

Economic Trends

December 2007

(Covering November 8, 2006–December 13, 2007)

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A Capital Idea

12.19.07

by Mark S. Sniderman

Traditionally, banks have made money by holding assets on their balance sheets that could not always be readily sold for cash at face value. Banks have earned their profits by learning how to take prudent risks with the funds entrusted to them. After all, once a loan is made, the lender often has little ability to dispose of it without taking a loss. Consequently, banks have always had strong incentives to know their borrowers and how to work with them to keep loan payments current.

Over time, some bankers changed their business model from “originate and hold” to “originate and sell.” In the second model, banks and others, such as independent mortgage companies, underwrite loans but then sell them off to a third party. This third party, which might be an investment bank, can pool together large numbers of loans and sell fractional interests in the pool to other investors, such as insurance companies and pension funds, in the form of securities. These are often called asset-backed securities because the repayment of principal and interest ultimately depends on the performance of the underlying loans to back investors’ claims.

The advent of securitized markets for mortgage and other loans enabled banks to build on their fundamental skills in loan origination and to tie up less of their capital than they would have, had they kept the loans on their own books. In addition, some traditional lenders gained another revenue stream by selling off their loan servicing rights to specialized financial companies that could operate the servicing business more profitably on a larger scale. Loan servicing companies operate on behalf of those who own the loan and expect a return from principal and interest payments. When loans do not perform as expected, the servicing companies decide when, how, and if the terms of the loan should be modified.

The media have made much of how badly the securitization of residential mortgage loans has turned out, both for investors in asset-backed securities and for many people who obtained mortgages as a result of lax underwriting standards and the unprecedented availability of funding. It is still not clear whether we have seen the worst of mortgage loan defaults and foreclosures, nor do we yet know the full extent of the losses to investors in mortgage-backed securities. Financial markets continue to be agitated by these uncertainties, to be sure, but now the turmoil is calling into question the banking system’s willingness and ability to provide credit to sound borrowers. But why should commercial lending in Boston and Cleveland be affected by mortgage foreclosures in Florida and California?

Unexpected complications have resulted from financial engineers’ piece de résistance—designing financial instruments backed by pools of securities that were themselves backed by pools of other securities. Billions of dollars worth of these instruments were offered to investors through special-purpose financial entities that existed for no other reason than to distance them from their sponsors. Having created this separation, the sponsors—often commercial banking organizations—believed that they need not hold much, if any, capital against potential losses suffered by their progeny. However, just as some parents worry that their children’s financial misfortunes could damage their own credit, some sponsors of special-purpose entities are standing behind their progeny and taking the assets back onto their own balance sheets. These sponsors are acting to preserve their reputation with customers and investors, even though such actions dilute capital ratios.

In much the same way, secondary markets for various loans have been affected by investors’ concerns about the quality of the underlying assets, whether or not those assets are funded through special-purpose vehicles. Some banks that have come to rely on secondary markets to take loans off their balance sheets are now obliged to fund these assets themselves. Such unplanned funding needs have made it more difficult for certain banks to find stable sources of

funding—at a cost they consider reasonable—to replace sources that used to be available.

During the next several months, we will learn more about the magnitude of losses for financial institutions, mortgage insurers, and investors. Though it is possible that some financial institutions will allow their balance sheets to shrink to fit what capital they have, others will find investors to put in more capital. In fact, some prominent financial institutions have already announced new capital infusions. Over time, the current turmoil will dissipate, and lending markets will normalize. What will then constitute “normal” for these markets is still uncertain, but it seems likely that the new financial architecture will benefit from a sounder capital footing.

Inflation and Prices

October Price Statistics

October Price Statistics

	Percent change, last					2006 avg.
	1mo. ^a	3mo. ^a	6mo. ^a	12mo.	5yr. ^a	
Consumer Price Index						
All items	3.6	1.7	2.8	3.5	2.9	2.6
Less food and energy	1.9	2.4	2.3	2.2	2.1	2.6
Median ^b	3.2	2.8	2.6	2.8	2.5	3.1
16% trimmed mean ^b	3.4	2.6	2.3	2.5	2.3	2.7
Producer Price Index						
Finished goods	0.7	-0.7	2.1	6.1	3.6	1.6
Less food and energy	0.0	1.0	1.8	2.5	1.5	2.1

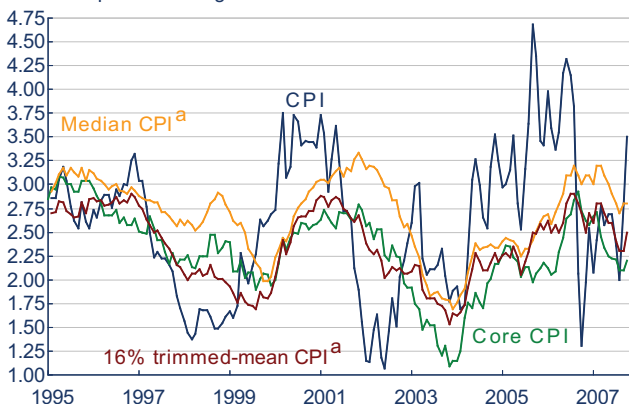
a. Annualized.

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.

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

11.29.07

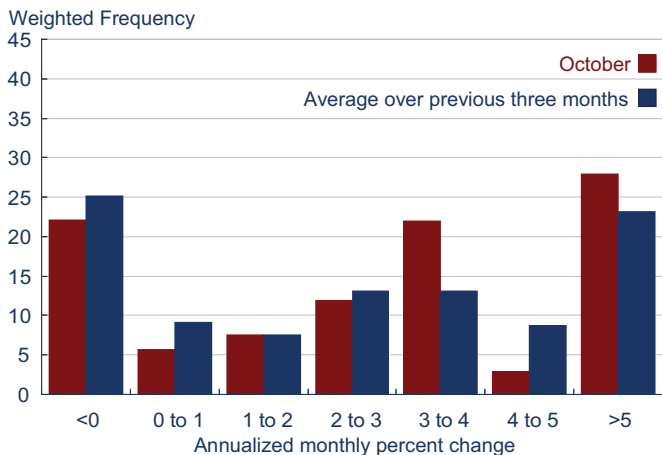
by Michael F. Bryan and Brent Meyer

The Consumer Price Index (CPI) rose at an annualized rate of 3.6 percent in October—the second straight increase since the index’s 1.7 percent drop in August. Year-to-date, the CPI has advanced 3.6 percent (at an annualized rate), which is ahead of 2006’s annual increase of 2.5 percent. Growth in the CPI excluding food and energy prices (core CPI) slowed to 1.9 percent, after having climbed to 2.7 percent in September. However, both the median and 16 percent trimmed-mean CPI indicators posted increases above 3 percent in October (3.2 percent and 3.4 percent, respectively), outpacing their 3-, 6-, and 12-month averages.

The 12-month growth rate in the CPI rose from 2.8 percent in September to 3.5 percent in October and has increased 1.5 percentage points over the last two months to the highest it has been since August 2006. The 12-month trends of the core CPI and the 16 percent trimmed-mean CPI inched up during the month, to 2.2 percent and 2.5 percent, respectively. The longer-term trend in the median CPI held steady at 2.8 percent, which is down from a recent high of 3.2 percent in March.

Roughly 53 percent of the CPI’s components increased in excess of 3 percent in October, compared to 45 percent over the previous three months. Some interesting and possibly transitory component-price increases led to overall acceleration in the index. Public transportation prices, which increased 3.1 percent in the third quarter, jumped 16 percent in October because of a 23.5 percent spike in airline fares. Hospital and related services, which had been

CPI Component Price-Change Distributions

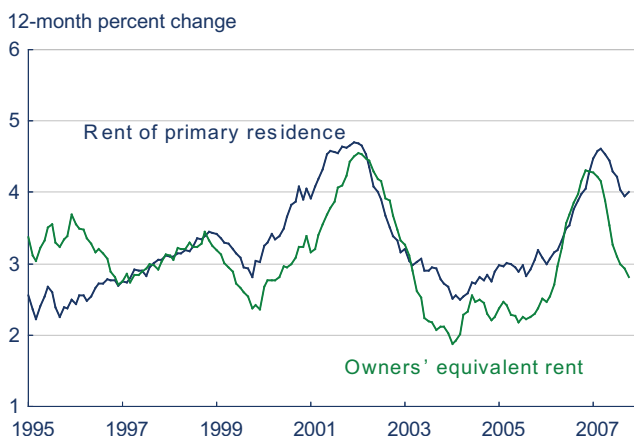


Sources: U.S. Department of Labor, Bureau of Labor Statistics.

increasing moderately for most of the year, rose 14 percent, the largest increase of this CPI component in five years.

There were also some unusual price changes in the shelter category. Rent of primary residence, which had been moderating in recent months, posted its largest increase in six years, rising 5.6 percent in October. In contrast, owners' equivalent rent (OER) increased 2.7 percent during the month, after increasing 3.4 percent last month. The 12-month trend in OER has lessened considerably more than rent of primary residence. Another interesting price move in this month's CPI report was in lodging away from home, which has risen 5.5 percent year-to-date but fell 16.3 percent in October.

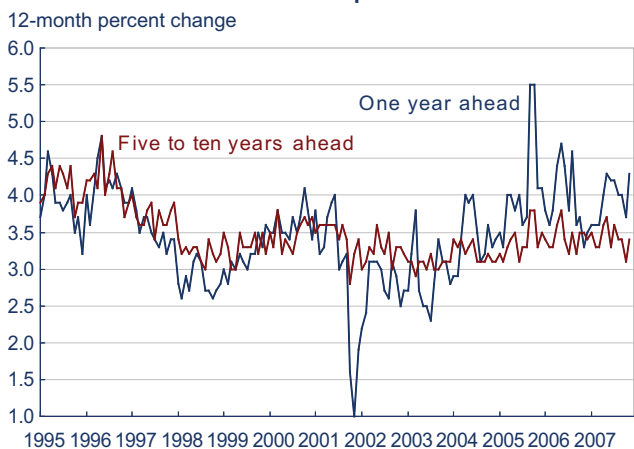
CPI Rent of Shelter



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

Following a couple of somewhat unfavorable CPI reports, household inflation expectations, as measured by the University of Michigan's Survey of Consumers, ticked upward in November. Expected average short-run inflation rose from 3.7 percent in October to 4.3 percent for the year ahead. Longer-term expectations (5 to 10 years out), posted a slight increase (from 3.1 percent to 3.4 percent in November), but remain near the ten-year average of 3.4 percent.

Household Inflation Expectations*



*Mean expected change as measured by the University of Michigan's Survey of Consumers

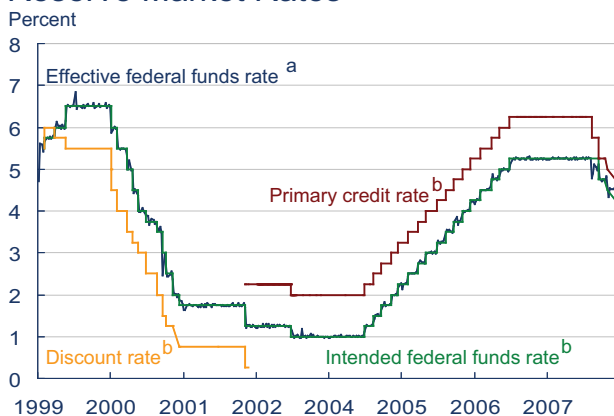
Source: University of Michigan

The Funds Rate, Liquidity, and the Term Auction Facility

12.14.07

by Charles T. Carlstrom and Sarah Wakefield

Reserve Market Rates

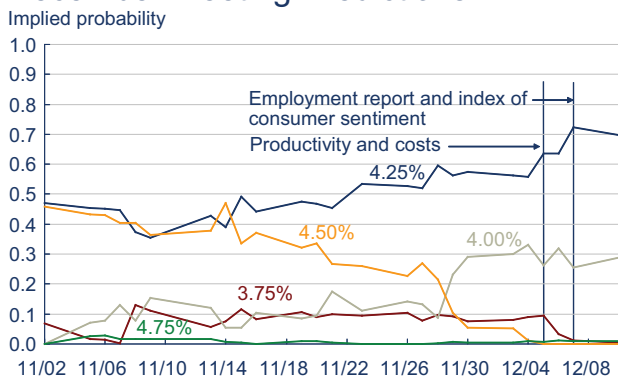


a. Weekly average of daily figures.

b. Daily observations.

