sarah Wakefield

At its September 18 meeting, the Federal Open Market Committee (FOMC) voted to lower the target federal funds rate 50 basis points to 4.75 percent. This was the first rate reduction since the last round of rate increases ended in June 2006.

Since that meeting, participants in the Chicago Board of Trade's federal funds options market have seen it as ever more probable that the outcome of October's meeting would be to leave the funds rate at 4.75 percent. For instance, on September 19, markets were evenly split between no change and a further 25 basis point reduction at the October meeting, with just less than a 40 percent probability for each possibility. But by the beginning of October, participants actually placed a slightly higher probability on a 25 basis point cut as opposed to no rate change at the October meeting. However, a favorable employment report on October 5 reversed this, tilting the probabilities in favor of no rate change.

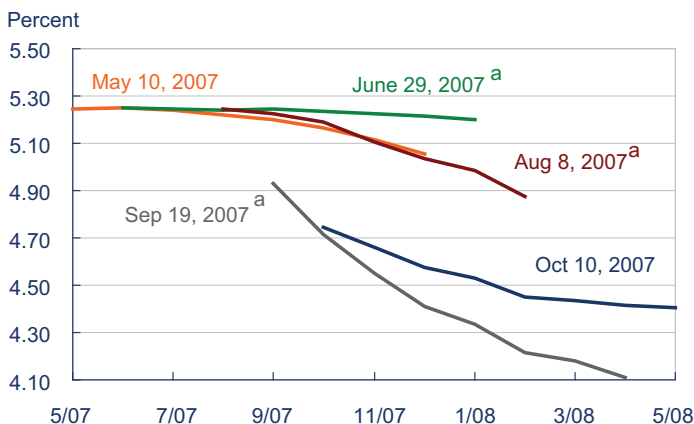
On October 9, the FOMC released the minutes of its September 18 meeting. In the minutes, the committee noted, "The information reviewed at the

## Implied Probabilities of Alternative Target Federal Funds Rates October Meeting Outcome\*



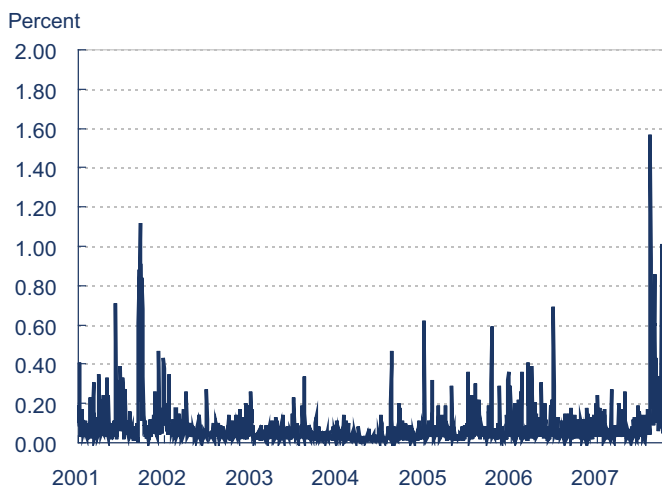
\*Probabilities are calculated using trading-day closing prices from options on November 2007 federal funds futures that trade on the Chicago Board of Trade. Source: Chicago Board of Trade and Bloomberg Financial Services.

## Implied Yields on Federal Funds Futures



a. One day after FOMC meeting. Sources: Chicago Board of Trade and Bloomberg Financial Services.

## Standard Deviation of the Federal Funds Rate



Source: Federal Reserve Bank of New York.

September meeting suggested that economic activity advanced at a moderate rate early in the third quarter.” The minutes also discussed the “exceptionally weak” housing sector, noting “deteriorating conditions in the subprime mortgage market” and indicating that “the availability of financing to borrowers recently appeared to have been crimped even further.” Meeting participants expressed concern that developments in credit markets could potentially “restrain aggregate demand in coming quarters.” Participants also noted that although there had been some improvement in financial market conditions in the days prior to the September meeting, conditions “were still fragile.” Committee members voted for a 50 basis point cut in the funds rate as the “most prudent course of action” to “forestall some of the adverse effects” of credit market conditions.

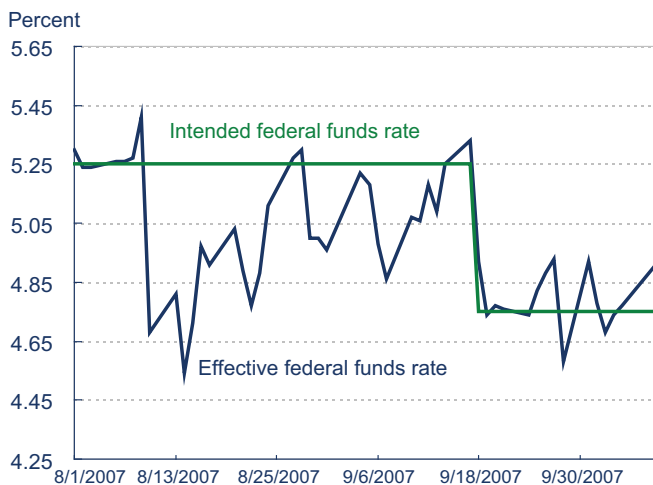
The release of the minutes did have a mild impact on market participants’ views of the future course of monetary policy. The minutes’ release further shifted options market participants’ views toward no change in policy at the October meeting, and participants currently place over a 65 percent probability on no change in policy in October. Meanwhile, the federal funds futures market indicates the possibility of a further rate cut by year’s end.

During August and September, the federal funds rate exhibited marked volatility. This volatility coincided with the general financial market volatility. Whereas the intraday standard deviation for the funds rate has averaged around 8 basis points since 2001, the intraday standard deviation for August and September averaged over 33 basis points and reached a high of 1.57 percent on August 10. For the majority of the operating days during those two months, the effective rate was below the intended rate—up to 71 basis points on some occasions—leading some commentators to proclaim that the committee had effectively cut the funds rate before its September 18 meeting to curtail possible negative effects from increased financial market volatility.

Another way the Federal Reserve attempted to fight financial market volatility in August was through its primary and secondary credit facility. Since January

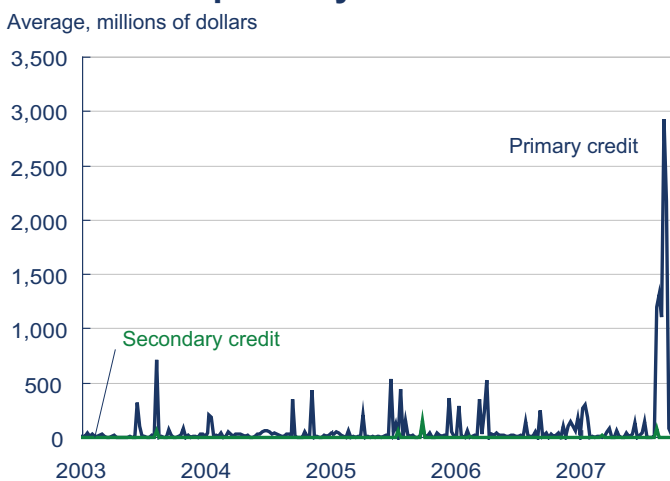


## Reserve Market Rates



Source: Federal Reserve Bank of New York.

## Reserve Bank Credit: Loans to Depository Institutions



Source: Federal Reserve Board.

9, 2003, the Federal Reserve has extended discount window loans to depository institutions through its primary and secondary credit facilities. Primary credit is available to generally sound financial institutions at an interest rate above the federal funds rate. Federal Reserve Banks extend secondary credit in appropriate circumstances to financial institutions that do not qualify for primary credit. For most of the period since its inception, the primary credit rate has been set at 100 basis points above the federal funds rate. The secondary credit rate is set at 50 basis points above the primary credit rate. Under these programs, the volume of discount window lending typically has been small. Primary credit outstanding has averaged \$82 million, with outstanding secondary credit averaging \$2 million.

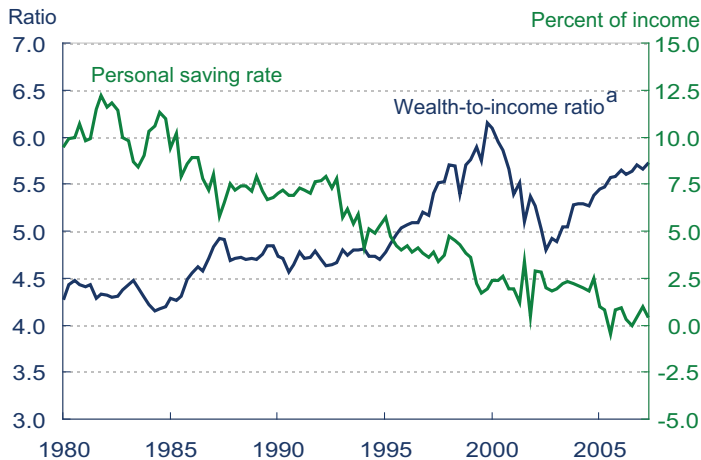
Shortly after the August FOMC meeting, concern developed in financial markets about potential liquidity problems and counterparty credit risk. On August 10, the Fed stated it was “providing liquidity to facilitate the orderly functioning of financial markets.” On that day, the Trading Desk of the New York Fed conducted temporary open market purchases of \$38 billion. On August 17, 2007, amidst signs of increased turmoil in financial markets, the Federal Reserve Board lowered the primary credit rate to 5.75 percent —50 basis points above the funds rate—and provided for 30-day term lending through the discount window. The use of primary credit subsequently surged. From mid-August to mid-September, primary credit outstanding averaged over \$1.7 billion. It has subsequently settled down to near-normal levels.

# Household Financial Conditions

09.27.07

by Bruce Champ and Sarah Wakefield

## Household Financial Position

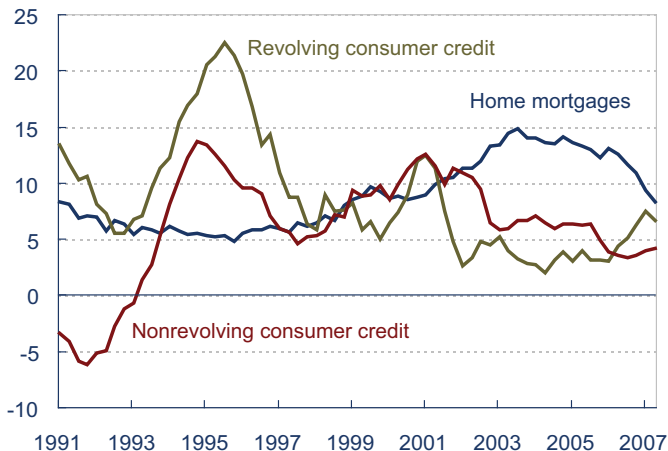


a. Wealth is defined as household net worth; income is defined as personal disposable income.

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

## Outstanding Debt

Four-quarter percent change



Sources: Board of Governors of the Federal Reserve System.

During the summer of 2007, the Bureau of Economic Analysis revised data in the National Income and Product Accounts going back to the beginning of 2004. The revisions caused increases in the personal saving rate over the period. Pre-revision estimates of the personal saving rate were negative from mid-2005 through the first quarter of 2007. The Bureau's revisions pushed the saving rate to small positive values over most of the revision period. For example, in the first quarter of 2007, the saving rate increased from -1.0 percent to a revised value of 1.0 percent. Despite these upward revisions, the saving rate remains at historically low values. Windfalls from increasing home and stock prices have increased household wealth, thus enabling households to spend more of their disposable income. Although there has been a dramatic slowdown in the appreciation of home prices, rising equity prices contributed to modest increases in the wealth-to-income ratio during the second quarter of 2007.

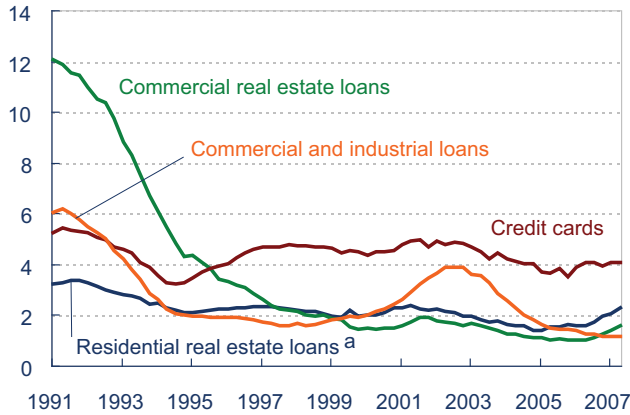
Growth in outstanding home mortgage debt continued to slow modestly in the second quarter of 2007, reflecting a slowdown in home sales and housing prices. At its peak, home mortgage debt grew at a 15 percent annual clip. The huge run-up in housing prices, along with the refinancing of existing mortgages, fueled this growth.