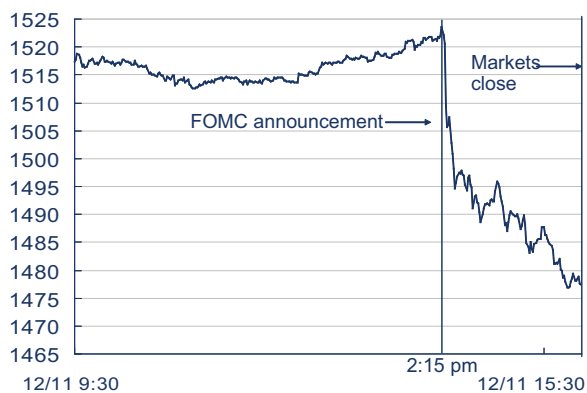
Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical Releases, H.15.

December Meeting Predictions



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.

S&P Index



Source: Bloomberg Financial Services.

At its December 11 meeting, the Federal Open Market Committee (FOMC) voted to lower the target federal funds rate 25 basis points to 4.25 percent. This followed on the heels of a 50 basis point cut at its September 18 meeting and a 25 basis point cut at the October 30-31 meeting.

The committee supported the move by stating that "incoming information suggests that economic growth is slowing, reflecting the intensification of the housing correction and some softening in business and consumer spending. Moreover, strains in financial markets have increased in recent weeks."

Prior to the meeting, participants in the Chicago Board of Trade's federal funds options market thought there was a 70 percent probability that the Fed would announce a 25 basis point cut. The remainder thought that a more aggressive policy cut of 50 basis points would occur.

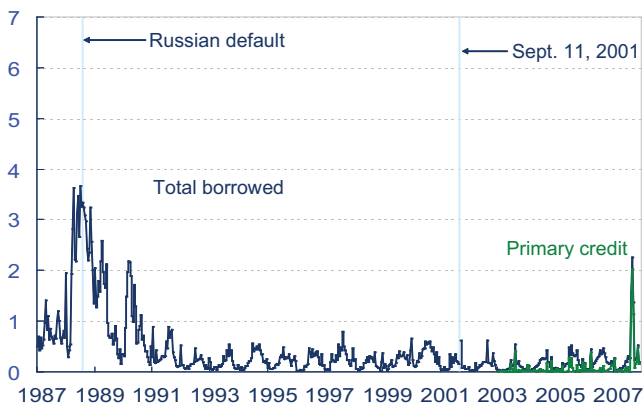
While the modest rate cut was not a big surprise to markets, the stock market fell nearly 2 percent after the Fed's announcement. This large drop was probably due more to the Fed's decision to keep the spread between the primary credit rate and the discount rate at 50 basis points rather than its decision to cut the fed funds target by only 25 basis points.

Many had expected the committee to lower the primary credit rate more aggressively in order to boost discount window borrowing. Discount window or primary credit borrowing is particularly important during times of financial crisis. While the statement mentioned the "strains in financial markets," the fear was that the Fed was not doing enough to address those strains.

Signs of increasing financial strains included the widening spread between the London Inter-Bank Offer Rate (LIBOR) and a comparable short-term Treasury bill. LIBOR is the interest rate that the banks internationally charge each other for loans.

Discount Window Lending

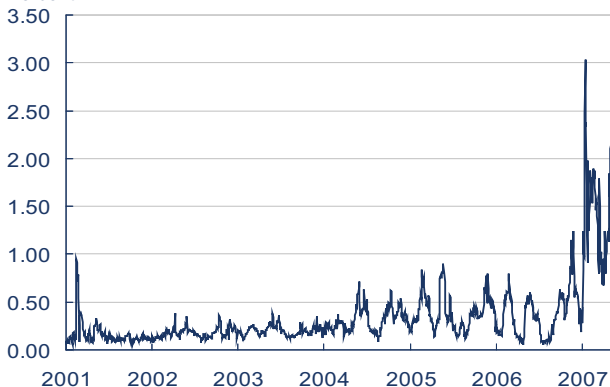
Billions of dollars



Source: Board of Governors of the Federal Reserve System.

LIBOR Spread

Percent

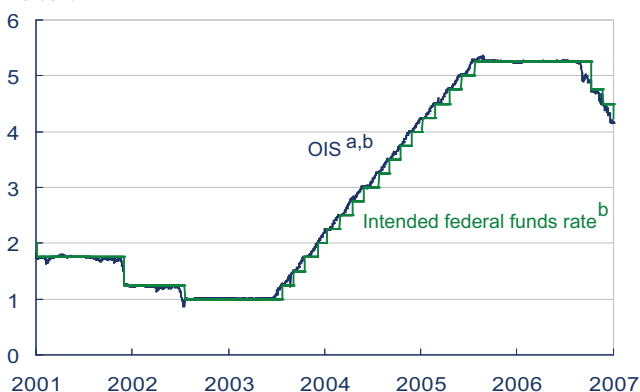


Note: Daily observations. LIBOR spread is the one-month LIBOR rate minus the one-month Treasury bill yield.

Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical Releases, H.15.

OIS and Federal Funds Rate

Percent



a. One-month Overnight Index Swap.

b. Daily observations.

Sources: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical Releases, H.15.; and Bloomberg Financial Services.

But what was not known at the time of the FOMC announcement was that more extensive efforts were already being planned to deal with these liquidity issues. At 9 a.m. on December 12 (the day following the meeting), a press release was issued that stated: "Today, the Bank of Canada, the Bank of England, the European Central Bank, the Federal Reserve, and the Swiss National Bank are announcing measures designed to address elevated pressures in short-term funding markets." One of the major changes for the Federal Reserve System was the institution of a "term auction facility" (TAF) to supplement regular discount window borrowing. This facility is designed to give the Fed greater control of how much borrowing will actually occur and to aid the channeling of funds to those financial institutions experiencing the greatest liquidity pressures.

Policymakers are concerned that banks are not borrowing enough at the discount window because of the so-called "stigma effect"—the belief that borrowing at the window is a signal that a bank is financially weak. If banks are afraid to come to the window when they need to, they might be forced to sell off assets quickly at fire sale prices because of immediate liquidity needs. The hope is that the term auction facility will lessen the stigma effect, thereby helping to ensure that banks that most need the loans will receive them.

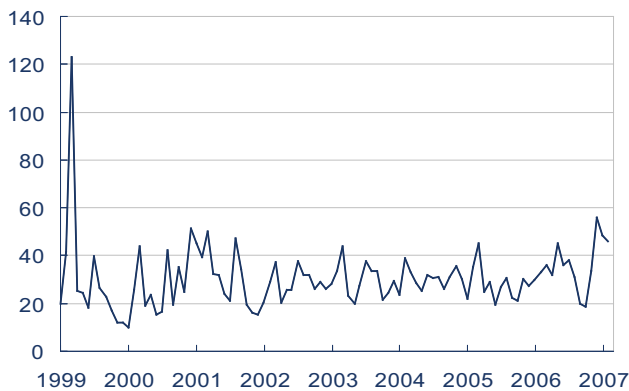
The terms of the auction are to be as follows: "The minimum bid rate for the auctions will be established at the overnight indexed swap (OIS) rate corresponding to the maturity of the credit being auctioned. The OIS rate is a measure of market participants' expected average federal funds rate over the relevant term."

Setting the minimum bid to the OIS rate is pretty much the same as setting the minimum bid to an interest rate with no penalty. Of course, this is the minimum bid, and market forces will determine how large a penalty rate there will actually be.

The amount being auctioned off is quite substantial. "The first TAF auction of \$20 billion is scheduled for Monday, December 17, with settlement on Thursday, December 20; this auction will provide 28-day term funds, maturing Thursday, January 17,

Repurchase Agreements

Billions of dollars

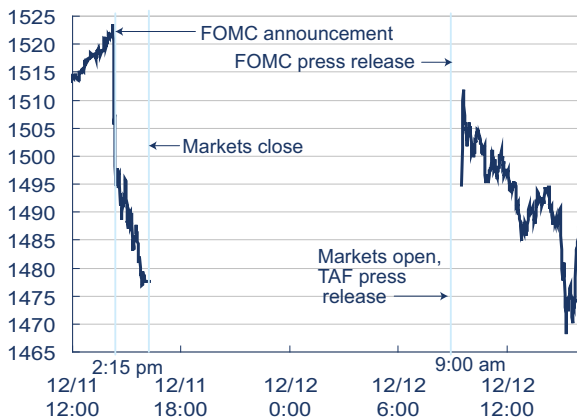


Source: Board of Governors of the Federal Reserve System.

2008. The second auction of up to \$20 billion is scheduled for Thursday, December 20, with settlement on Thursday, December 27; this auction will provide 35-day funds, maturing Thursday, January 31, 2008.” There will also be a third and fourth auction on January 14 and 28 of unannounced quantities. After that, “the Federal Reserve may conduct additional auctions in subsequent months, depending in part on evolving market conditions.”

One way to gain some perspective on the magnitude of the December 20 and December 27 credit auctions is to compare these amounts with Federal Reserve System repurchase agreements (REPOs). REPOs are collateralized loans from the Fed to dealers, typically for 28 days or less, used to supply reserves to the banking system.

S&P Index

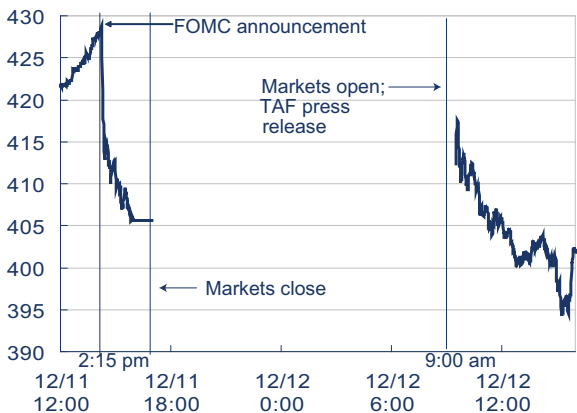


Source: Bloomberg Financial Services.

The market reacted favorably to the announcement of the term auction facility. While stock prices had dropped around 2 percent following the fed funds rate decision, following the announcement of the TAF, stocks regained most of what they had lost. Later in the day, stocks retraced their earlier gains, but that was probably due to higher oil prices.

Financial stocks also benefited from the news, but interestingly, their increase was less than that of the broader market. Undoubtedly, other news had come out overnight, which was reflected in their opening price.

S&P Financial Index

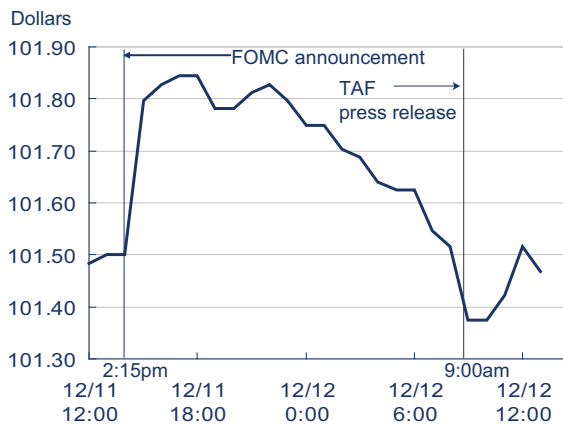


Source: Bloomberg Financial Services.

The two-year Treasury rate is thought to reflect current liquidity pressures as well as expectations of those of the future. Liquidity concerns raise the price (cut the yield) of safe assets such as the two-year Treasury bill, because investors turn to safer assets at such times. Prices on two-year Treasury bills increased substantially after the Fed rate announcement, but subsequently fell back down following the TAF announcement. Even in the time between the two announcements, some of the earlier declines had been erased, as there was speculation of a forthcoming Fed announcement.

Even with the cut in the funds rate and the introduction of the new term auction facility, the market is still betting on another cut at the end of January. Whether this cut materializes depends partly on whether the strains in financial markets lessen over

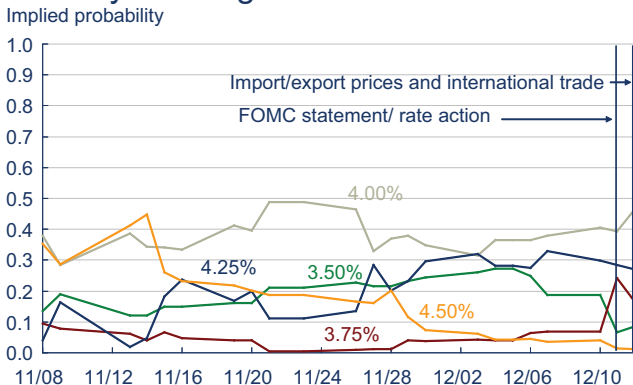
Two-Year Treasury Rate



Source: Bloomberg Financial Services.

the next six weeks. The hope is that they will, since some of the current pressures are probably because of year-end financing needs. The unwinding of these pressures, along with the past funds rate cuts and the new auction facility, will hopefully reduce these strains by the January meeting.

January Meeting Predictions



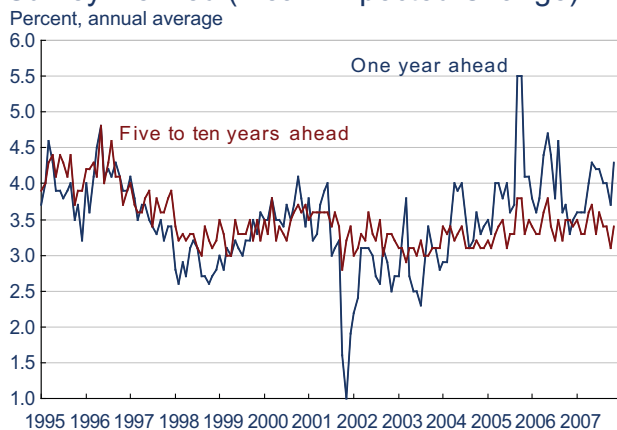
Note: Probabilities are calculated using trading-day closing prices from options on federal funds futures that trade on the Chicago Board of Trade.

Sources: Chicago Board of Trade; and Bloomberg Financial Service

Money, Financial Markets, and Monetary Policy

Inflation Expectations

Household Inflation Expectations, Survey-Derived (Mean Expected Change)



Source: University of Michigan, *Survey of Consumers*.

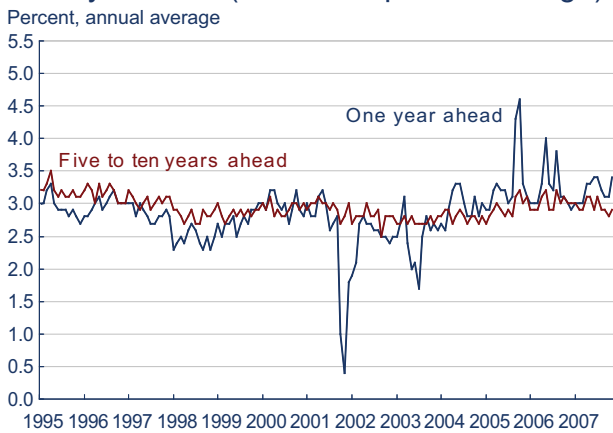
12.04.07

by Charles T. Carlstrom and Sarah Wakefield

It is crucial that monetary policymakers know what expectations the public has for inflation rates over the short and long term. One reason is that inflation expectations help policymakers to gauge the public's perception of the central bank's commitment to maintaining a low and stable rate of inflation. Even more important is the fact that long-term inflation expectations—if they are stable—often mute short-term movements in inflation. So keeping long-term inflation expectations well-contained is desirable.

Inflation expectations, despite their importance, are

Household Inflation Expectations, Survey-Derived (Median Expected Change)



Source: University of Michigan, *Survey of Consumers*.

notoriously difficult to measure. One well-known measure comes from the University of Michigan's Survey of Consumers. Households are asked what they expect inflation will be on average over the next year (short-term expectations) as well as in the next 5 to 10 years (long-term expectations). According to this measure, mean short-term inflation expectations have crept up more than 50 basis points since the beginning of 2007. Over the past month alone they increased 50 basis points, although part of that increase served to erase some of the improvement that had occurred over the summer. Longer-term expectations have remained fairly steady, not showing any discernible movement over the year.

TIPS-Derived Inflation Expectations, January 2003-July 2007*

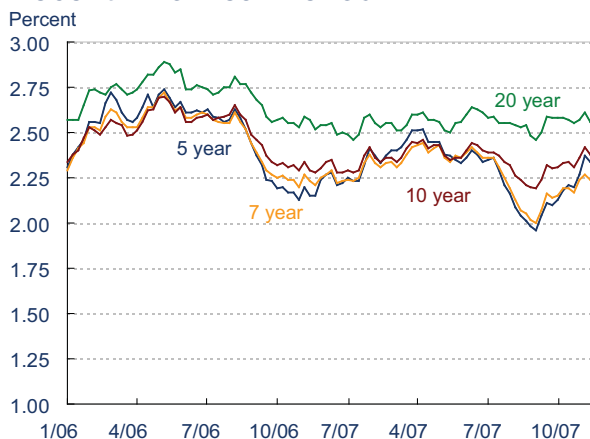


*January 2003 is the first TIPS data available.

Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical Releases, H. 15.

Survey measures are greeted with skepticism in some quarters. Since they do not reflect market transactions, responses do not necessarily reflect what market participants are truly expecting to happen. Furthermore, while there is evidence to suggest that changes in survey measures may be informative, the levels themselves are clearly not very accurate. It is doubtful that people really expect inflation to average 3.5 percent over the next 5 to 10 years. For that reason, many simply report the median versus the mean response from survey participants. This pushes down the average inflation rate that people expect over the next 5 to 10 years to 3 percent. Even this seems high, but it does not strain credulity as much.

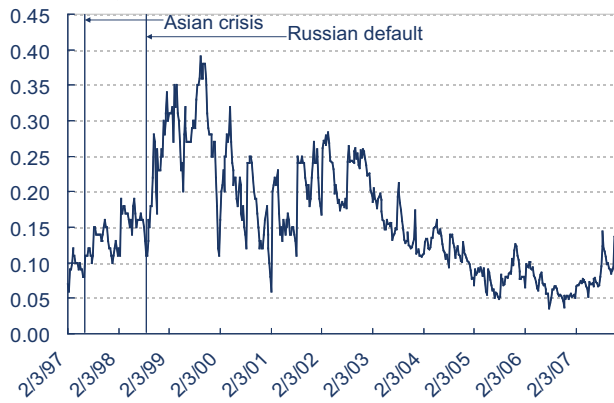
TIPS-Derived Inflation Expectations, Recent Two-Year Period



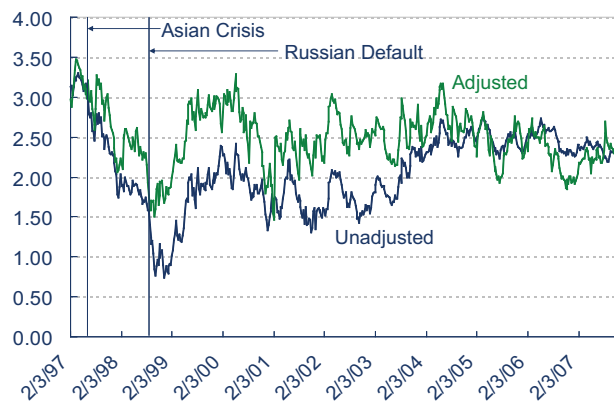
Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical Releases, H. 15.

As an alternative, many economists have looked to the TIPS market to get a truer sense of what markets are expecting inflation to average. In theory, the yields on two different kinds of Treasury securities—nominal Treasury notes and Treasury inflation-protected securities (TIPS)—can be used to calculate a market-based estimate of expected inflation. Nominal Treasury notes earn a fixed nominal rate of interest on a fixed amount of principal, whereas the principal of TIPS is adjusted for inflation. Because the return on nominal Treasuries is vulnerable to inflation, it compensates investors for inflation over the time they hold the bonds. In principle, one ought to be able to simply subtract the real yield on TIPS from the nominal yield of Treasury notes of the same maturity to derive expected inflation.

Liquidity Premium

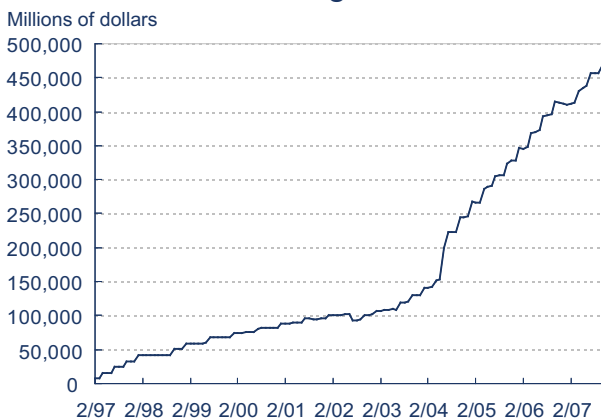


Expected Inflation, TIPS-Derived for Ten Years Ahead (Adjusted and Unadjusted)



Source: Federal Reserve Board.

Marketable Inflation-Protected Securities Outstanding



Source: U.S. Treasury

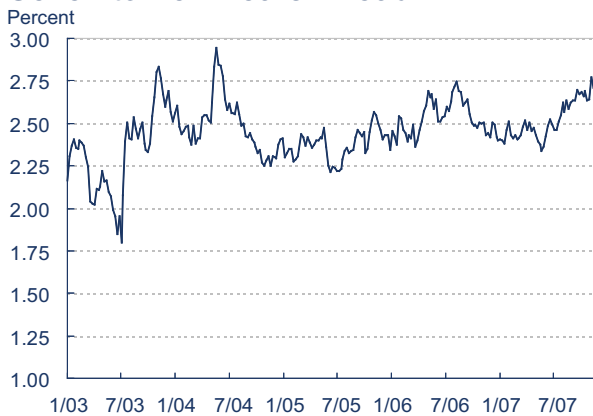
Using this method, one can derive inflation expectations over the next 5, 7, 10, and 20 years. This measure suggests that expected inflation in the next 5 or 7 years is around 2.25 percent. Over the next 10 years it is slightly higher, 2.4 percent, but in 20 years, it jumps to 2.6 percent.

Is it really realistic that market participants expect inflation to average a full one-half percentage point more over the next 20 years than in the next 7 years? Perhaps, but the fact that expectations for inflation in 20 years consistently run above those for other time frames suggests that something else may be going on. The answer is that TIPS estimates of inflation expectations are also imperfect. There are two factors that cause TIPS to be a biased predictor of expected inflation: an inflation-risk premium and a liquidity premium. To make matters more difficult, these biases likely go in different directions.

The existence of inflation risk suggests that the TIPS measure of expected inflation likely overestimates actual expected inflation. Nominal securities must compensate investors for the risk that inflation will change and affect the securities' returns but by definition, a TIPS real return is constant. Because nominal securities include an inflation-risk premium but TIPS do not, the real return on TIPS will be less than the average return on nominal bonds. Over short periods of time the compensation for inflation risk will be pretty small, but over long periods like 20 years it can be quite substantial. Studies suggest that because of inflation risk, even the 10-year TIPS-derived measure will overestimate actual expected inflation by 50 to 100 basis points. Although this bias may not be constant over very long periods of time, monthly movements in the bias are probably not too important.

In contrast, TIPS returns contain a premium to compensate investors for liquidity risk. While the TIPS market is deep, it is probably less liquid than the market for nominal Treasury securities. Because of this relative liquidity difference, a TIPS real return should be greater than the real return on nominal government securities. As a result, TIPS-derived expected inflation will underestimate actual expected inflation. This difference, while typically

Expected Inflation, TIPS-Derived for Seven to Ten Years Ahead



Source: Board of Governors of the Federal Reserve System, "Selected Interest Rates," Federal Reserve Statistical releases, H. 15.

small, can be important during periods in which there are severe liquidity concerns. While potentially important, the bias due to liquidity risk is more difficult to correct for than the bias due to inflation risk because it is likely not constant over time.

One measure of the market's liquidity concerns is the difference in the yields on nominal Treasuries in the primary and secondary markets. (The primary market refers to bonds bought directly from the Treasury at auction, and the secondary market refers to bonds bought from other investors.) This difference, although small, can pick up broader liquidity concerns in the market. For example, during the Asian crisis this measure increased little, from less than 10 basis points to 15–20 basis points. The Russian default crisis saw a much more dramatic increase, with the difference in yields increasing nearly 30 basis points over the months of the crisis. Recently, this measure has increased 10 basis points, similar to the magnitude of the increase during the Asian crisis.