Revolving consumer credit growth moderated in the second quarter of 2007, which resulted in a decline in the growth of total consumer credit. Much of this moderation in the quarterly data came from a substantial decline in consumer credit growth in April. However, consumer credit rebounded in May and June. July figures indicate revolving credit rose at a 6.8 percent annual rate, while nonrevolving consumer credit increased only 2 percent, primarily due to weak vehicle sales. It is important to note that any restriction of credit due to fallout from the recent turmoil in financial markets is not reflected in the latest data.



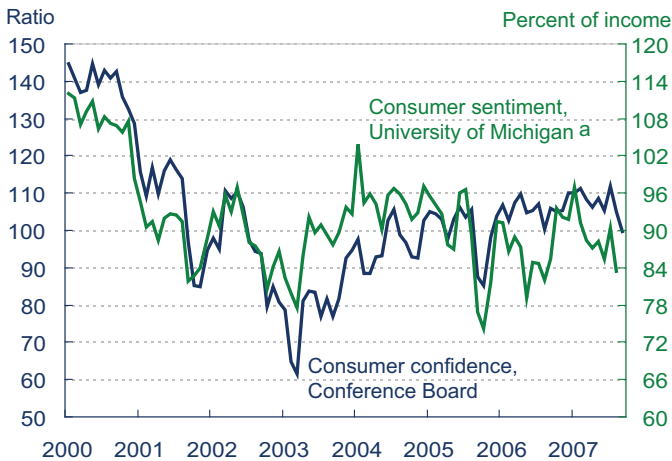
## Delinquency Rates

Percent of average loan balances



a. Delinquency rates are based on loans that are 30 days past due.  
Sources: Board of Governors of the Federal Reserve System.

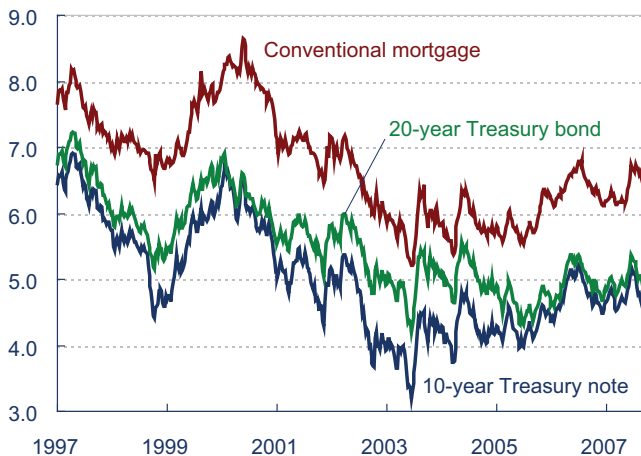
## Consumer Attitudes



a. Data are not seasonally adjusted.  
Sources: University of Michigan and the Conference Board.

## Long-Term Interest Rates

Percent, weekly average



Source: Federal Reserve Board, "Selected Interest Rates," Federal Reserve Statistical Releases, H.15.

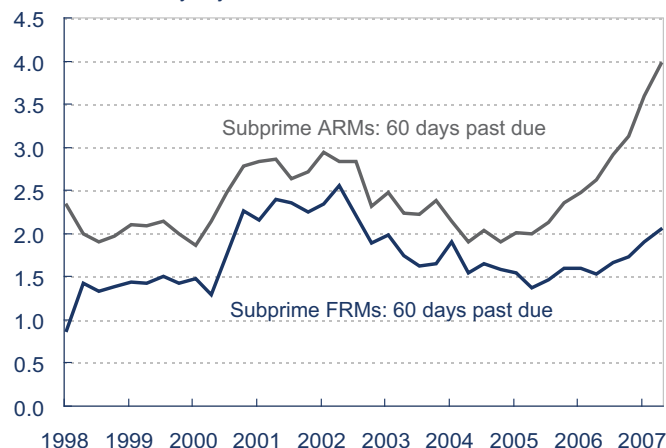
Thirty-day delinquency rates for credit card loans showed only a slight uptick in the second quarter of 2007. More significant in the second quarter was a rise in delinquency rates on residential real estate loans to 2.28 percent. As has been well publicized, the problem of high delinquency rates within mortgage markets is most acute in the subprime market, with 3.2 percent of conventional subprime mortgages 60 days past due in the second quarter. Delinquencies in conventional prime mortgages also experienced a small increase. Households with adjustable rate mortgages have been hardest hit. Higher mortgage payments due to rising or resetting rates have caused substantial increases in delinquency rates for these types of loans. Delinquency rates for subprime adjustable rate mortgages have nearly doubled since 2005.

Perhaps reflecting the weakening housing market, the Conference Board's Index of Consumer Confidence fell substantially for the second consecutive month in September. This places the index at its lowest level since November 2005. After reaching a post-9/11 high in July, the latest numbers suggest a marked deterioration in consumer confidence in the last two months. The present situation component of the index was responsible for most of the decline, although the expectations component also experienced a modest decrease. Negative household perceptions of conditions in the labor market accounted for much of the decline. Households also indicated sharp downward revisions in their plans to buy homes and autos.

In contrast, the University of Michigan Consumer Sentiment Index's preliminary September value held fairly steady, increasing less than a point. The index's present situation component fell slightly, countered by a small increase in the expectations component.

## Mortgage Delinquencies: ARM vs. FRM

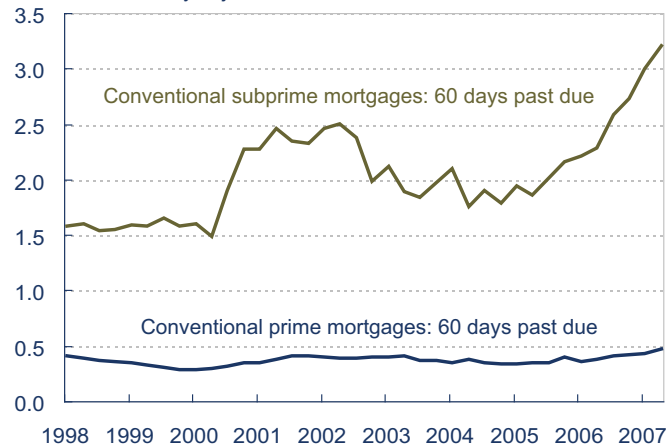
Percent, seasonally adjusted



Source: Mortgage Bankers Association.

## Mortgage Delinquencies: Subprime and Prime

Percent, seasonally adjusted



Source: Mortgage Bankers Association.

## Money, Financial Markets, and Monetary Policy

### What Is the Yield Curve Telling Us?

#### Yield Spread and Real GDP Growth\*

Percent



\*Shaded bars indicate recessions.

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

09.19.07

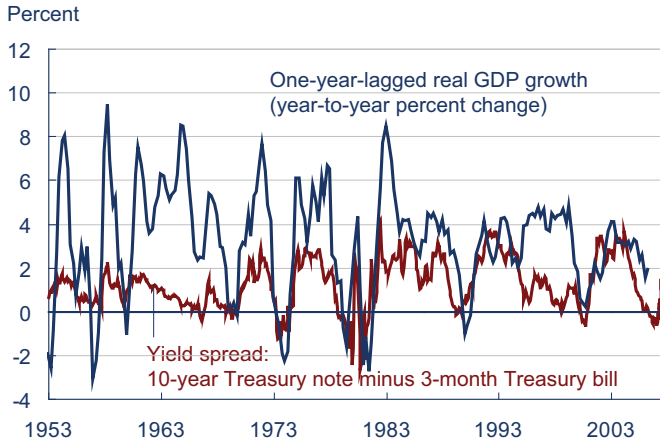
by Joseph G. Haubrich and Katie Corcoran

Since last month, turmoil in the financial market has shifted the yield curve downward, with short rates falling by more than long rates. The yield curve has returned to its normal upward slope after its brief dip into inversion last month.

Market watchers attend to the slope of the yield curve because it 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 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.

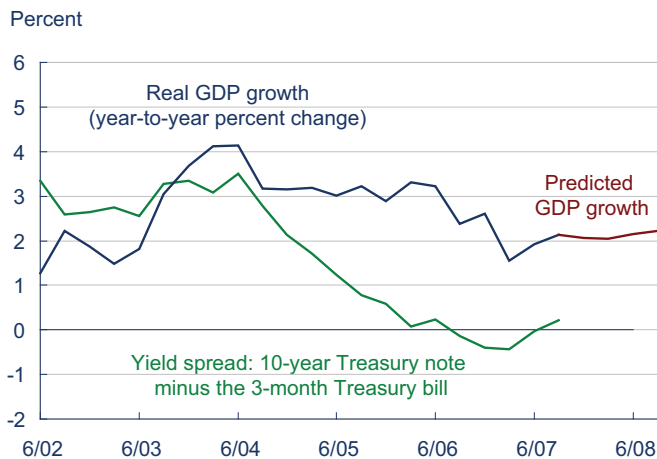
The yield curve had been giving a rather pessimistic view of economic growth for a while now, but

## Yield Spread and Lagged Real GDP Growth



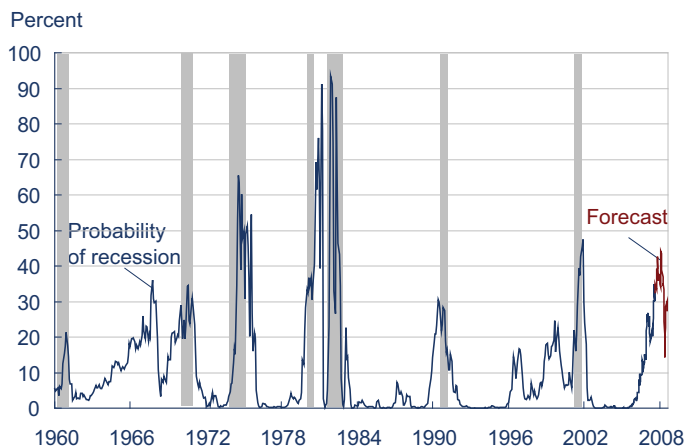
Sources: U.S. Department of Commerce, Bureau of Economic Analysis; and Board of Governors of the Federal Reserve System.

## Predicted GDP Growth and the Yield Spread



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

## Probability of Recession Based on the Yield Spread\*



\*Estimated using probit model. Shaded bars indicate recessions.  
Sources: U.S. Department of Commerce, Bureau of Economic Analysis; Board of Governors of the Federal Reserve System; and authors' calculations.

with a nearly flat curve, this is less pronounced. The spread turned positive, with the 10-year rate at 4.42 percent and the 3-month rate at 4.04 percent (both for the week ending September 14). Standing at 38 basis points, the spread is up from August's -4 basis points and July's 14 basis points but still below June's 54 basis point spread. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.2 percent rate over the next year. This prediction is on the low side of other forecasts, in part because the quarterly average spread used here some earlier inversions.

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 a recession in the next year is 17 percent, down from August's 28 percent and July's 24 percent.

Perhaps these observations seems strange in the midst of recent financial concerns, but two developments explain the current shape of the yield curve and its implications. First, the financial concerns have caused a flight to quality, which works to lower Treasury yields. Second, the Federal Reserve has reduced both the federal funds target rate and the discount rate, and these lower rates tend to steepen the yield curve.

The 17 percent probability of a recession in the next year is below the 26.2 percent calculated by James Hamilton over at Econbrowser. (Note that Econbrowser is calculating a different event. Our number gives a probability that the economy will be in recession over the next year; Econbrowser looks at the probability that the first quarter of 2007 was in a recession.)

Of course, it might not be advisable to take these numbers quite so literally, for two reasons. First, probabilities are themselves 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?”

## International Markets

### Head'n South

10.05.07

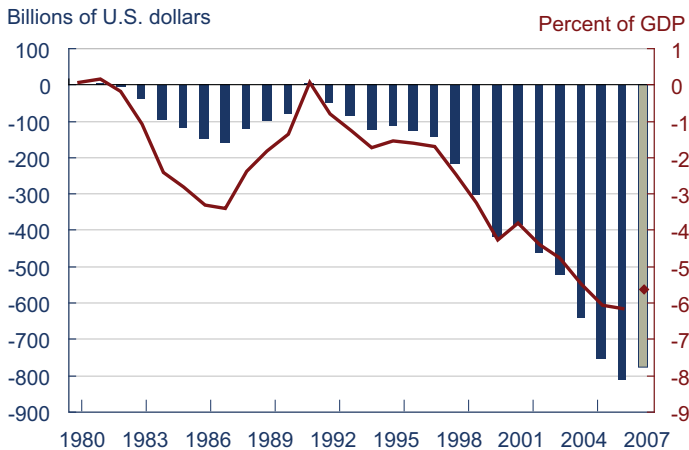
By Owen F. Humpage and Michael Shenk

Dollar exchange rates have recently reached some eye-bulging levels: parity with the Canadian dollar, a record against the euro, and a rate not seen in 25 years against the British pound. Two fundamental developments seem to be pressing on the dollar: One is a large current-account deficit and the other, recent changes in monetary policy.