A 2004 study used this measure of the liquidity premium to correct TIPS 10-year expected inflation for liquidity risk. The study was largely a statistical exercise and, if correct, has pretty alarming implications for today. Given recent financial turmoil, liquidity-adjusted inflation expectations have increased nearly 50 basis points. According to this measure, market participants are expecting inflation to average nearly 3 percent over the next 10 years.

The liquidity correction used in this study, however, almost assuredly overcorrects. This is because the study was done when the TIPS market was a lot less liquid and deep than it is today. For example, volume in the market has doubled since then.

While the recent increase in TIPS-derived adjusted inflation expectations deserves our attention, it is still not clear that long-term inflation expectations have truly increased 50 basis points in the past two months.

A better measure of inflation expectations might be to use the separate 7-year and 10-year TIPS-derived inflation expectations to construct a measure of expectations for the combined period—7 to 10 years out. The problem of the liquidity premium

is probably minor since liquidity concerns for 7- and 10-year TIPS are probably negligible. There is undoubtedly more inflation risk over 10 years than over 7, but this probably only biases up by a small degree the measure of inflation expectations 7–10 years out.

Unfortunately, this measure shows the same qualitative pattern as the 10-year liquidity-adjusted measure. According to the 7–10 year measure, there has been a marked increase since early summer in long-term inflation expectations of nearly 50 basis points.

Both the liquidity-adjusted measure of long-term inflation expectations and the measure for 7–10 years out suggest that inflation expectations may have crept up in response to the latest federal funds rate cuts and the probability of possible future rate cuts. Of course, these moves in the funds rate may be appropriate considering the recent financial turmoil caused by the housing market correction, and the possible specter of a recession.

Money, Financial Markets, and Monetary Policy

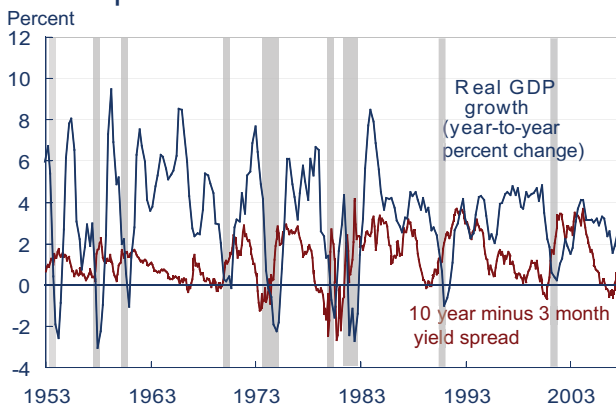
What Is the Yield Curve Telling Us?

11.20.07

by Joseph G. Haubrich and Katie Corcoran

Since last month, both long-term and short term interest rates have decreased, with short rates dipping more, leading to a steeper yield curve. 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 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.

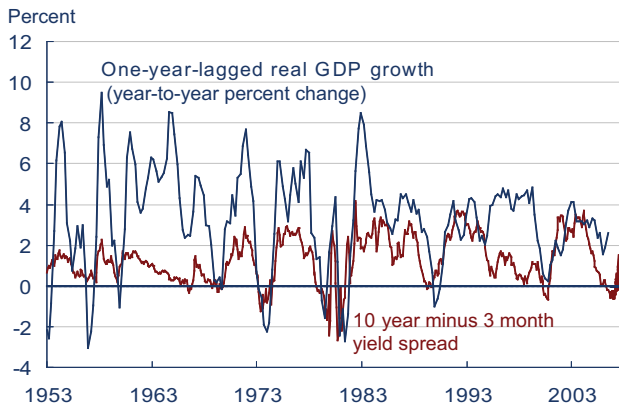
Yield Spread and Real GDP Growth*



*Shaded bars represent recessions

Sources: Bureau of Economic Analysis; Federal Reserve Board

Yield Spread and Lagged Real GDP Growth



Sources: Bureau of Economic Analysis; Federal Reserve Board

The yield curve had been giving a rather pessimistic view of economic growth for a while, but with an increasingly steep curve, this is turning around. The spread remains robustly positive, with the 10-year rate at 4.22 percent and the 3-month rate at 3.40 percent (both for the week ending November 16). Standing at 82 basis points, the spread is up from October's 67 basis points as well as September's 38 basis points. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.5 percent rate over the next year. This is broadly in the range of other forecasts, if a bit on the low side.

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 9 percent, down from October's 14 percent and September's 17 percent.

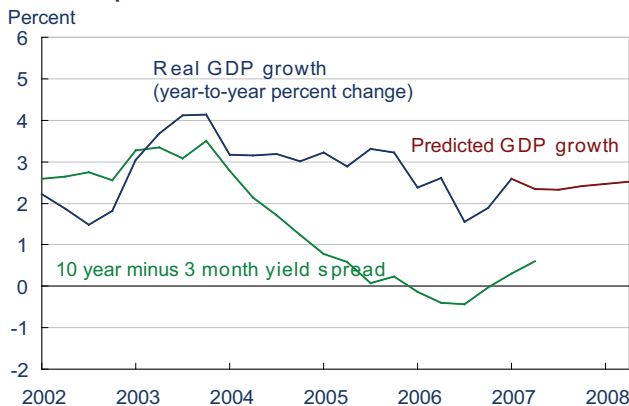
Perhaps the decreasing probability of a recession seems strange in the midst of recent financial concerns, but one aspect of those concerns has been a flight to quality, which has lowered Treasury yields, and a reduction in both the federal funds target rate and the discount rate by the Federal Reserve, which tends to steepen the yield curve.

The 9 percent is close to the 9.5 percent calculated by James Hamilton over at Econbrowser

(though we are calculating different events: our number gives a probability that the economy will be in recession over the next year; Econbrowser looks at the probability that the second quarter of 2007 was in a recession.)

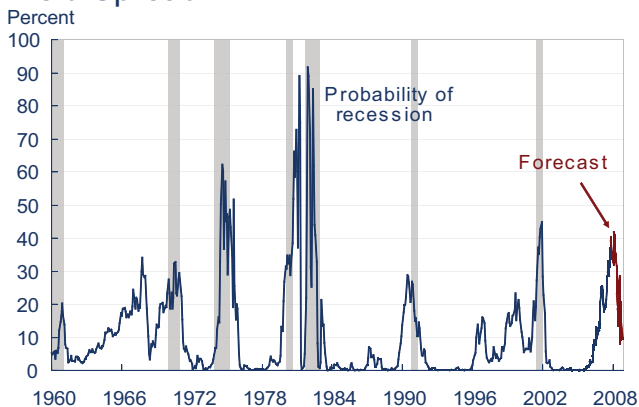
Of course, it might not be advisable to take this number quite so literally, for two reasons. First, this probability is itself subject to error, as is the case with all statistical estimates. Second, other researchers have postulated that the underlying determinants of the yield spread today are materially different from the determinants that generated yield spreads during prior decades. Differences could arise from changes in international capital

Predicted GDP Growth and the Yield Spread



Sources: Bureau of Economic Activity; Federal Reserve Board

Probability of Recession Based on the Yield Spread*



*Estimated using probit model
 Note: Shaded bars indicate recessions.
 Sources: Bureau of Economic Analysis; Federal Reserve Board;
 Authors' calculations

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

Dollar Depreciations and Inflation

12.07.07

By Owen F. Humpage and Michael Shenk

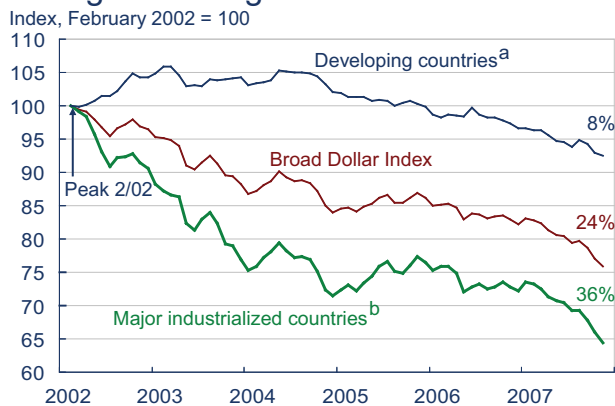
The dollar has depreciated 24 percent on a broad trade-weighted basis since its peak in February 2002, posting its biggest losses against currencies of the major developed countries. Since late January 2002, for example, the dollar has lost 41 percent of its value against the euro.

A dollar depreciation—all else constant—raises the price of all U.S. traded goods. It directly increases the dollar price of U.S. imports. Likewise, it directly lowers the foreign-currency prices of U.S. exports, but this will shift foreign demand toward our exported goods and, thereby, raise their dollar prices. These price effects are important; they foster the adjustment in our international trade and financial accounts.

Exchange-rate-induced price changes—contrary to popular belief—are not inflationary. Inflation is a decline in the purchasing power of money that results when the money supply rises faster than money demand. Inflation manifests itself as a rise in all prices. If the rate of inflation in the United States exceeds the rate of inflation in the rest of the world, the dollar will depreciate. In fact, exchange rates may react faster than the prices of goods and services. In this case, inflation causes a depreciation; the depreciation does not cause inflation.

Since 2006, however, the dollar has depreciated because foreign investors have become reluctant to add dollar assets to their portfolios, not because of a high U.S. inflation rate or expectations of future

Foreign Exchange Indexes



a: Other Important Trading Partners Index.
b: Major Currencies Index.
Source: Board of Governors of the Federal Reserve System.

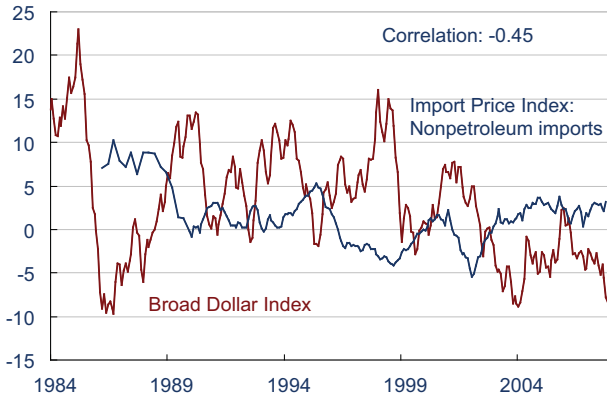
Dollar Exchange-Rate Movements

	Percent change from:	
	01/28/2002 ^a	08/06/2007 ^b
Australia	-40.7	-1.4
Canada	-36.4	-3.5
Euro area	-41.0	-5.5
Japan	-16.9	-6.7
Mexico	18.4	-3.7
United Kingdom	-30.4	-0.3

a. Peak in Major Currency Index.
b. Day preceding the August FOMC meeting.
Source: Bloomberg Financial Services.

Broad Dollar and Import Price Indexes

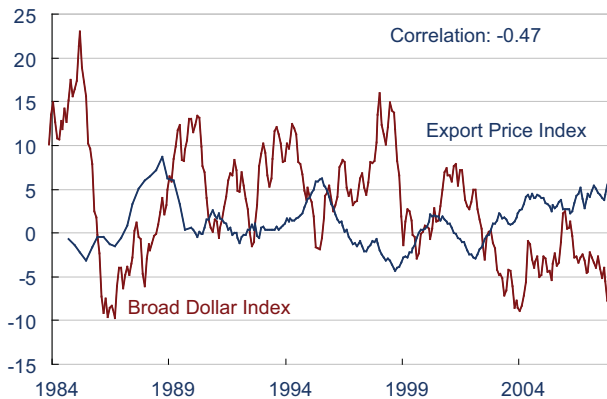
Percent change, year over year



Source: Board of Governors of the Federal Reserve System; and Bureau of Labor Statistics.

Broad Dollar and Export Price Indexes

Percent change, year over year



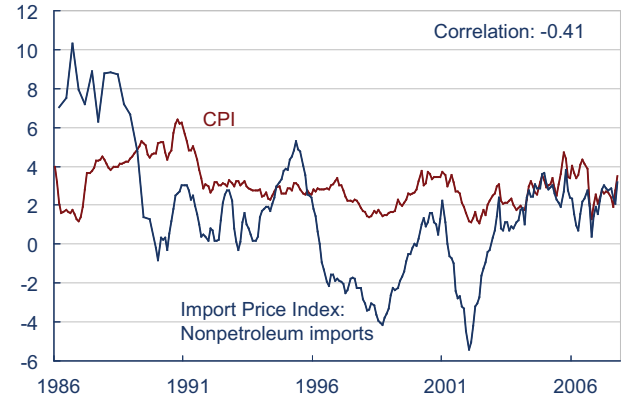
Source: Board of Governors of the Federal Reserve System; and Bureau of Labor Statistics.

inflation. The price of trade goods will rise, but as long as the Federal Reserve does not accommodate the price pressures by easing excessively, inflation will not ensue.

All this may sound like an excessive bit of economic hair splitting. To the average consumer, a price rise is a price rise. But to a central bank the distinction is vital. Central banks can prevent inflation; they cannot always stop relative changes in the price of traded goods.

CPI and Import Price Index

Percent change, year over year



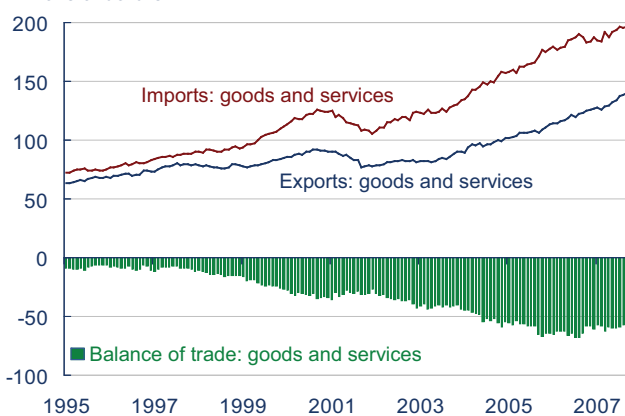
Source: Bureau of Labor Statistics

International Markets

Trade and the Dollar

Trade Balance, Exports and Imports

Billions of dollars



Source: Census Bureau

12.06.07

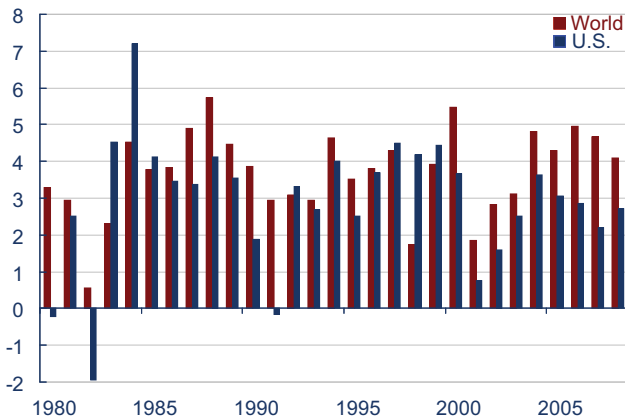
By Owen F. Humpage and Michael Shenk

Our trade deficit is narrowing, with exports growing at four times the pace of imports. In September 2007, the U.S. deficit in goods and services trade was \$677.4 billion (annual rate), down substantially from its recent peak of \$811.3 billion in August 2006. In the third quarter of 2007, strong exports contributed nearly 2 percentage points to real economic growth, a welcome offset to weak residential investment. Strong export growth is likely to continue through next year because of strong growth abroad and the dollar's depreciation.

A key factor contributing to lower U.S. trade deficits is phenomenally strong economic growth

Real GDP Growth

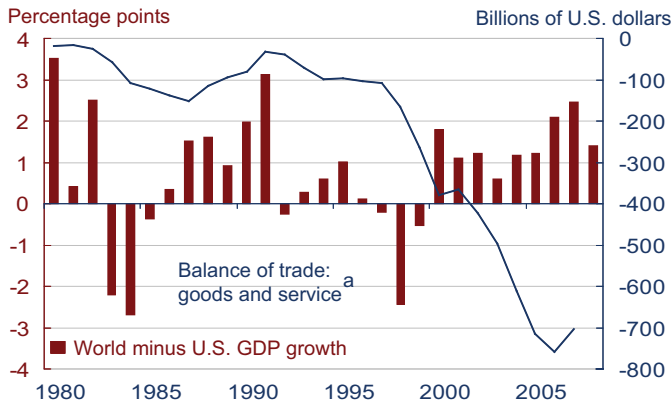
Annual percent change



Sources: Board of Governors of the Federal Reserve System; Bureau of Economic Analysis International Monetary Fund, *World Economic Outlook Database*, Oct. 2007; and Action Economics

abroad relative to that in the United States. The slower pace of U.S. growth this year has trimmed import demand. Growth next year will probably show only a little improvement. World growth, in contrast, is well above its average pace, and the number of countries sharing in that growth is the largest in most observers' memories. Holding all else constant, when foreign growth exceeds U.S. growth by at least one percentage point, our trade deficit often shrinks. Foreign growth has outpaced U.S. growth since 2004 and is likely to do so this year and next. The big uncertainty, of course, is the possible global fallout from the U.S. subprime implosion.

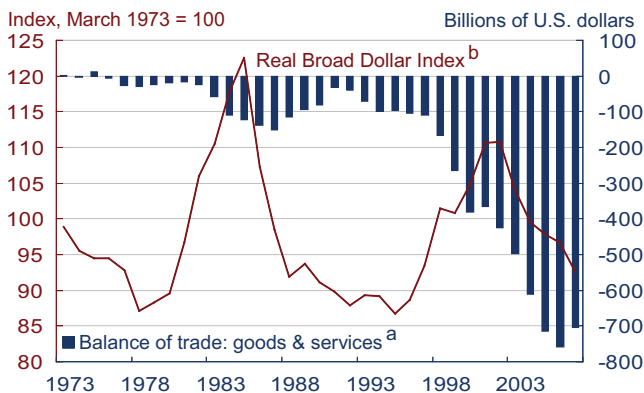
Real Growth Differential and Trade Balance



a: 2007 data is the average of the first three quarters
Sources: Board of Governors of the Federal Reserve System; Bureau of Economic Analysis; International Monetary Fund, *World Economic Outlook Database*, Oct. 2007; Action Economics.

The U.S. trade deficit is getting a boost from the dollar. The relationship between dollar depreciations and the U.S. trade balance has never been simple and clear-cut, because it depends critically on why the dollar depreciates. The dollar has been depreciating since early 2002. Initially, the depreciation seemed to reflect aggregate demand pressures emanating from the United States. Such a home-grown depreciation would not result in a lower trade deficit. Since 2006, however, a growing reluctance among international investors to add dollar-denominated assets to their portfolios seems to be driving the dollar down. The Federal Reserve's rate cuts in September and October encouraged these portfolio adjustments. This diversification will lead to a lower trade deficit if not confounded by inflation fears, and thus far, the federal funds rate cuts have not had a significant effect on inflation expectations.

Real Broad Dollar and Trade Balance



a: 2007 data is the average of the first three quarters
b: 2007 data is the average of the first 11 months
Sources: Board of Governors of the Federal Reserve System; Bureau of Economic Analysis.

A dollar depreciation in response to an international portfolio shift out of dollars raises the dollar price of goods produced abroad and lowers the foreign-currency price of goods manufactured in the United States. This relative price change shifts worldwide demand toward the United States and, if inflation remains subdued, will reduce the U.S. trade deficit.

The Employment Situation

12.10.07

By Murat Tasci and Beth Mowry

Labor Market Conditions

	Average monthly change (thousands of employees, NAICS)				
	2004	2005	2006	Jan.–Nov. 2007	November 2007
Payroll employment	172	212	189	118	94
Goods-producing	28	32	9	-24	-33
Construction	26	35	11	-11	-24
Heavy and civil engineering	2	4	2	-1	-5
Residential ^a	9	11	-2	-7	-20
Nonresidential ^b	3	4	6	2	1
Manufacturing	0	-7	-7	-16	-11
Durable goods	8	2	0	-11	-1
Nondurable goods	-9	-9	-6	-5	-10
Service-providing	144	180	179	142	127
Retail trade	16	19	-3	6	24
Financial activities ^c	8	14	16	-2	-20
PBS ^d	38	57	42	23	30
Temporary help services	11	18	-1	-4	11
Education and health services	33	36	41	47	28
Leisure and hospitality	25	23	38	30	26
Government	14	14	20	21	30
Local educational services	8	6	11	7	10
	Average for period (percent)				
Civilian unemployment rate	5.5	5.1	4.6	4.6	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 payroll employment grew by 94,000 in November, just slightly below the forecasted gain of 100,000. This follows October's strong job growth of 170,000, revised up from 166,000. However, gains for September were revised down by more than half to 44,000. After these revisions, the average monthly increase in employment stands about 118,000 for 2007, significantly lower than the past three years. The average monthly employment gain in the third quarter now stands at 77,000, which is the lowest since the third quarter of 2003. The unemployment rate remained unchanged from the previous two months, at 4.7 percent.

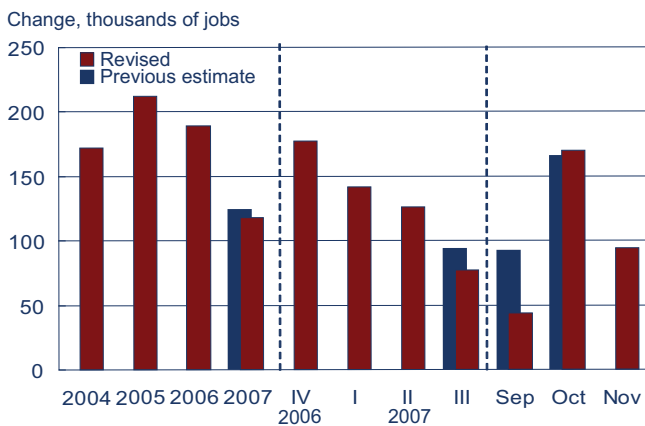
Service-providing industries continued to drive growth, adding 127,000 jobs during the month on strong, broad-based gains, with the exception of a 20,000 loss in financial services. This fourth consecutive monthly loss for financial services was largely due to cuts in credit intermediation (-13,000) and real estate, rental, and leasing (-10,800). Professional business services remained solid, as did leisure and hospitality and the government sector, which added 26,000 and 30,000 to their payrolls, respectively.

Goods-producing industries were a dark spot in the report, losing 33,000 jobs. Nondurable goods manufacturers (-10,000) and specialty trade contractors (-11,000) bore most of the hardship within this category. Overall, the construction industry lost 24,000 jobs. Jobs in residential construction fell by 20,000, reflecting a sharp decline in the housing sector.

November's gain in overall employment reflected a 30,000 increase in government payrolls and a 64,000 increase in private payrolls. The heaviest gains in government were at the local level (19,000), and the sector as a whole has contributed positively to growth over the year, with the exceptions of June (-2,000) and July (-24,000).

Professional and business services made a hefty

Average Nonfarm Employment Change



Source: Bureau of Labor Statistics.

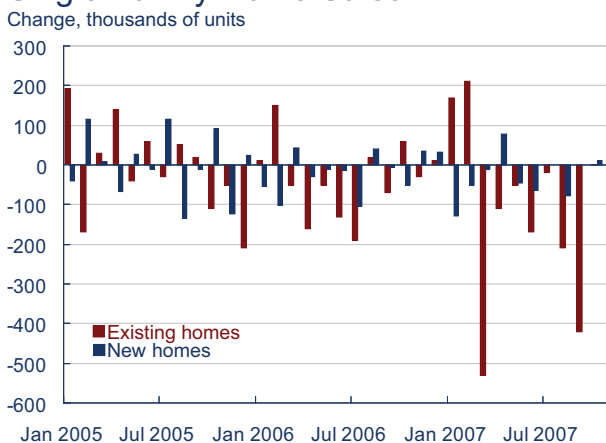
contribution of 30,000 jobs during the month, led largely by professional and technical services (23,900) and computer systems design (11,900). Leisure and hospitality also added an impressive 26,000 to its payrolls, despite pressures on consumers. This sector was led almost exclusively by food services and accommodation, which experienced 27,800 in payroll gains. Also notable was the 24,000 increase in retail payrolls, which more than offset the past three-month decline.

Overall, this month's report suggests that the economy is still creating jobs at a moderate pace. However, it is worth noting that monthly numbers are volatile and subject to revision. In last month's report, for instance, the Bureau of Labor Statistics revised September payrolls down by 14,000, lowering that estimate to a gain of 96,000. The current report made even more dramatic revisions, reducing the earlier figure by 52,000 and resulting in September gains of 44,000. Payroll gains in October and November are subject to revision in the next report.