The dollar has been depreciating in an orderly fashion since February 2002. Many economists viewed this depreciation as a natural market adjustment to persistent and growing U.S. current-account deficits. The United States has maintained a current-account deficit in all but one year since 1982. During the first half of this year, our current-account deficit was running at a \$776 billion annual rate, equal to nearly 5.7 percent of our GDP. This ratio has narrowed slightly from 6.2 percent in 2006.

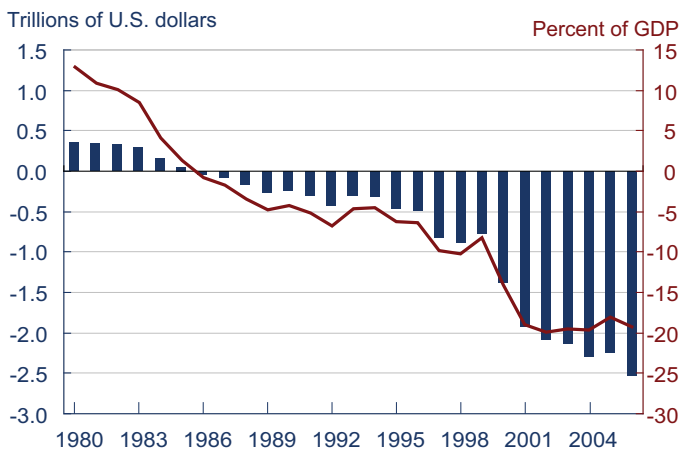
The United States pays for its current-account deficits by issuing financial claims—corporate bonds and stocks, Treasury securities, bank accounts, etc.—to the rest of the world. Essentially, these instruments are promises to pay for our existing surfeit of imports out of our future output. Beginning in 1986, foreign claims on the United States began to exceed U.S. claims on the rest of the world. At the end of last year, the net outstanding stock of foreign financial claims on the United States—our negative net international investment position—

### Current Account Deficit\*



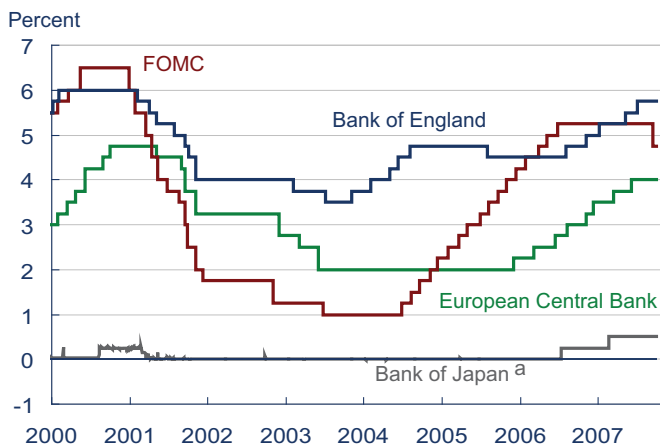
\*2007 data points are annualized data through 2007:Q2.  
Sources: Bureau of Economic Analysis; and Haver Analytics.

## Net International Investment Position



Sources: Bureau of Economic Analysis; and Haver Analytics.

## Key Overnight Rates



a: Daily data until 3/9/2006.

Sources: The Bank of England; the Bank of Japan; The European Central Bank; Board of Governors of the Federal Reserve System, "Selected Interest Rates," *Federal Reserve Statistical Releases*, H.15; and Bloomberg Financial Information Services.

amounted to \$2.5 trillion dollars, or 19.2 percent of our GDP.

Because our negative net international investment position represents foreign claims on our future output, economists often express it as a ratio to GDP and interpret this ratio as a gauge of the economic burden of these claims. The stock of foreign claims on the United States has been growing over the years from 6.3 percent of GDP in 1996 to 19.2 percent of GDP last year. If recent projections of our current-account deficit prove accurate, our negative net international investment position could easily remain around 20 percent of GDP this year and next. This is a hefty percentage, but it is not unprecedented among large industrialized countries.

To be sure, net foreign claims cannot rise indefinitely relative to our GDP. At some point, international investors will become reluctant to add U.S. financial claims to their portfolios without some inducement for the growing risk of doing so. Such a risk premium could come about either through higher interest rates on dollar-denominated claims or through a depreciation of the dollar, which would lower the foreign-currency price of dollar-denominated assets, or from a combination of both of these adjustments. Unfortunately, economists have no way of knowing when this effect might take place or how abruptly the adjustment might occur.

The risk-premium story does not seem to explain dollar movements between early 2002 and mid 2006. Over that time period, the dollar depreciated as the current-account deficit increased, a pattern more consistent with expanding U.S. aggregate demand than with the risk-premium story. Nevertheless, since mid 2006 statistical evidence and anecdotal news reports have suggested that international investors are becoming increasingly reluctant to add dollar-denominated assets to their portfolios. International Monetary Fund data on the currency composition of international reserve holdings, for example, suggest that developing countries are adding more euro-denominated assets to their portfolios than dollar-denominated assets. Foreign investors, however, have not been dumping dollars outright.

Since mid-August, the pace of the dollar's depreciation has accelerated. The market observed the Federal Reserve respond a bit more aggressively than many other central banks to the widening turmoil in financial markets. Although some foreign central banks provided emergency liquidity to financial markets, none of the key central banks—the European Central Bank, the Bank of England, the Bank of Japan, or the Bank of Canada—cut their main policy rates. Prior to the recent market disorder, policy analysts believed that these central banks, notably the European Central Bank, were more likely to raise rates than lower them. While the recent financial turmoil has muddied the near-term outlook for economic activity in many countries, analysts still do not seem to anticipate a loosening of monetary policy abroad. The Federal Reserve, on the other hand, first narrowed the spread between the primary credit rate and the federal funds rate and then lowered the federal funds rate by 50 basis points (from 5.25 percent to 4.75 percent). This was a bigger cut than many observers expected.

The relative shifts in policy seem to have had two effects on dollar exchange rates. First, the yield on short-term U.S. financial instruments declined relative to the yield on short-term European paper, generally making foreign investments relatively more attractive. As investors move out of dollars and into euro-denominated or pound-denominated assets, the dollar exchange rates will fall. By itself, this effect should appear as a fairly discrete adjustment. Second, if the easing of U.S. policy causes individuals to expect a higher rate of inflation in the United States than elsewhere around the globe, the downward pressure on the dollar will be even greater.



# The Employment Situation, September

10.05.07

By Murat Tasci and Michael Shenk

## Labor Market Conditions

	Average monthly change				
	(thousands of employees, NAICS)				
	2004	2005	2006	Jan-Sept. 2007	September 2007
Payroll employment	172	212	189	122	110
Goods-producing	28	32	9	-22	-33
Construction	26	35	11	-8	-14
Heavy and civil engineering	2	4	2	-1	-4
Residential <sup>a</sup>	9	11	-2	-5	-20
Nonresidential <sup>b</sup>	3	4	6	1	10
Manufacturing	0	-7	-7	-16	-18
Durable goods	8	2	0	-12	-10
Nondurable goods	-9	-9	-6	-4	-8
Service-providing	144	180	179	144	143
Retail trade	16	19	-3	8	-5
Financial activities <sup>c</sup>	8	14	16	1	-14
PBS <sup>d</sup>	38	57	42	18	21
Temporary help services	11	18	-1	-10	-20
Education and health services	33	36	41	52	44
Leisure and hospitality	25	23	38	27	35
Government	14	14	20	21	37
Local educational services	8	6	11	6	19
		Average for period (percent)			
Civilian unemployment rate	5.5	5.1	4.6	4.5	4.7

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).

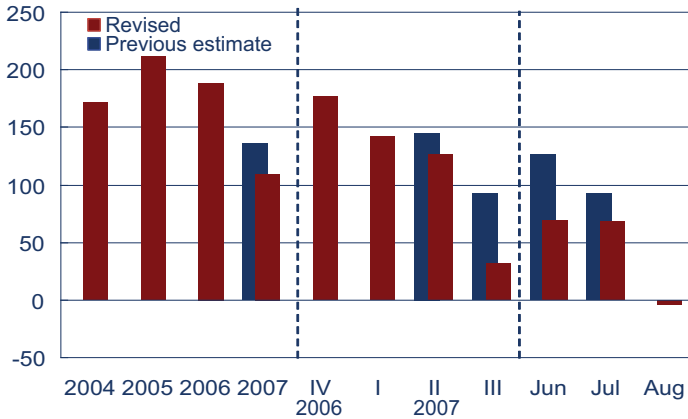
Source: Bureau of Labor Statistics.

Nonfarm payrolls increased by 110,000 net jobs in September, the highest net increase since May 2007. This increase was within expectations. It is still below the average increase of 122,000 jobs per month in 2007. The Bureau of Labor Statistics (BLS) also revised its August payroll numbers significantly, reporting a job gain of 89,000 instead of a 4,000 job loss. The major reason for the difference that local figures for local education services were revised significantly; an increase of 39,000 was the final number, instead of a 31,000 decline as initially reported. We pointed out the erratic behavior of employment in local education services and suggested that it might be the reason behind the anomaly in the initial report last month. September's job gains along with the revision for August imply an average monthly increase in payrolls of 97,300 in the third quarter of 2007—the lowest average monthly increase in a quarter since the third quarter of 2003.

The service-providing sector continued to grow in September, adding 143,000 jobs and offsetting the decline of 33,000 jobs in the goods-producing sector. The construction sector continued to suffer, losing 14,000 jobs. Most of the loss happened in the residential construction sector—about 20,000 jobs. However, nonresidential construction added an unusual 10,000 jobs to payrolls, suggesting a relocation of the construction workforce, from the residential to the nonresidential sector. Education and health services and leisure and hospitality services continued to be a major source of job growth within the service-providing sector; together they added 80,000 jobs. Professional and business services and the government sector contributed another 58,000. Finally, the unemployment rate is virtually unchanged at 4.7 percent, slightly higher than the average in 2006 and in 2007 so far.

## Average Nonfarm Employment Change

Change, thousands of jobs



Source: Bureau of Labor Statistics.

Overall, the payroll employment picture seems to indicate moderate employment growth, improving since the summer months but still below the levels we have experienced in the past 15 quarters.

## Economic Activity and Labor

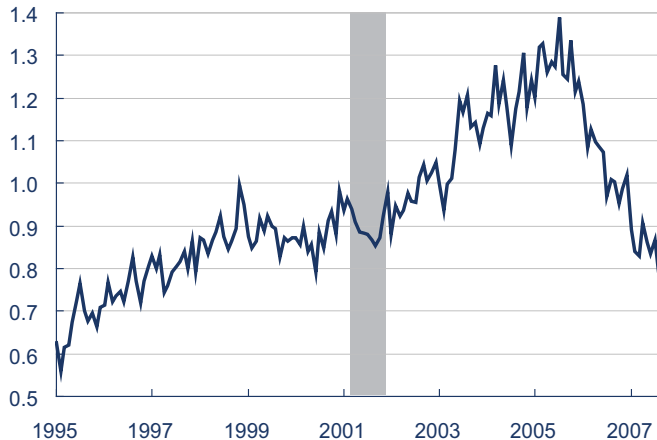
### Who Cares about the Housing Market?

10.03.07

By Michael Shenk

## New Single-Family Home Sales

Millions of units

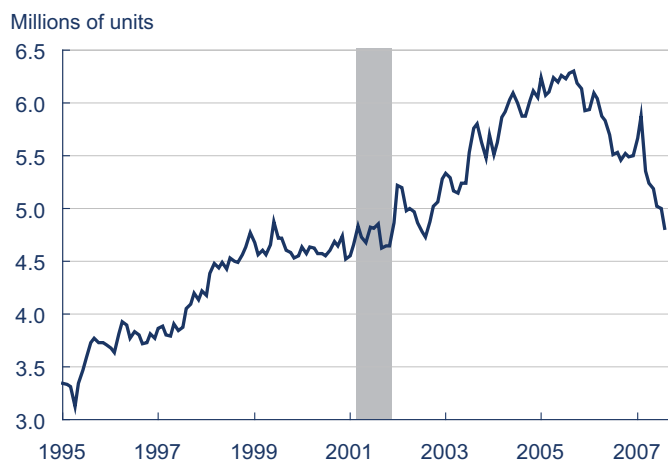


Shaded bar indicates recession.  
Source: Census Bureau.

This month's bounty of housing data was once again overwhelmingly negative. Both the new and the existing homes series have been falling steadily for the better part of two years. However, the economy has chugged along at a fairly decent pace throughout the downturn in the housing market. This might lead some to wonder why we care so much about housing in the first place.