Economic Activity

The Housing Market

Single-Family Home Sales



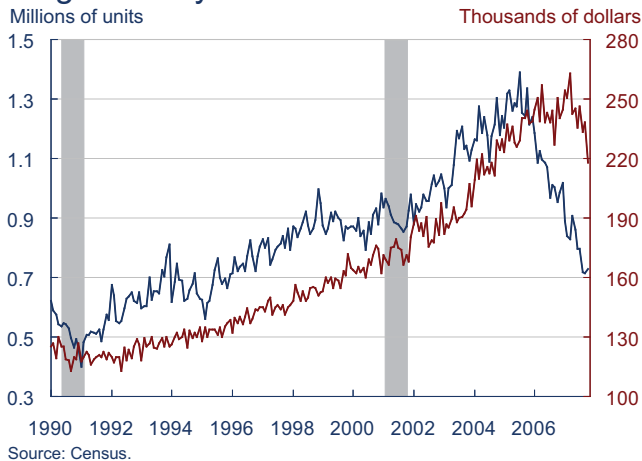
Sources: Census; and National Association of Realtors.

12.10.07

By Michael Shenk

Sales figures for single-family homes were relatively good in October—the key word being relatively. In the market for new homes, sales increased 1.7 percent in October, which wouldn't be noteworthy under normal conditions. But considering that sales have fallen an average of 2.4 percent per month over the past 27 months, a slight increase seems rather positive. In the market for existing homes, sales were virtually unchanged in October, which, again, wouldn't be noteworthy except for the fact that it is the best showing in the series since February. In fact, October marked only the fourth time since the end of 2004 that sales of neither new or existing single-family homes fell. And though that seems like great news, keep in mind that both of these numbers are preliminary and will be revised in the months to come.

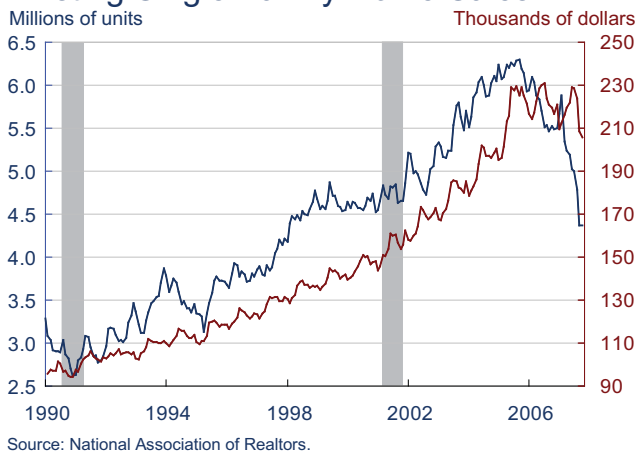
Single-Family Home Sales



Looking at the long-term trend, this month's positive figures are more or less lost. Since peaking in mid 2005, new and existing single-family home sales are still down 47.6 percent and 30.6 percent, respectively. In addition, the median sales prices of both new and existing single-family homes are down a little more than 10 percent from two years ago.

The inventory story isn't very pretty either. While the current inventory level (in terms of months of supply at the current sales pace) is not unprecedented in either market, levels in both markets are very much elevated. (Though it is not shown on the chart below, the inventory of existing single-family homes on the market relative to the current sales pace was higher than it is now on several occasions, most recently in 1985.) In the market for new homes, the actual number of homes on the market has been declining steadily since July 2006, as home builders have been adjusting their inventory levels. However, throughout this period sales have been falling at a faster pace than inventories, resulting in greater months of supply. In the market for existing homes, where inventories can be much more difficult to control, the actual number of homes on the market has generally continued to increase as the sales pace has declined, resulting in a very rapid and steady increase in the months of supply on the market.

Existing Single-Family Home Sales



New Single-Family Homes for Sale



Existing Single-Family Homes for Sale



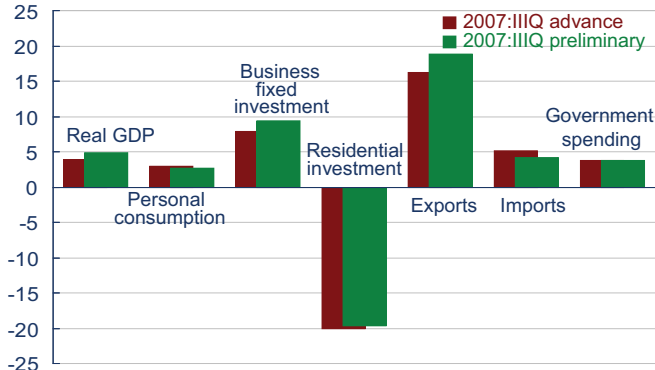
Third-Quarter Preliminary GDP Release

12.06.07

By Brent Meyer

Revisions to Real GDP and Components

Annualized percent change



Source: Bureau of Economic Analysis.

Real GDP was revised up from 3.9 percent (annualized rate) to 4.9 percent, according to the preliminary estimate released by the Bureau of Economic Analysis. The one percentage point adjustment was primarily due to upward revisions to private inventories and exports, and a downward revision to imports. Private inventories added \$27.1 billion in the third quarter, after a \$17.2 billion upward revision. Exports were revised up 2.7 percentage points to 18.9 percent, while imports dropped a percentage point, resulting in a revised increase of 4.2 percent in the third quarter. Personal consumption expenditures were revised down from an increase of 3 percent to 2.7 percent, partially offsetting the upward revisions. If the preliminary estimate holds, it will be the largest annualized increase in GDP since the third quarter of 2003.

Real GDP and Components, Third-Quarter Advance Estimate

	Quarterly change (billions of 2000\$)	Annualized percent change, last	
		Quarter	Four quarters
Real GDP	139.2	4.9	2.8
Personal consumption	54.2	2.7	2.9
Durables	12.0	4.0	4.76
Nondurables	11.1	1.9	2.2
Services	32.1	2.8	3.0
Business fixed investment	30.9	9.4	5.2
Equipment	18.5	7.2	1.7
Structures	10.2	114.3	13.3
Residential investment	-26.2	-19.7	-16.3
Government spending	19.1	3.8	2.7
National defense	12.2	10.1	5.7
Net exports	40.5	—	—
Exports	60.9	18.9	10.2
Imports	20.4	4.2	1.7
Change in business inventories	27.1	—	—

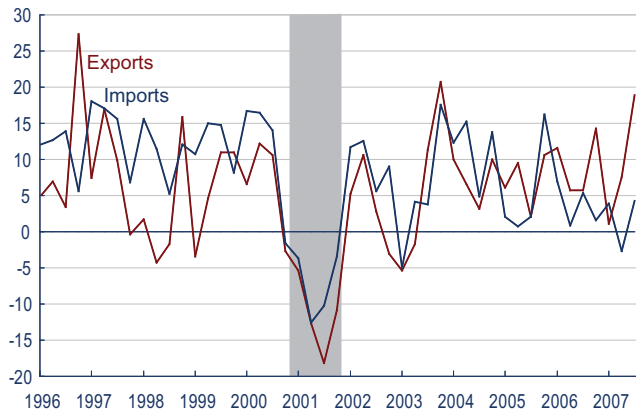
Source: Bureau of Economic Analysis.

Compared to the past four quarters, the third quarter's preliminary estimate is showing a slight deceleration in personal consumption expenditures and residential investment, while business fixed investment and exports are advancing well above growth over the past four quarters. The change in business inventories was the largest increase since the fourth quarter of 2005.

Net exports have been a hot topic as of late, partly due to weakness in the dollar, and were a major contributor to growth in the third quarter. Real exports increased 18.9 percent, their largest increase since the fourth quarter of 2003, while imports, which take away from growth in GDP accounting, increased only 4.2 percent. While the dollar value of exports is nowhere near the value of imports (which is reflected in our -\$533.4 net export balance), the recent trend of higher export growth is starting to close the gap. In fact, the \$40.5 billion change in net exports in the third quarter is the largest gain the series has ever seen since its start in 1947. The only quarter that comes close is the fourth quarter of 1996, which saw a \$39.4 billion

Imports and Exports

Annualized percent change



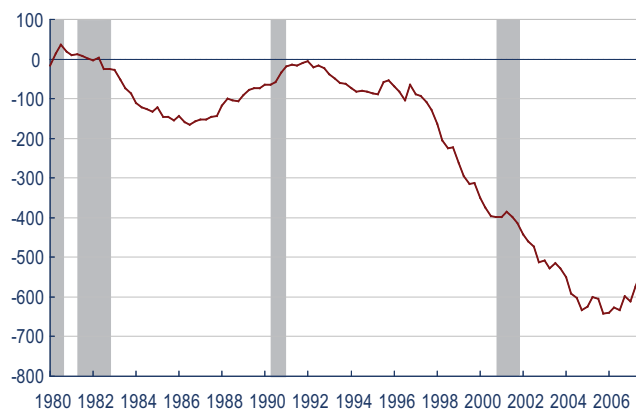
Note: Shaded bar indicates recession.
Source: Bureau of Economic Analysis.

addition. That being said, net exports haven't been positive since the second quarter of 1982.

The near-term consensus growth forecast, as produced by the Blue Chip panel of economists, has GDP dipping down to a growth rate of 1.7 percent but then rebounding to 2.8 percent by the end of 2008. Compared to their October forecast, this is a slightly weaker outlook over the next year.

Real Net Exports

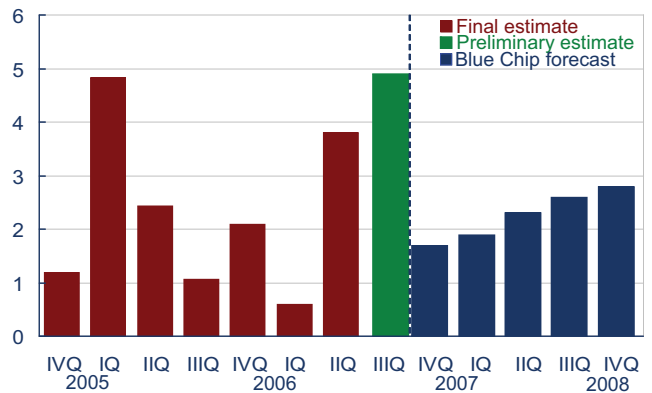
Billions (chained 2000\$, SAAR)



Note: Shaded bars indicate recessions.
Source: Bureau of Economic Analysis.

Real GDP Growth

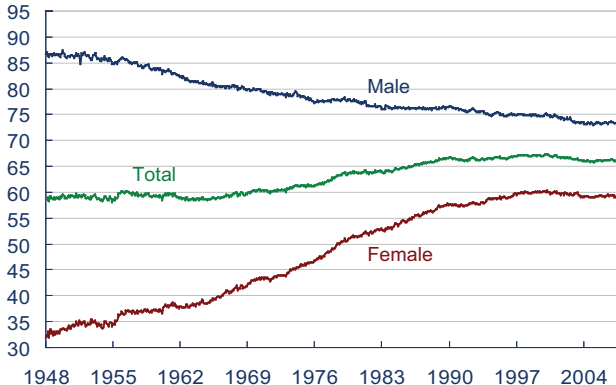
Annualized quarterly percent change



Sources: Blue Chip Economic Indicators, November 2007 and Bureau of Economic Analysis.