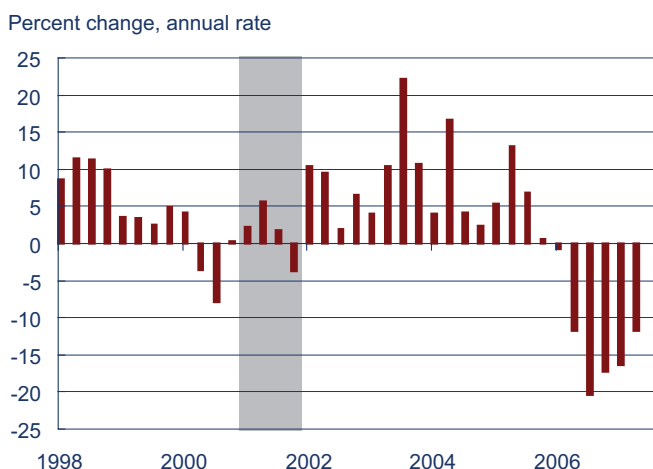
The housing market is important to the economy for a number of reasons. Most directly, sales of new homes, as well as additions and improvements on existing homes, contribute directly to GDP. Spending on these two categories is factored into GDP as residential investment, and it generally accounts for just under 5.0 percent of total GDP. For the past six quarters, spending on residential investment has been falling and has lowered GDP growth on average by 0.8 percentage point. (Sales of existing homes only affect GDP directly through the com-

## Existing Single-Family Home Sales



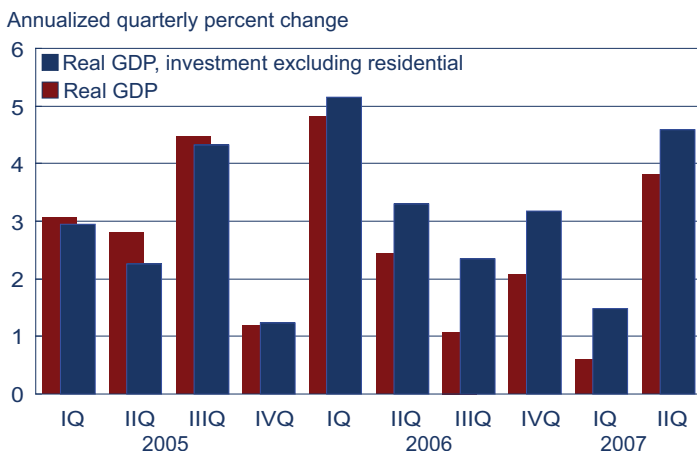
Shaded bar indicates recession.  
Source: National Association of Realtors.

## Real Residential Investment



Shaded bar indicates recession.  
Source: Bureau of Economic Analysis.

## Real GDP Growth: Investment Excluding Residential



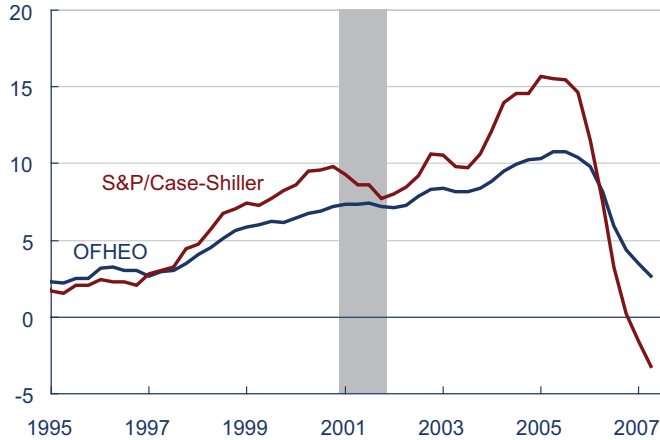
Source: Bureau of Economic Analysis.

missions that Realtors make from their sale.)

The market for existing homes is important to the economy in a more indirect sense. For many Americans, their home is their largest and most valuable asset; on average, homes account for approximately 30 percent of households' total assets. Because homes constitute such a large portion of household wealth, price changes in homes can have a significant wealth effect. When home prices are appreciating rapidly, homeowners are essentially becoming wealthier. If homeowners perceive the increase in wealth to be permanent rather than transitory, they will adjust their consumption upward. While the new-found wealth is not liquid, homeowners can still boost their consumption by borrowing against their homes, often through home equity loans. Likewise, in times of depreciating home prices, may see a decrease in wealth. A negative wealth effect can spill over into a household's consumption pattern, either by forcing people to increase their savings or by decreasing the amount of equity they have to borrow against. Over the past few quarters, consumption has slowed slightly but remains near its recent trend, and many forecasters are expecting a rebound in the coming quarters. The persistence of consumption likely points to a general opinion that slower home-price appreciation is a transitory phenomenon rather than a permanent change in trend. However, the longer the period of slow or negative price appreciation continues, the more likely we are to see negative wealth effects impact consumption decisions.

## Housing Price Indexes

Percent change, year over year

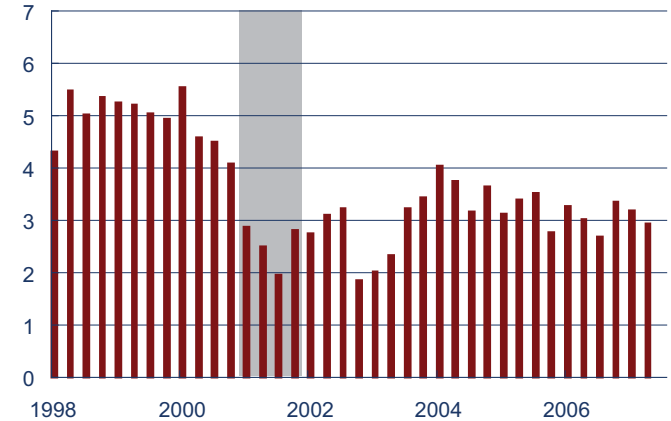


Shaded bar indicates recession.

Sources: OFHEO; and S&P, Fiserv, and MacroMarkets, LLC.

## Real Personal Consumption Expenditures

Percent change, year over year



Shaded bar indicates recession.

Source: Bureau of Economic Analysis.

## Economic Activity and Labor

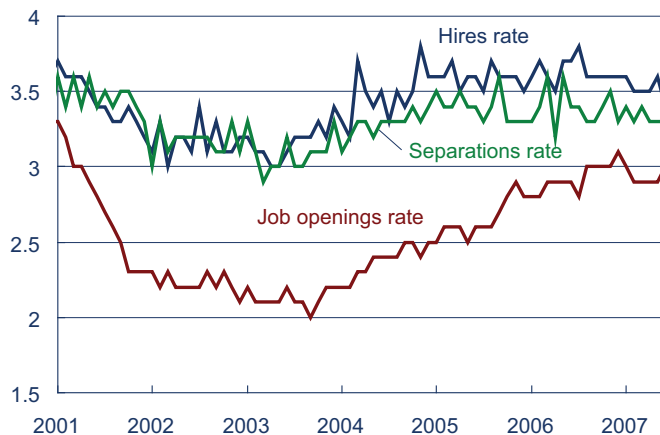
### Labor Turnover

10.03.07

By Murat Tasci and Michael Shenk

### Labor Turnover

Percent

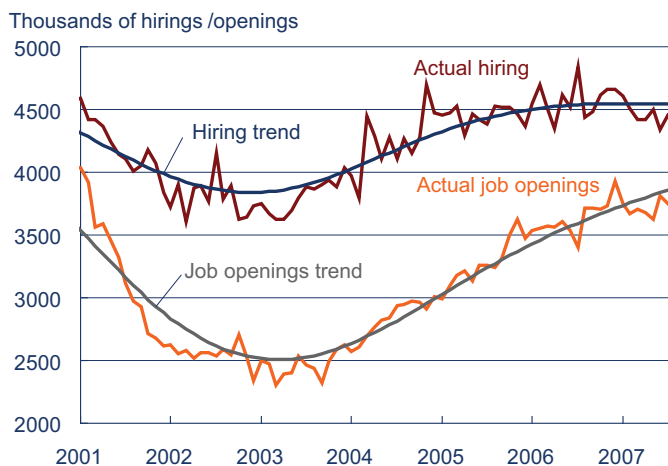


Source: U.S. Department of Labor, Bureau of Labor Statistics.

The hiring and firing behavior of establishments across the nation is tracked by the Bureau of Labor Statistics in its Job Openings and Labor Turnover (JOLTS) data. One important statistic from JOLTS is the net hires rate—the difference between the hires rate and the separations rate. A positive net hires rate indicates that aggregate employment across establishments has increased. This rate has not been negative since June 2003, which means that between June 2003 and July 2007, establishments across the country did not experience a net employment decline in the aggregate. Our earlier note on this topic in January 2007 reported a net employment decline in September 2005, but since then, the BLS has made several revisions to the data. The revised data indicate a strong 0.2 percent net hires rate for the second quarter of 2007 (a hires rate of 3.5 percent minus the separations rate of 3.3 percent). The job openings rate—the number of job openings divided by the sum of job openings and employment expressed in percentages—has also been hovering around 3 percent, one of the highest levels since the last recession.

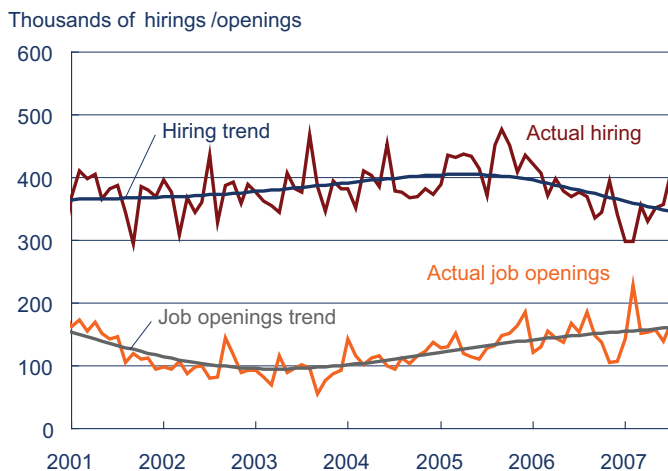
The average hires rate since December 2000 has

## Aggregate Economy



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

## Construction Sector



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

## Average Job Openings and Labor Turnover by Industry

	Since December 2000 (thousands)		
	Job openings	Hires	Total separations
Total private	3075	4209	4105
Mining <sup>a</sup>	9	20	19
Construction	124	381	387
Manufacturing	261	347	402
Trade, transportation, and public utilities	574	975	968
Informationa	91	72	79
Finance, insurance, and real estate <sup>a</sup>	208	188	183
Professional and business services	605	781	713
Education and health services	621	457	402

a. Not seasonally adjusted.

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

been 3.42 percent a month, which implies that more than 4.2 million employees were hired on average each month at the establishment level. At the same time, about 4.1 million jobs a month were lost at the same establishments, due to layoffs, quits, and other forms of separation. So the net result during this period was 104,000 net hires each month on average. Labor demand has also been steady, with more than three million jobs being opened on average each month since December 2000. Most of the net jobs created were in two service industries, professional and business services and education and health services, and these partly offset job losses in manufacturing.

It is often hard to understand the greater picture of labor turnover by looking at monthly levels of hirings, separations, and job openings in isolation of the broader trends. If we look at trends in hiring and job openings, we see that both have been increasing gradually since early 2003, a few quarters after the end of last recession. Even though hiring has leveled off recently, employers' demand for workers, as indicated by job openings, has been still trending upwards.

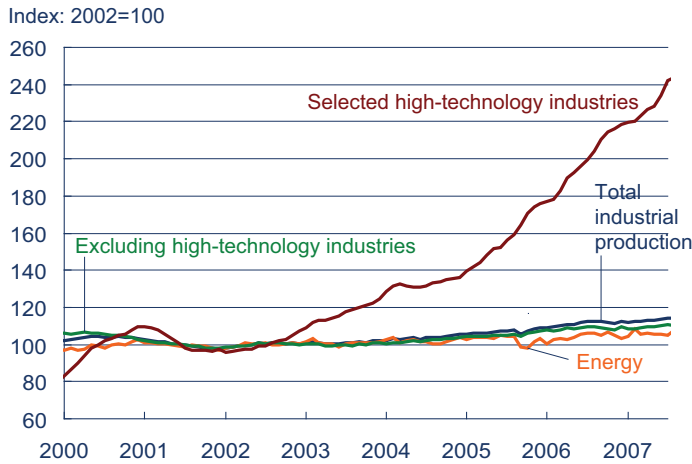
In principle, aggregate trends might disguise differences across sectors. For instance, labor turnover in the aggregate economy looks very different from labor turnover in the construction sector, which is expected to be hardest hit by recent turmoil in the housing market. The construction sector does not seem to have large swings in trend like the aggregate economy. Even though the job openings trend headed downward slightly, dipping around early 2003, the hiring trend stayed very much the same and even increased a bit during and after the recent recession. Unlike in the aggregate economy, hiring in construction has started to trend downward since May 2005.

# The Near-Term Economic Outlook

09.26.07

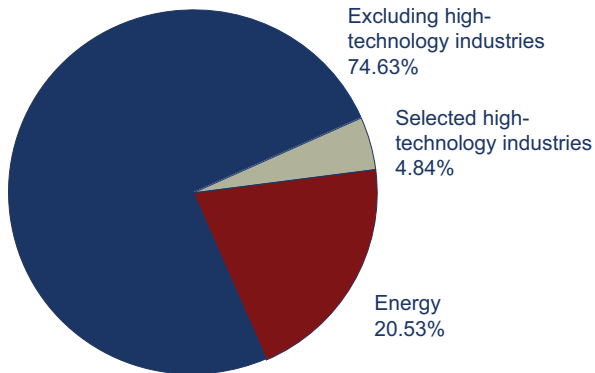
By Paul Bauer and Katie Corcoran

## Industrial Production



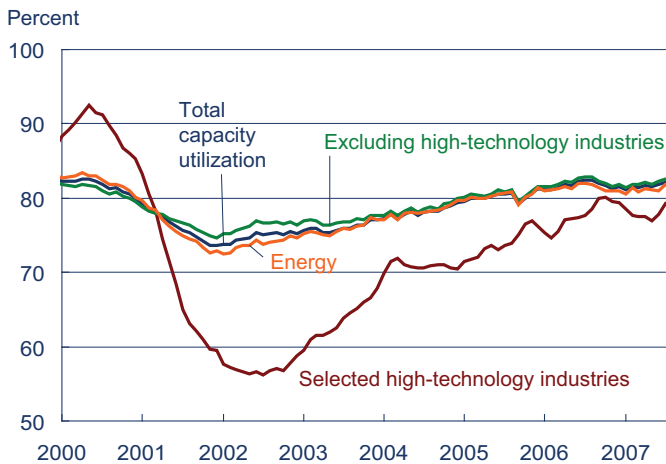
Source: Federal Reserve Board.

## 2006 Industrial Production and Capacity Utilization Indices



Source: Federal Reserve Board.

## Capacity Utilization



Source: Federal Reserve Board.

A famous economist characterized recent years as the “age of turbulence,” and although he was not specifically referring to the last few weeks when he titled his memoirs, the label still fits. With continuing weakness in the housing market, turmoil in financial markets from subprime mortgage difficulties, and the recent weakness in output and employment, economic observers are struggling to ascertain where the economy is headed. Should policymakers be worried about the economy slowing too much or about inflation getting out of hand?

The Federal Reserve Board’s monthly indices of industrial production and capacity utilization, which measure the quantity of output produced by the nation’s factories, mines, and utilities and the ratio of what they produced relative to what they could have produced given their existing capital, are some of the high-frequency series that help give economic observers a timely indication of the economy’s direction. According to these indices, the economy does appear to have down-shifted.

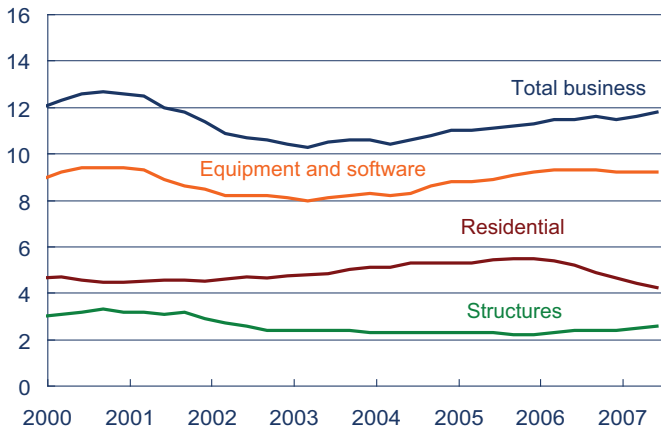
In August, total industrial production growth slowed to 0.2 percent, down from July’s rate of 0.5 percent. Although the deceleration was broad-based, the growth rate remains only modestly below its average over the last year. energy-related industries, which comprise over 20 percent of the total industrial production index, expanded 2.3 percent last month, reversing declines averaging 0.2 percent in May, June, and July. High-technology industries (up 0.8 percent last month and 19.5 percent year-over-year) continue to fare better than non-high-technology ones (down 0.3 percent last month, but up 0.6 percent over the past year). Even so, non-high-technology industries still comprise the bulk of the total index, 75 percent compared to 5 percent for high-technology.

Other things being equal, when output growth slows, there is less reason to worry about inflationary pressure. However, whether this holds in the



## Business Fixed Investment

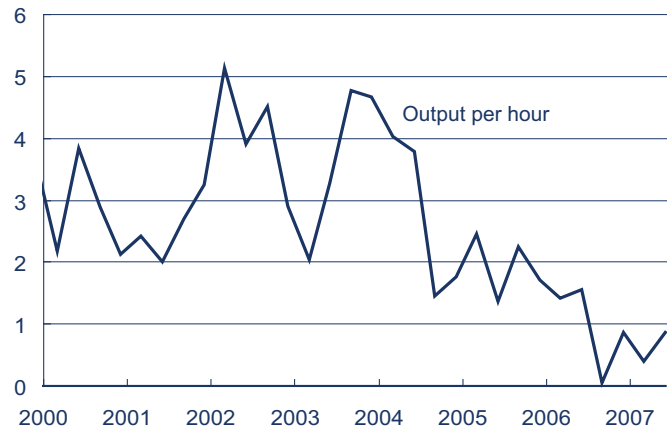
Percent (ratio to GDP)



Source: Bureau of Economic Analysis.

## Productivity

Year-over-year percent change



Source: Bureau of Labor Statistics.

present case depends on how much pressure is already present. A more direct measure of potential supply-side price pressures comes from capacity utilization, which measures how much the economy is producing relative to the amount it could produce if capital were fully employed. The index stood at 82.2 percent in August, lower than the historic high of 85.1 percent achieved in 1994–1995, but higher than the 1972–2006 average of 81.0 percent, and thus it remains in a range that warrants watchful attention. Capacity utilization indices for energy-related industries and non-high-technology industries have both tracked fairly closely to the overall index. The index for selected high-technology industries has shown a bit more slack than the rest of the index. At 78.6 percent, the capacity utilization of these industries is well below their peak of 92.5 percent in May 2000 and modestly below the 80.1 value reached in October 2006.

Whether this modest tightness in productive capacity becomes more of a problem depends in part on how much investment expands the economy's capacity. Currently, investment as a share of GDP remains below the peak it reached in 2000, and consequently, capacity is not growing as quickly as it had been. This reduction in investment matters, not just for the price pressures it could cause, but also because investment is often the way new production technologies and products are introduced. Their introduction boosts labor productivity and, in the long run, per capita personal incomes and living standards. Consequently, a more important concern in the long run is not whether the economy has slowed or whether price pressures have increased, but whether the recent slowdown in productivity growth is temporary or more long lasting.

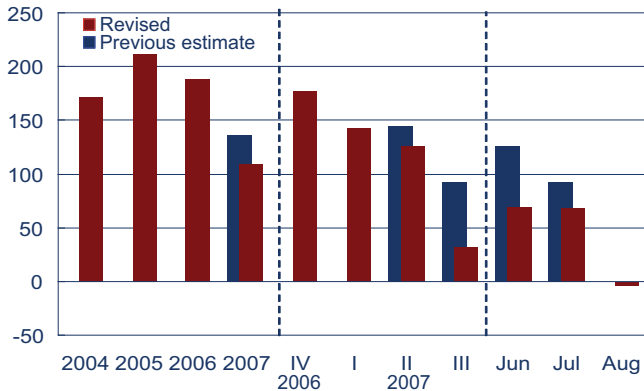
# The Employment Situation, August

09.14.07

By Yoonsoo Lee and Michael Shenk

## Average Nonfarm Employment Change

Change, thousands of jobs



Source: Bureau of Labor Statistics.

In August, the economy lost jobs for the first time since August 2003. The unemployment rate remains about the same, but this is because both household employment (-316,000) and the labor force (-340,000) declined sharply. The drop of 4,000 jobs was considerably below the market's expectation of about a 100,000 job gain. In addition, job gains in the prior two months were revised down by a combined 81,000 jobs; the June number was revised down to 69,000 from 126,000, and the July number was revised down to 68,000 from 92,000. (See Revisions to Employment Report for more detail about the revision.) Accompanied by the downward revisions, this report suggests that there has been a noticeable slowing in employment growth during the summer months.

The signs of a softening labor market were broadly observed across sectors, as most sectors expanded at slower rates than in recent months or declined. Losses centered particularly in the goods-producing sectors. Manufacturing employment declined by 46,000 jobs, the sector's largest loss since July 2003. The construction industry lost 22,000 jobs last month, largely because specialty residential contractors lost 18,000 jobs. The housing market has been declining rapidly since late 2005. However, overall construction employment has been relatively stable over the year due to solid growth in nonresidential construction (see the article on construction employment in the March 2007 issue of *Economic Trends*). Nonresidential construction continued to grow in August, adding 5,000 jobs. But it was not enough to offset the sharp decline in residential construction.

Despite the loss of jobs in the goods-producing sector, total private payrolls continued to add jobs in August, thanks to an 88,000 job increase in the private service sector. However, the 24,000 job gain in private payrolls was more than offset by a 28,000 job decline in government payrolls. Most of this decline came from local government educa-

## Labor Market Conditions

	Average monthly change (thousands of employees, NAICS)				
	2004	2005	2006	Jan.-Aug. 2007	Aug. 2007
Payroll employment	172	212	189	125	-4
Goods-producing	28	32	9	-13	-64
Construction	26	35	11	-5	-22
Heavy and civil engineering	2	4	2	0	-3
Residential <sup>a</sup>	9	11	-2	-3	-23
Nonresidential <sup>b</sup>	3	4	6	1	5
Manufacturing	0	-7	-7	-12	-46
Durable goods	8	2	0	-11	-30
Nondurable goods	-9	-9	-6	-1	-16
Service-providing	144	180	179	138	60
Retail trade	16	19	-3	9	13
Financial activities <sup>c</sup>	8	14	16	7	0
PBS <sup>d</sup>	38	57	42	17	6
Temporary help svcs.	11	18	-1	-8	-13
Education and health svcs.	33	36	41	50	63
Leisure and hospitality	25	23	38	27	12
Government	14	14	20	10	-28
Local educational svcs.	8	6	11	-3	-32
	Average for period (percent)				
Civilian unemployment rate	5.5	5.1	4.6	4.5	4.6

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.

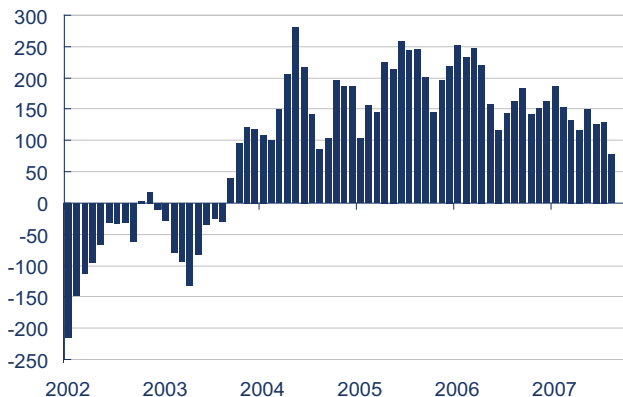
tional service, which shed 31,000 jobs, following a large decline in July (-50.3 after the revision). The local educational services series consists of anyone who falls onto local school payrolls, predominantly teachers, administrators, and staff. Employment in this series is very seasonal, and the numbers can be erratic. In fact, most of the revisions in June and July were due to downward revisions in local government educational services, which reflect unusually slow seasonal hiring at schools. If such weakness simply reflects a delay in hiring that normally takes place during the summer months, government employment may improve, as hirings occur in September.

Although service-providing sectors continued to expand in 2007, the revised numbers suggest that growth rates have dramatically declined in recent months. The average monthly gain over the last three months now stands at 72,000, compared to the average of 179,000 in 2006. Excluding government, the same three-month average gain for private services stands at 100,000, compared to the average of 159,000 in 2006. Recent turmoil in the mortgage market has been an issue in the financial markets. In August, employment in financial services was unchanged in the aggregate. Depository credit intermediation, which includes commercial banking, added 3,000 jobs. But the other component in credit intermediation, which includes nondepository financial intermediaries, lost 9,000 jobs a (2.8 percent decline from the peak in September 2006).