Labor Force Participation

Percent



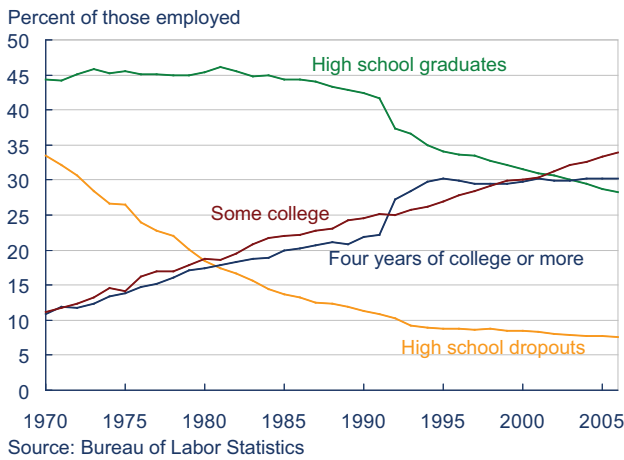
Source: Haver Analytics

Women in the Labor Force

12.05.07

By Murat Tasci and Beth Mowry

Women's Educational Attainment



Women's Occupations, 2006

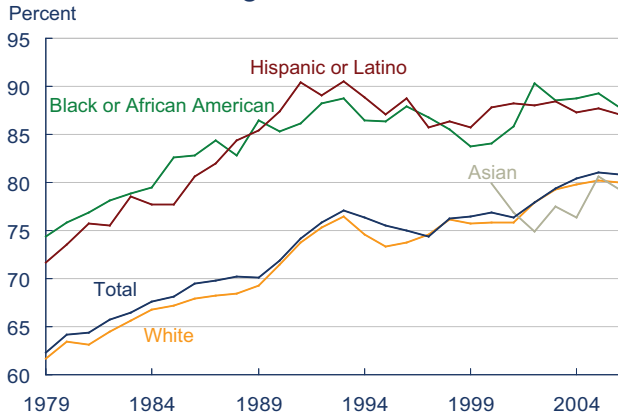
	Total employed (thousands)	Percent women
Total, 16 years and over	144,427	46.3
Management, professional, and related occupations	50,420	50.6
Management, business and financial operations	21,233	41.8
Professional and related occupations	29,187	56.9
Service occupations	23,811	57.3
Sales and office occupations	36,141	63.3
Sales and related occupations	16,641	49.1
Office and administrative support occupations	19,500	75.4
Natural resources, construction, and maintenance	15,830	4.8
Farming, fishing, and forestry occupations	961	22.1
Construction and extraction occupations	9,507	3.1
Installation, maintenance, and repair occupations	5,362	4.6
Production, transportation, and material moving	18,224	22.8
Production occupations	9,378	30.4
Transportation and material moving occupations	8,846	14.8

That women's experience in the labor force has changed in several notable ways over the past few decades is highlighted in a report just published by the Bureau of Labor Statistics. Since the 1970s, women have increased the level of their participation in the labor force, their earnings in real terms are higher, their attachment to the labor market is stronger, and they are attaining higher levels of education.

The higher participation of women in the labor force has often been cited as one of the most important trends in U.S. labor markets. Since the late 1940s, the rate of female labor force participation has been gradually increasing—from about 32 percent then to about 59 percent in 2007. Interestingly, the significant increase of women in the labor force did not translate into a comparable increase in the total labor force participation rate, because the trend for men's labor force participation has been declining. While the rate of female labor force participation jumped dramatically over this period, the rate of male participation dropped from 87 percent to 73 percent, leaving the total labor force participation rate at around 66 percent.

The increasing movement of women into the labor force has been matched by their attainment of higher levels of education. In 1970, one-third of women in the labor force were high school dropouts and only one-tenth held bachelor's degrees. By 2006, these figures had swapped places, with less than one-tenth of women in the labor force having dropped out of high school and almost one-third holding bachelor's degrees. This rising educational attainment helps to explain how women in 2006 accounted for more than half of all workers employed in the better-paying management, professional, and related occupations, despite the fact that women make up only 46.3 percent of the total number of people employed. Women are also the majority in service occupations and office and administrative support positions. However, they

Women's Earnings as a Percent of Men's



a. Women's median usual weekly earnings for full-time wage and salary workers as a percent of men's
Source: Current Population Survey, U.S. Department of Labor, U.S. Bureau of Labor Statistics

are dramatically underrepresented in several occupations, given the share of women in the overall workforce: construction and extraction; installation, maintenance, and repair; and transportation and material moving.

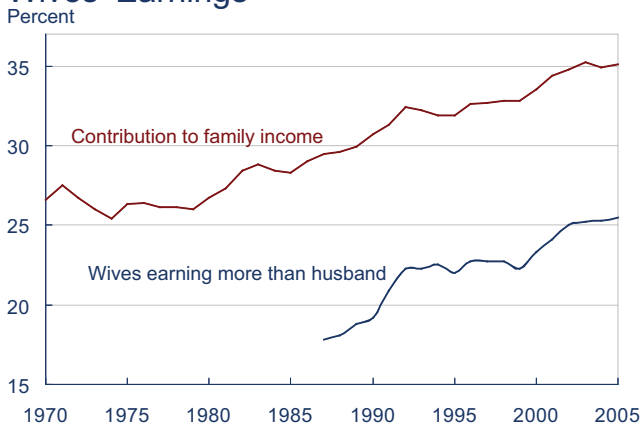
Income disparity between men and women has continued its narrowing trend. Women in 2006 took home 80 percent of what their male counterparts made, compared to only 62 percent in 1979. White and Asian women continue to experience the greatest disparity, earning about 80 percent as much as white and Asian men, while Hispanic and African American women make 87 percent as much as their male counterparts. Meanwhile, wives' contribution to family incomes rose from 27 percent to 35 percent between 1970 and 2005. More than 25 percent of wives now earn more than their husbands, compared to 18 percent in 1987.

Women with Work Experience

Year	Percent of female population	Total	Usually work full-time		Usually work part-time			
			Total	1-49 weeks	50-52 weeks	Total	1-49 weeks	50-52 weeks
1970	52.7	100.0	67.9	40.7	27.2	32.2	10.1	22.1
1975	53.8	100.0	67.1	41.4	25.7	32.8	11.7	21.1
1980	57.7	100.0	67.7	44.7	23.0	32.3	11.9	20.4
1985	59.4	100.0	68.1	48.9	19.2	31.8	12.3	19.5
1990	62.1	100.0	69.8	51.5	18.3	30.2	12.8	17.4
1995	62.8	100.0	70.2	54.3	15.9	29.7	13.3	16.4
2000	64.0	100.0	72.9	58.4	14.5	27.1	13.4	13.7
2005	61.4	100.0	72.7	59.9	12.8	27.3	14.1	13.2

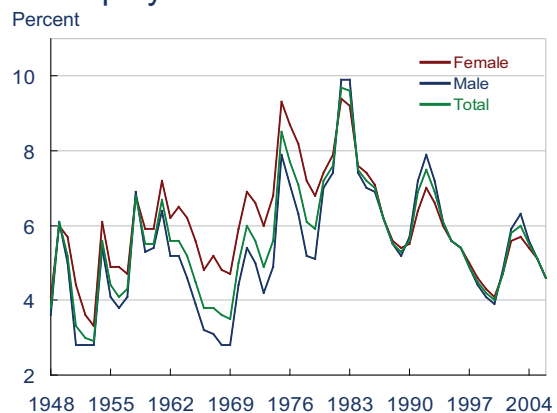
Over the past several decades, women have become more attached to the labor force, even when they are out of a job. This stronger attachment is suggested by several observations. Since the early 1980s, the unemployment rate for women has closely followed that of men. In addition, during the last three recessions, women's unemployment rates stayed lower than men's—and this occurred during the time the participation of women in the labor force was steadily increasing. And finally, more women are working full-time, and fewer are working part-time. From 1970 to 2005, the percentage of working females with work experience who were full-timers grew from 68 percent to about 73 percent, while the percentage of those who were part-timers fell from 32 percent to about 27 percent.

Wives' Earnings



a. "Contribution to family income" is given in median percent
b. "Wives earning more than husband" data excludes families in which husband had no earnings from work and includes only families in which both wives and husbands have earnings
Source: Bureau of Labor Statistics

Unemployment Rates



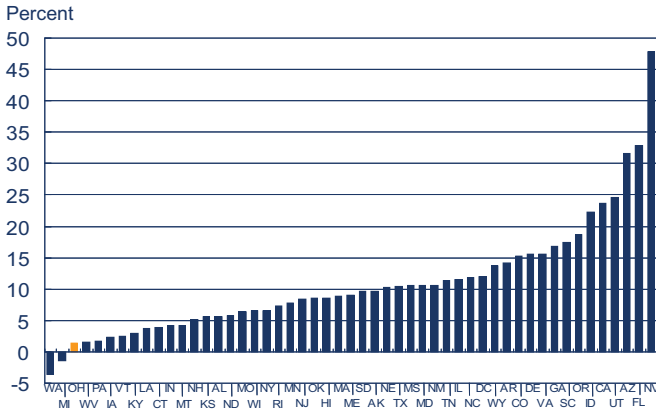
Sources: Bureau of Labor Statistics, Haver Analytics

Business Establishments

12.11.07

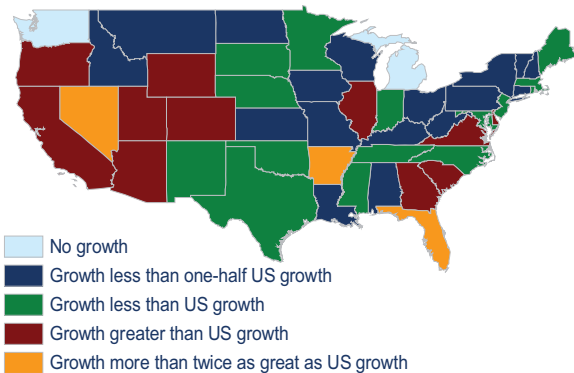
By Tim Dunne and Kyle Fee

Private Establishment Growth, 2001–2007:I

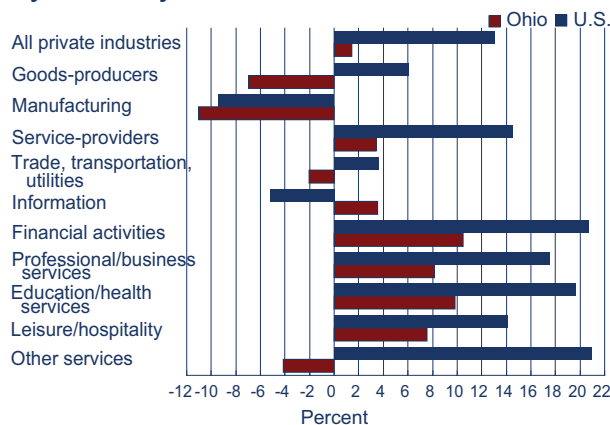


Private Establishment Growth Relative to the Nation, 2001–2007:I

U.S. establishment growth = 13.1%



Private Establishment Growth by Industry, 2001–2007:I



Besides providing data on employment, the Quarterly Census of Employment and Wages (QCEW) program also produces statistics on private business establishments. These statistics can tell us how the number of private business establishments has changed over time, as well as whether the number is growing at different rates in different states. A business establishment is defined as a location—a store, an office, or a plant—where business activity takes place. It may represent an entire firm or simply one location of multi-plant firm. The QCEW includes all business establishments that employ at least one worker, but excludes businesses without employees.

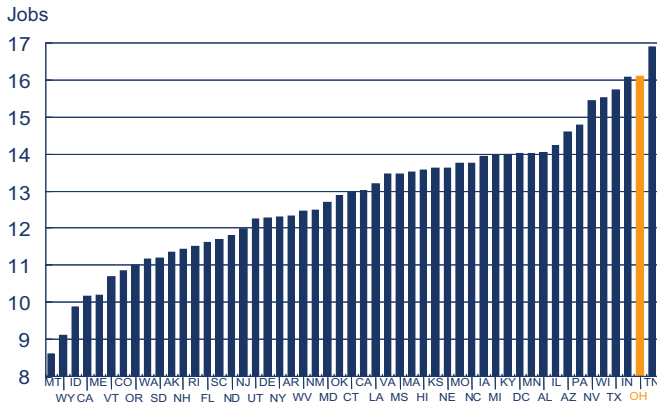
Looking across the 50 states, we see quite a range in the growth rates of the number of establishments. Nevada had the highest growth rate (47.8 percent) from 2001 to the first quarter of 2007, while Washington had the lowest (-3.6 percent). Washington's low growth rate partially reflects the fact that the number of establishments in the state peaked in 2001, after it had risen substantially during the 1990s.

The Fourth District states of Ohio, Kentucky, Pennsylvania, and West Virginia stand out because they are all in the lowest quintile of the 50 states with respect to the growth in the number of business establishments over this period. Ohio is ranked 48th, West Virginia, 47th, Pennsylvania, 46th, and Kentucky, 43rd.

The geographic distribution of establishment growth is shown on the U.S. map below, as well. Fast-growth states are generally located in the West and South, while slow-growth states are in the Northeast, the Great Lakes region, and the Upper Midwest.

Comparing Ohio's growth in the number of business establishments to the nation's shows that Ohio's economy has generated less growth than the overall U.S. economy in almost all industries.