Overall, this report, along with the downward revisions to prior months, suggests that labor market has been softening faster than economists had previously thought. When the payroll figures were adjusted to take into account the effect local educational services have had over the past three months, private payrolls continued to add jobs but at a slightly more sluggish rate. However, the three-month moving average of private payroll growth is not far off the range it has been in since 2004. More disconcerting are the signs of weakness found in some sectors that often lead the aggregate labor market. Steeper declines in durables, in particular in industrial machinery (-7,000) imply that business activity may decelerate further. Temporary

## Employment Growth Excluding Local Educational Services

Change, thousands of jobs: 3-month moving average



Source: Bureau of Labor Statistics.

help employment, which is often viewed as a leading indicator of the labor market, also continued to decelerate in August.

## Economic Activity and Labor

# Revisions to the Employment Report

### Labor Market Conditions

	June Current	Revision to June	July Current	Revision to July	Aug 2007
Payroll employment	69	-57	68	-24	-4
Goods-producing	-10	-3	-10	2	-64
Construction	6	3	-14	-2	-22
Heavy and civil engineering	-0.5	-1.7	-2.5	-0.4	-3.3
Residential <sup>a</sup>	-3.9	-3.3	-1.7	-0.1	-23
Nonresidential <sup>b</sup>	9.8	8	-9.9	-1.7	5
Manufacturing	-19	-6	-1	1	-46
Durable goods	-16	-5	-2	-5	-30
Nondurable goods	-3	-1	1	6	-16
Service-providing	79	-54	78	-26	60
Retail trade	-11.2	2.3	5	6.2	12.5
Financial activities <sup>c</sup>	-4	-2	24	-3	0
PBS <sup>d</sup>	-7	-14	25	-1	6
Temporary help services	-14.7	-8.2	-5.2	1.7	-13.2
Education and health services	71	7	50	11	63
Leisure and hospitality	17	-16	6	-16	12
Government	-2	-21	-52	-24	-28
Local educational services	-19.6	-23.6	-50.3	-35	-31.8

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.

09.14.07

By Yoonsoo Lee and Michael Shenk

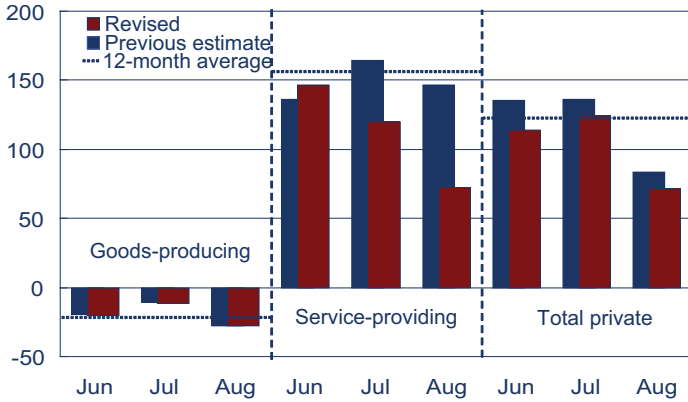
When each month's employment report is released, it contains revisions to the previous two months' data as well as the latest data. In addition to the monthly revision, the Bureau of Labor Statistics (BLS) annually revises its benchmarking process and updates seasonal adjustment factors. Revised numbers for the previous year are reported in the January report. August's labor report contained revisions to the employment numbers for June and July; both revisions were strongly negative. The revision to total nonfarm payrolls took away 57,000 jobs in June and left employment growth at a fairly weak 69,000 jobs. July's employment growth was revised down a total 24,000 jobs, leaving employment growth over the month at just 68,000 jobs.

Both months' revisions were focused largely on the service sector, mostly centered in local government educational services. In June, service-providing employment was revised down 54,000 jobs, while goods-producing employment was revised down only 3,000 jobs. Similarly, July's payroll gains in the service-providing industry were revised down 26,000 jobs, while goods-producing payrolls were revised up 2,000 jobs. The revisions do not change the overall employment growth trend in the service sector or the payroll declines in the goods-producing sector, but they did result in the two weakest months of service-sector job growth since 2005.

The good news, or rather the less bad news, is that private payrolls were revised down significantly less. When government payrolls are excluded, the revision to June's employment took away only 36,000 jobs. Professional and business services lost 14,000 jobs, and leisure and hospitality lost 16,000 from the revision. Overall, the effect of the revision to July's data was essentially zero. The revisions left private nonfarm employment growth in June below

## Average Nonfarm Employment Change

Change, thousands of jobs: 3-month moving average



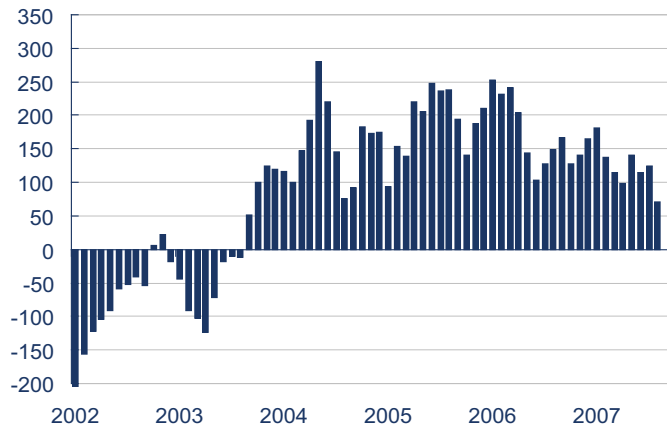
Source: Bureau of Labor Statistics.

the recent trend at 71,000 jobs, but July's revised figure stands right at the 5-year average of 120,000 jobs. However, when combined with August's weak gain in private nonfarm payrolls, which was the smallest since early 2004, growth in private nonfarm payrolls does appear to be sluggish.

Prior to June, government payrolls had expanded in each of the past 16 months, adding on average 25,000 jobs each month. Over the last three months, government payrolls have lost a combined 82,000 jobs. During this period, local government educational services have led the decline, falling by a combined 101,700 jobs. In fact, the latest revision alone took away 23,600 jobs from June's local government educational services and 35,000 jobs from July's figure. Outside of these two revisions in government, June and July payrolls were revised down 33,000 jobs and up 9,000 jobs, respectively.

## Private Sector Employment Growth

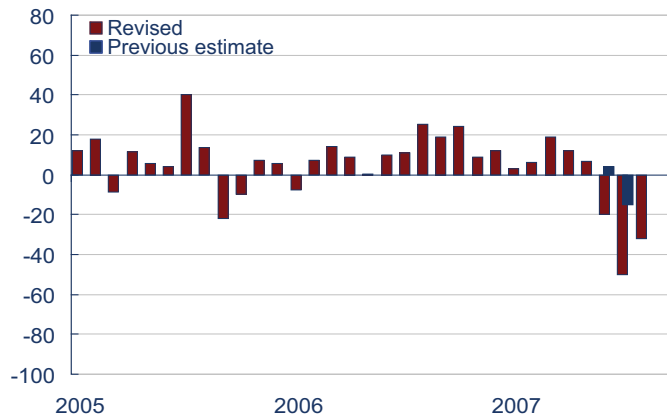
Change, thousands of jobs: 3-month moving average



Source: Bureau of Labor Statistics.

## Local Government Educational Services Employment Growth

Change, thousands of jobs



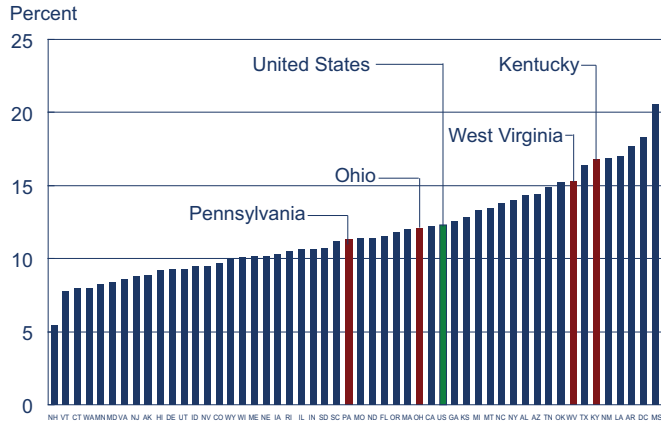
Source: Bureau of Labor Statistics.

# Poverty and Income in the Fourth District

10.01.07

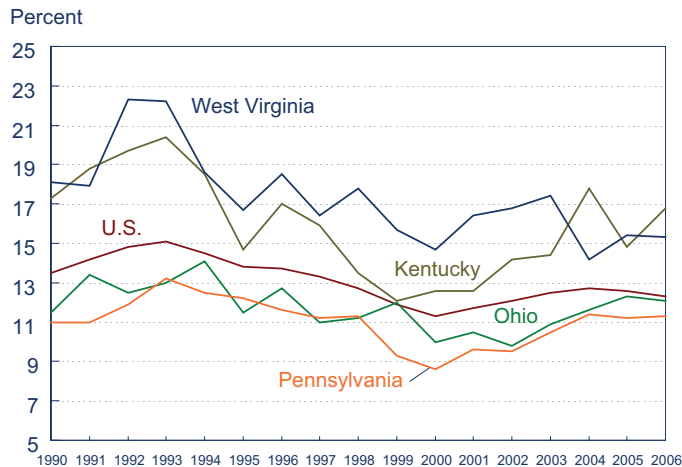
By Tim Dunne and Kyle Fee

## Poverty by State, 2006



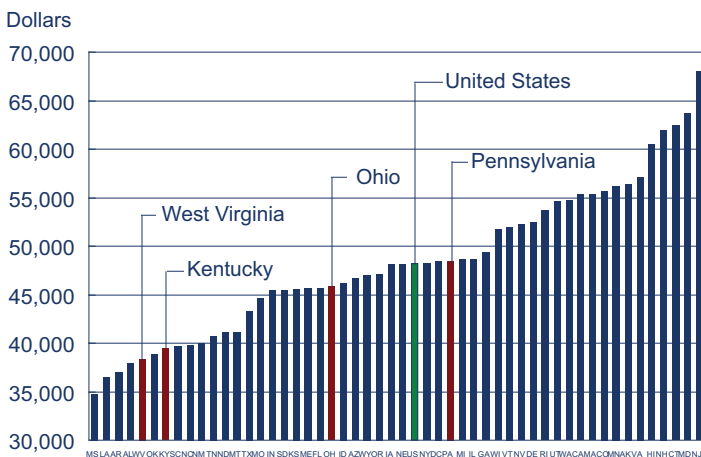
Source: Census Bureau, Current Population Survey 2006.

## Fourth District Poverty



Source: Census Bureau, Current Population Survey 2006.

## Median Household Income by State, 2006



Source: Census Bureau, Current Population Survey 2006.

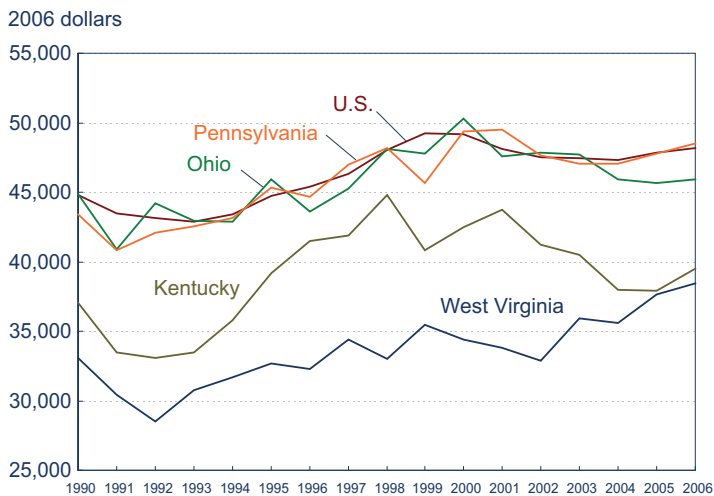
Each August, the U.S. Census Bureau reports new data on poverty and income for the nation, the states, and cities from its Current Population Survey. This is the official source of poverty statistics for the United States, and it is used as a basis for the distribution of public spending and in making public policy. Families and individuals are classified as living in poverty if their total family income or unrelated individual income was less than the poverty threshold specified for the applicable family size, the age of the head of household, and the number of related children who are under 18 and living there. For example, in 2006, the poverty threshold for a four-person family unit with two children was \$20,444 and for an individual, \$10,294.

In 2006, 12.3 percent of the U.S. population lived in poverty. Mississippi has the highest poverty rate, while the New England states of New Hampshire, Vermont, and Connecticut have the lowest. The four states of the Fourth District stack up as follows: Ohio (12.1 percent) and Pennsylvania (11.3 percent) have somewhat lower poverty rates than the national rate, but Kentucky (16.8 percent) and West Virginia (15.3 percent) have much higher poverty rates and are among the top 10 poorest states in the nation.

Looking at poverty rates over the past 16-year period, we note that Ohio and Pennsylvania have achieved lower poverty rates than the nation, and they have experienced similar trends. The highest poverty rates were seen between 1993 and 1994. A downward trend followed until 2001–2002, when poverty rates began to rise again. In fact, today Ohio’s and Pennsylvania’s poverty rates are almost the same as they were back in 1990. Kentucky loosely follows this pattern as well; its poverty rate reached a high in 1993, it declined to its lowest level in 1999, and then rose again thereafter. Except for a brief dip in Kentucky’s poverty rate in 1999, poverty rates in Kentucky and West Virginia re-



## Fourth District Median Household Income



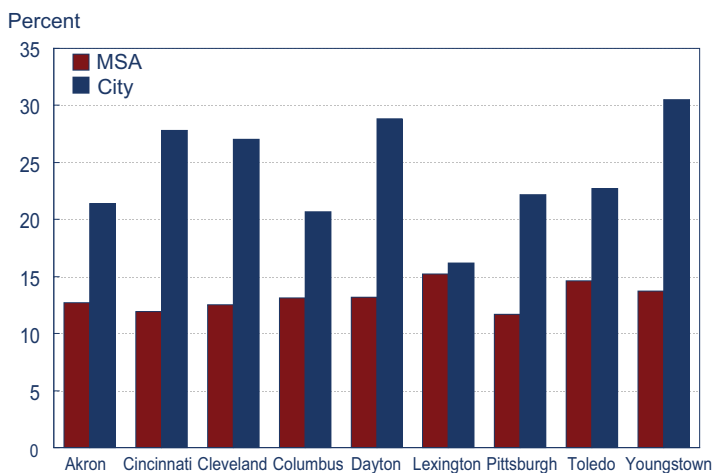
Source: Census Bureau, Current Population Survey 2006.

mained well above those of Ohio and Pennsylvania throughout the entire period.

For 2006, the median household income for the nation was \$48,201. The only state in the Fourth District to have a median household income higher than the nation was Pennsylvania, at \$48,477. Ohio's median household came in at \$45,900, which ranks it thirtieth among the states. In Kentucky (\$39,485) and West Virginia (\$38,419), the median household earns substantially less than the national median household income.

The inflation adjusted median household income for the nation increased from \$44,782 to \$48,201 over the 1990–2006 period. Ohio and Pennsylvania follow the trend in the national median household income up through 2004. After 2004, Ohio's income growth falters while Pennsylvania's continues to track the nation's. Kentucky and West Virginia also experience gains in real household income over the period, though Kentucky's growth rate after the beginning 1990 is quite modest. Similar to Ohio, Kentucky has recently experienced a substantial decline in real median household income.

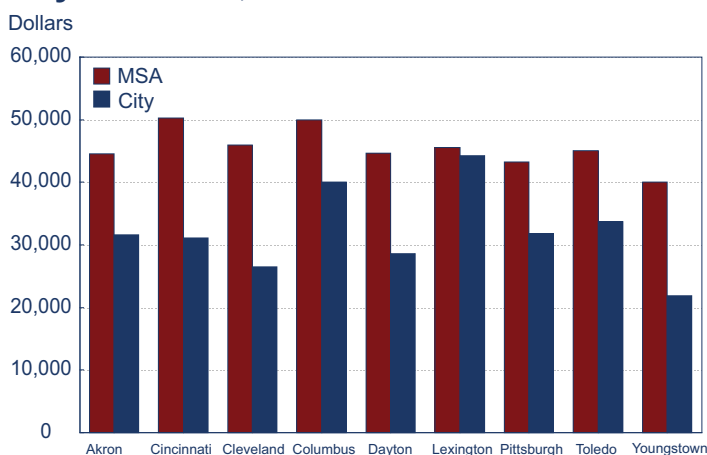
## MSA and City Poverty, 2006



Source: Census Bureau, American Community Survey 2006.

New data are also available on poverty and income for metropolitan statistical areas (MSAs) and cities from the 2006 American Community Survey. Looking at the large cities in the Fourth District—Cincinnati, Cleveland, Columbus, and Pittsburgh—we see that these cities all have poverty rates exceeding 20 percent. Cleveland and Cincinnati have particularly high rates, with both cities ranked in the top-five poorest large cities in the nation. These four largest cities of the district all have very similar poverty rates, with Columbus, somewhat surprisingly, having the highest of all at 13.1 percent. With regards to the smaller cities in the district, both Youngstown and Dayton have very high poverty rates—exceeding 28 percent. Similar to their larger counterparts, these cities have poverty rates that are much higher within the cities' official borders than in the broader metropolitan areas surrounding them. The exception is Lexington, Kentucky, where the poverty rate is quite similar for both the city and MSA. This is due to the fact that City of Lexington makes up a large part of the Lexington-Fayette MSA.

## Median Household Income City and MSA, 2006



Source: Census Bureau, American Community Survey 2006.

Among large Fourth District cities, Columbus has the highest median household income at \$40,074, while Cleveland has the lowest at \$26,535. The latest American Community Survey report shows that the City of Cleveland has the lowest median household income for places with 250,000 or more people. At the metropolitan level, the differences are more muted, with Cincinnati (\$50,346) and Columbus (\$49,920) at the high end and Pittsburgh (\$43,260) at the low end. The median household income in the Cleveland MSA is \$45,925; Cleveland also has the largest disparity in the Fourth District between the level of income in the city and the MSA (\$19,390).

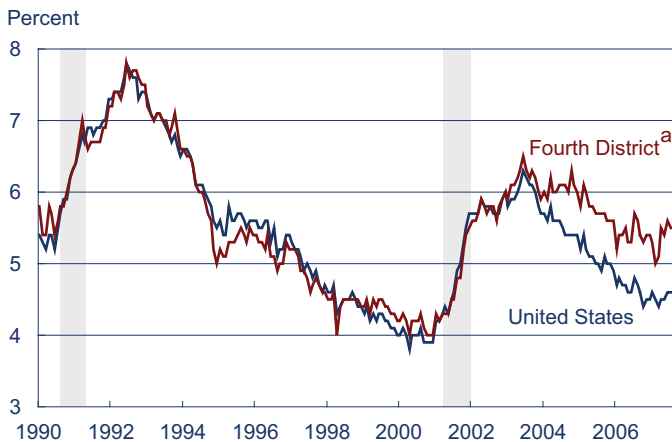
## Regional Activity

# Fourth District Employment Conditions

09.17.07

by Tim Dunne and Kyle Fee

## Unemployment Rates\*

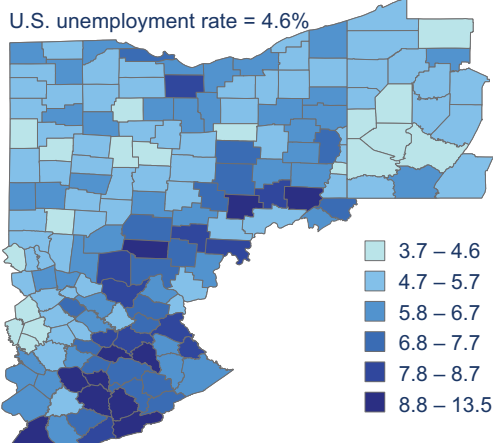


a. Seasonally adjusted using the Census Bureau's X-11 procedure.  
 \*Shaded bars represent recessions. Some data reflect revised inputs, reestimation, and new statewide controls. For more information, see [www.bls.gov/lau/launews1.htm](http://www.bls.gov/lau/launews1.htm).  
 Source: U.S. Department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

The district's unemployment rate fell 0.1 percent to 5.5 percent for the month of July. The decrease in the unemployment rate can be attributed to decreases in the number of people employed (-0.1 percent), the number of people unemployed (-3.1 percent), and the size of the labor force (-0.4 percent). Compared to the national rate, the district's unemployment rate stood 0.9 percentage point higher in July, and it has been persistently higher since early 2004. Since the same time last year, the Fourth District's unemployment rate decreased 0.2 percent, as did the national unemployment rate.

Of the 169 counties in the Fourth District, 17 had an unemployment rate below the national average in July, and 152 had a higher unemployment rate than the national average. Rural Appalachian counties continue to experience high levels of unemployment; Fourth District Kentucky is home to three counties with double-digit unemployment rates. The unemployment rate for Fourth District Kentucky is 6.0 percent, well above the national average of 4.6 percent. Also above the national average but down from last month (-0.3 percent), Ohio's unemployment rate is 5.8 percent. On par with the national average, Fourth District Pennsylvania has an unemployment rate of 4.5 percent. Unemployment rates for the District's major metropolitan

## Unemployment Rates, July 2007\*

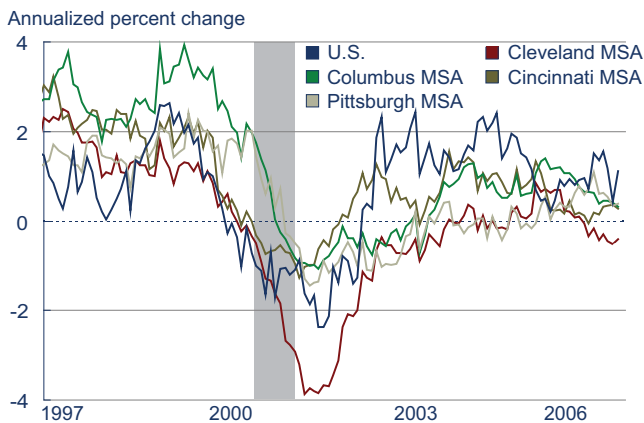


\*Data are seasonally adjusted using the Census Bureau's X-11 procedure.  
Source: U.S. Department of Labor, Bureau of Labor Statistics.

areas ranged from a low of 4.3 percent (Pittsburgh and Lexington) to a high of 6.4 percent (Toledo).

Dayton is the only major metropolitan area to have nonfarm employment decrease (-0.1 percent) over the past twelve months. On the other hand, Lexington (2.3 percent) is the only to metropolitan area where nonfarm employment grew faster than the national average (1.3 percent). Employment in goods-producing industries increased 1.9 percent in Akron and 0.2 percent in Lexington; nationally, employment in goods-producing industries declined 0.8 percent. Cleveland and Cincinnati lost goods-producing jobs at more than double the national rate. Service-providing employment increased in seven of the eight major metropolitan areas, with Lexington posting the strongest growth by far (2.8 percent). Employment in professional and business services grew in all Fourth District metro areas except for Cleveland (-0.5 percent) and Dayton (-0.6 percent). All major Fourth District metro areas posted job gains in the education and health services industry, with only Cincinnati (3.6 percent) posting stronger growth than the nation (3.3 percent). Information services expanded strongly in Lexington (6.5 percent) and Toledo (3.1 percent) but contracted in Cincinnati (-3.1 percent) and Akron (-2.1 percent).

## Payroll Employment Growth for Large MSAs



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

## Payroll Employment by Metropolitan Statistical Area

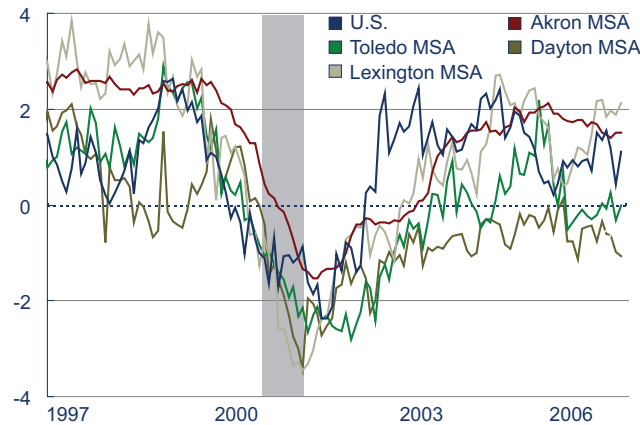
12-month percent change, August 2007

	Cleveland	Columbus	Cincinnati	Pittsburgh	Dayton	Toledo	Akron	Lexington	U.S.
Total nonfarm	0.0	0.6	0.0	0.3	-0.2	0.5	0.9	2.0	1.2
Goods-producing	-1.4	-1.4	-2.2	-1.1	-0.4	-0.3	1.4	-0.6	-1.2
Manufacturing	-2.2	-1.0	-1.3	-1.1	0.0	-0.4	1.1	-1.1	-1.4
Natural resources, mining, construction	1.3	-2.1	-4.1	-1.4	-1.9	0.0	2.5	0.8	-0.8
Service-providing	0.3	0.8	0.5	0.6	-0.2	0.7	0.8	2.3	1.7
Trade, transportation, utilities	0.0	0.1	-0.4	-0.3	-1.6	-1.1	0.3	-0.9	1.1
Information	0.0	-1.6	-3.2	-2.2	-0.9	4.9	0.0	6.5	1.0
Financial activities	-0.5	-1.5	-1.1	-0.9	1.5	1.5	-1.4	0.9	1.0
Professional and business services	-0.5	2.1	0.6	1.6	-0.9	2.6	2.3	-0.7	1.6
Education and health services	1.4	1.5	3.6	2.0	0.5	1.6	1.8	2.6	3.4
Leisure and hospitality	0.1	2.5	1.1	0.6	0.0	-0.6	-0.3	7.7	2.8
Other services	0.9	-1.3	1.2	-1.8	0.6	0.0	0.7	0.0	1.0
Government	1.1	1.1	-1.0	0.8	0.6	1.3	0.7	5.9	1.1
August unemployment rate (sa, percent)	6.1	4.7	5.0	4.7	5.7	6.0	5.0	4.4	4.6

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

## Payroll Employment Growth for Mid-sized MSAs

Annualized percent change



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

Looking over the longer term, employment growth in Cleveland and Pittsburgh has significantly lagged the national rate. In particular, Cleveland experienced a severe contraction in employment during and after the 2001 recession, from which it has been slow to recover. Cincinnati and Columbus have fared better, but even these cities have added jobs at a relatively modest pace over the last three years.

Fourth District mid-sized cities also showed marked differences in employment growth over the last decade. Dayton and Toledo have experienced weak growth while Akron and, especially, Lexington have enjoyed much stronger employment growth.

## Banking and Financial Institutions

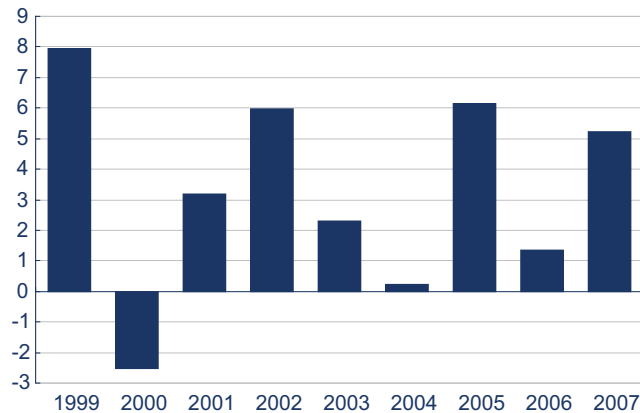
### Fourth District Bank Holding Companies

10.16.07

by Ed Nosal and Saeed Zaman

### Annual Asset Growth

Percent



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

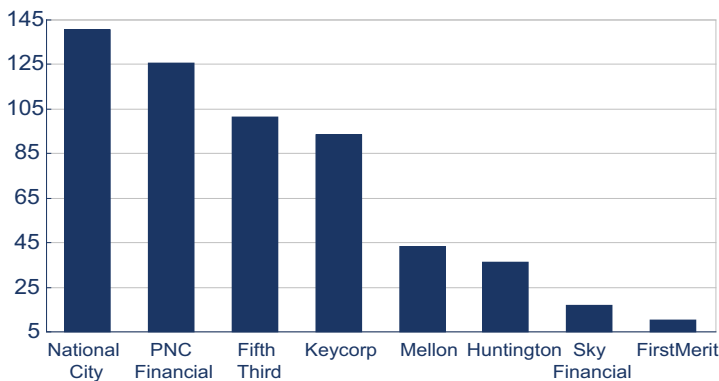
A bank holding company (BHC) is a company that owns one or more commercial banks, other depository institutions, and nonbank subsidiaries. While BHCs come in all sizes, we focus here on BHCs with consolidated assets of more than \$1 billion. There are 21 BHCs headquartered in the Fourth District that meet this definition as of the second quarter of 2007, including seven of the top fifty BHCs in the United States.

The banking system continues to consolidate nationwide, a process that is evident in the Fourth District. Between the beginning of 1999 and the second quarter of 2007, the number of BHCs in the Fourth District with assets over \$1 billion fell from 24 to 21, but the total assets of the remaining BHCs increased every year except 2000. The decline that year reflects the acquisition of Charter One Financial by Citizens Financial Group, a BHC headquartered in the First Federal Reserve District, served by the Federal Reserve Bank of Boston.

Fourth District BHCs of all asset sizes account for roughly 4.8 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.

## Largest Fourth District Bank Holding Companies by Asset Size\*

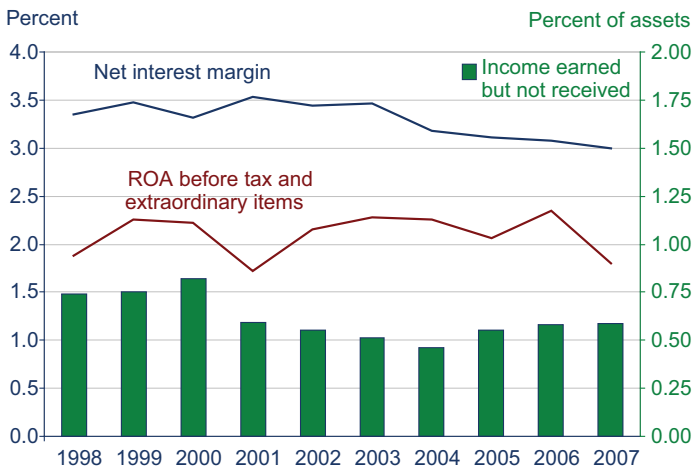
Dollars, billions



\*Rank is as of 2nd quarter 2007.

Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

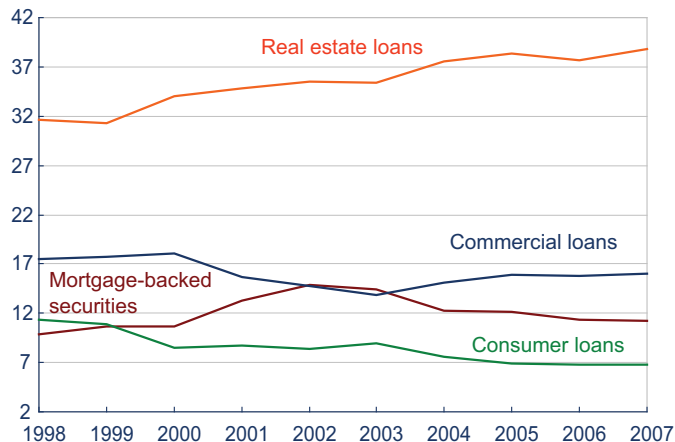
## Income Stream



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

## Balance Sheet Composition

Percent of assets



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

The income stream of BHCs in the district has improved slightly in recent years. The return on assets has fluctuated between 1.7 percent and 2.3 percent since 1998, and it edged down to 1.8 percent in the second quarter of 2007 (Return on assets is measured by income before taxes and extraordinary items, because a bank's extraordinary items can distort the average earnings picture in a small sample of 21 banks). This decrease has coincided with a weakening of net interest margins (interest income minus interest expense divided by earning assets). Currently at 3.0 percent, the net interest margin is at its lowest level in over eight years.

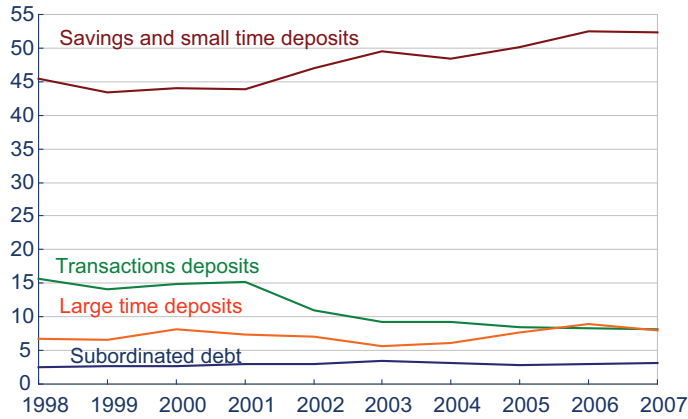
Another indication of the strength of earnings is the continued low level of income earned but not received. If a loan allows the borrower to pay an amount that does not cover the interest accrued on the loan, the uncollected interest is booked as income even though there is no cash inflow. The assumption 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 two years, income earned but not received in the second quarter of 2007 (0.59 percent) was still well below the recent high of 0.82 percent, registered at the end of 2000.

Fourth District BHCs are heavily engaged in real estate related lending. As of the second quarter of 2007, about 39 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 50 percent.

Deposits continue to be the most important source of funds for Fourth district BHCs. Saving and small time deposits (time deposits in accounts less than \$100,000) made up 53 percent of liabilities in the second quarter of 2007. Core deposits, the sum of transaction, saving, and small time deposits, made up 60 percent of the district's BHC liabilities as of the second quarter of 2007, the highest level since 1998. Finally, total deposits made up almost 68 percent of funds so far this year. Despite the requirement that large banking organizations must have a rated debt issue outstanding at all times,

## Liabilities

Percent of liabilities

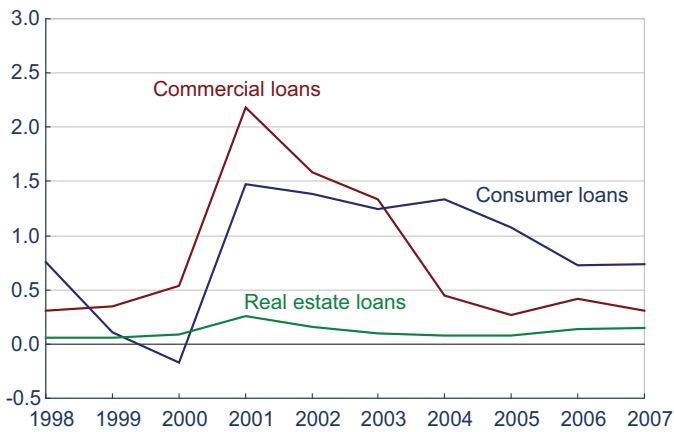


Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

subordinated debt represents only 3 percent of funding. As with large holding companies outside the district, Fourth district BHCs rely heavily on large negotiable certificates of deposit and nondeposited liabilities for funding.

## Net Charge-Offs

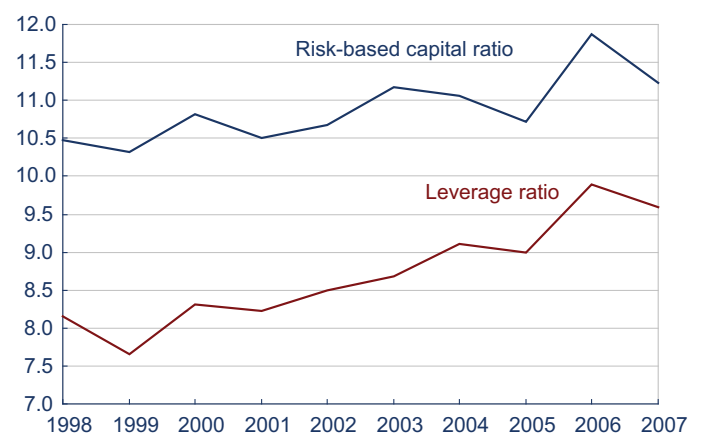
Percent of loans



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

## Capitalization

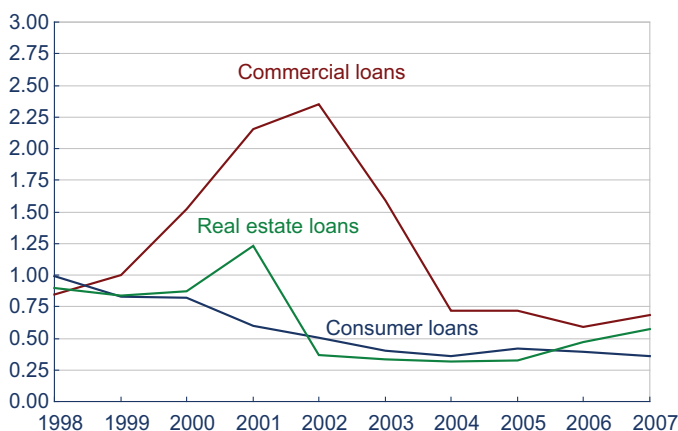
Percent



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

## Problem Loans

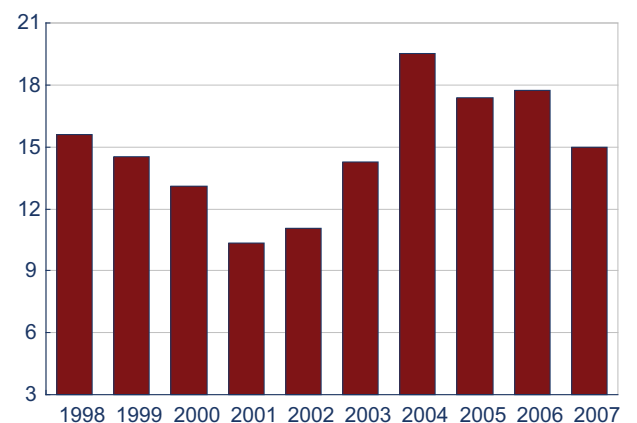
Percent of loans



Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income, Second Quarter 2007.

## Coverage Ratio\*

Dollars



\*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, Second Quarter 2007.



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