Employment per Private Establishment, 2007:1



Growth in the number of goods-producing business establishments was -7.0 percent; the U.S. growth rate was 6.0 percent. The difference is largely due to strong growth in construction-related businesses. Indeed, growth in manufacturing establishments looks similar for Ohio (-11.0 percent) and the United States as a whole (-9.4 percent).

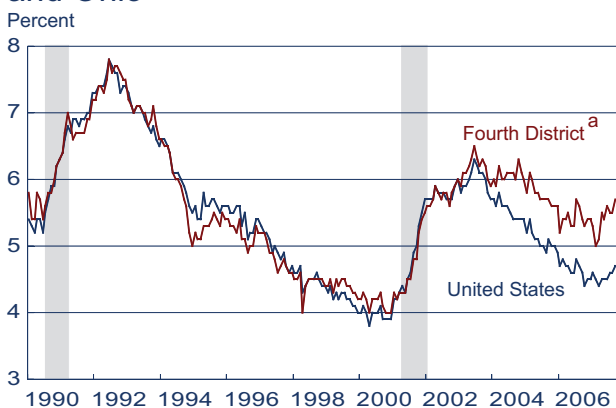
Somewhat surprisingly, the only sector where Ohio's growth in the number of business establishments exceeded the nation's was in the information sector. For the United States as a whole, the number of establishments providing information services actually fell from 2001 to the first quarter of 2007, while in Ohio it actually rose. The reason for this, in part, is that 2001 was close to the peak of the Internet boom, and the number of information services firms had expanded markedly in some states in the late 1990s but less so in Ohio. The subsequent Internet bust affected information services more strongly in places where expansion had been particularly strong, like California.

The final chart shows the average size of establishments, measured in terms of number of employees, in the first quarter of 2007. Again, Ohio is in a tail of the distribution. The average-sized business in Ohio has 16 employees—the second-highest average in nation. Only Tennessee averages a higher number of employees at each establishment.

Regional Activity

Fourth District Employment Conditions

Unemployment Rates, Fourth District and Ohio



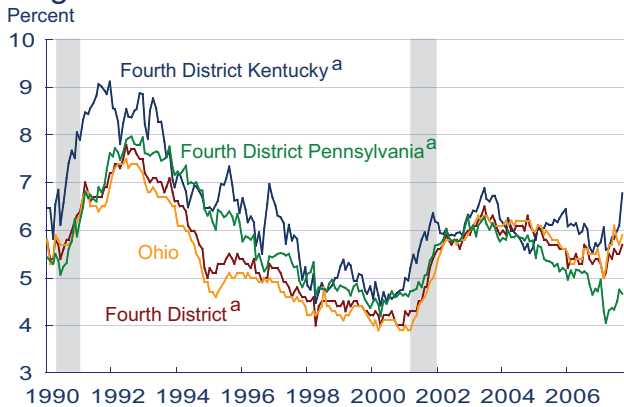
a. Seasonally adjusted using the Census Bureau's X-11 procedure.
 * Shaded bars represent recessions. Some data reflect revised inputs, reestimation, and new statewide controls. For more information, see <http://www.bls.gov/iau/launews1.htm>.
 Source: U.S. Department of Labor, Bureau of Labor Statistics.

12.03.07

By Tim Dunne and Kyle Fee

The district's unemployment rate rose to 5.7 percent for the month of September, an increase of 0.2 percentage point. The jump in the unemployment rate can be attributed to the increase in the number of unemployed people (3.4 percent) outpacing increases in the number of people employed (0.3 percent) and the labor force (0.7 percent). Compared to September's national unemployment rate, the district's rate stood 1.0 percent higher, continuing the trend since early 2004 of being consistently higher than the national rate. Year over year, the Fourth District's unemployment rate increased 0.3

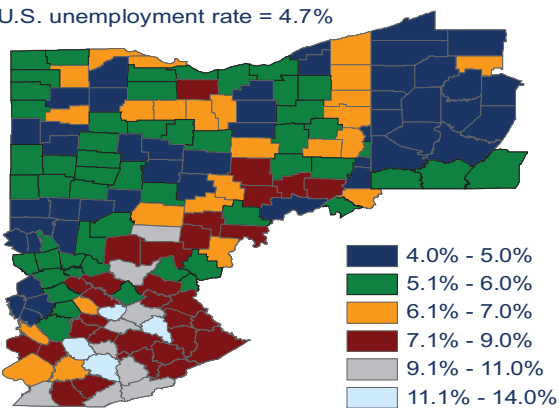
Unemployment Rates, Fourth District Regions



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 <http://www.bls.gov/lau/launews1.htm>.
 Source: U.S. Department of Labor, Bureau of Labor Statistics.

Unemployment Rates, September 2007

U.S. unemployment rate = 4.7%



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

percentage point, whereas the national unemployment rate increased 0.1 percentage point.

The 4.7 percent unemployment rate in Pennsylvania counties that are in the Fourth District is on par with the national average. In contrast, all other areas of the Fourth District—the eastern counties of Kentucky, Ohio, and the northernmost counties of West Virginia—have unemployment rates that are well above the national rate. For example, the rate is 6.7 percent in Kentucky counties of the Fourth District and 5.9 percent in Ohio. Looking over a longer term, Fourth District Kentucky has generally exhibited a higher unemployment rate than Ohio or Fourth District Pennsylvania. While Ohio experienced somewhat lower unemployment rates than Fourth District Pennsylvania prior to the 2001 recession, Fourth District Pennsylvania's unemployment rate has been consistently below that of Ohio's since 2004.

Of the 169 counties in the Fourth District, 13 had an unemployment rate below the national average in September, while 156 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 9 counties with double-digit unemployment rates. Unemployment rates for the District's major metropolitan areas ranged from a low of 4.4 percent in Pittsburgh to a high of 6.5 percent in Toledo.

Lexington (1.5 percent) is the only metropolitan area where nonfarm employment grew faster than the national average (1.2 percent) over the past 12 months. Conversely, Cleveland, Dayton, and Toledo have not seen any change in nonfarm employment over the same time period.

Employment in goods-producing industries increased in Akron (1.7 percent), while all other Fourth District metropolitan areas lost goods-producing jobs. Nationally, employment in goods-producing industries declined 1.2 percent.

Lexington showed the strongest growth in service-providing employment (2.0 percent) and was the only large metro area in the Fourth District to top the national average (1.6 percent). Information

services expanded strongly in Toledo (7.5 percent) and Lexington (6.5 percent) but contracted in Cincinnati (-3.2 percent) and Columbus (-0.5 percent). Employment in professional and business services grew faster than the nation's 1.9 percent in Columbus (2.3 percent), Toledo (2.9 percent), and Akron (2.8 percent). Cincinnati posted stronger job gains in the education and health services industry (3.3 percent) than the nation (3.1 percent) over the past 12 months. All other metropolitan areas in the Fourth District posted modest gains in the education and health services industry except for Dayton.

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	0.8	0.1	0.3	0.0	0.0	1.1	1.5	1.2
Goods-producing	-1.2	-1.2	-2.3	-1.3	-0.1	-2.3	1.7	-0.4	-1.2
Manufacturing	-2.1	-1.2	-1.6	-0.7	-0.4	-2.6	1.5	-1.4	-1.4
Natural resources, mining, construction	1.8	-2.2	-3.9	-2.3	0.6	-1.3	2.5	2.3	-0.9
Service-providing	0.3	1.1	0.6	0.5	0.0	0.6	1.0	2.0	1.6
Trade, transportation, utilities	0.1	0.0	-0.4	-0.4	-1.7	-1.2	0.6	-1.5	1.1
Information	1.1	-0.5	-3.2	-0.9	1.0	7.5	2.2	6.5	1.2
Financial activities	-0.1	-1.2	-1.1	-0.4	2.5	-0.8	0.0	0.0	0.4
Professional and business services	1.0	2.3	0.4	1.3	-0.2	2.9	2.8	-0.3	1.9
Education and health services	1.2	1.2	1.3	1.8	0.0	1.0	1.5	1.9	3.1
Leisure and hospitality	0.2	2.7	1.9	0.4	0.3	-1.2	0.0	7.3	3.1
Other services	0.7	-0.8	0.0	-1.4	0.6	0.7	0.0	-1.0	0.7
Government	1.2	2.0	-0.1	0.2	0.6	1.7	0.2	4.8	0.9
August unemployment rate (sa, percent)	6.0	5.0	5.3	4.4	6.1	6.5	5.6	5.0	4.7

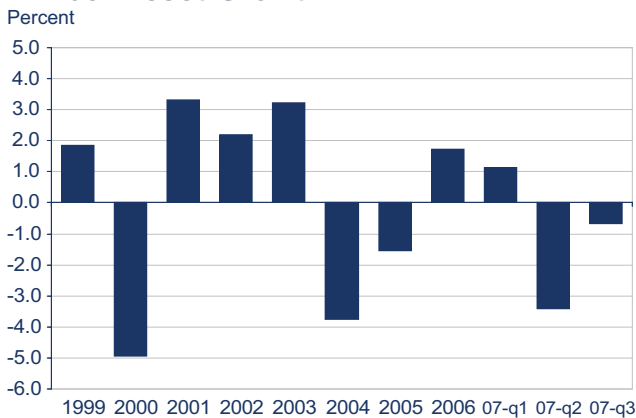
Source: U.S. Department of Labor, Bureau of Labor Statistics.

Banking and Financial Institutions

Fourth District Community Banks

12.21.07
by Ed Nosal and Saeed Zaman

Annual Asset Growth

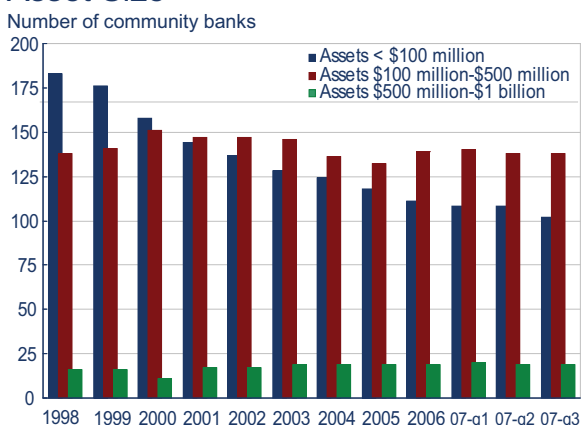


a. Growth rates for 2007:I, 2007:II, and 2007:III are annualized year-to-date asset growth. For other years, fourth-quarter year-over-year rates are used.
Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income.

Most of the 283 banks headquartered in the Fourth Federal Reserve District as of September 30, 2007, are community banks—commercial banks with less than \$1 billion in total assets. There are 259 such banks headquartered in the District, a number that, as a result of bank mergers, has declined since 1998, when there were 337.

Total asset growth for Fourth District community banks decreased 0.68 percent in the third quarter of 2007 (annualized rate), but this number has fluctuated in the past few years. A decline in the community banking assets within the district does not necessarily mean that any banks closed shop or left the district. A community bank might no longer be included among the Fourth District's banks if it is acquired by bank holding company that is headquartered in another district or if it merges with another Fourth District bank and the total assets of the merged institution push it above the \$1 billion cutoff. For example, community bank assets declined sharply in 2000 and 2004—years in which a great number of institutions consolidated or left the population of Fourth District community banks.

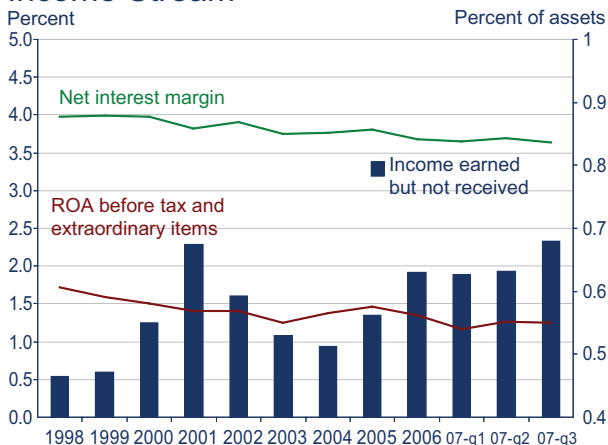
Fourth District Community Banks by Asset Size



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

The structure of the market has changed since 2000, when the majority of the community banks in the district had less than \$100 million in total assets. Since then, banks in the mid-size category (\$100 million to \$500 million) have constituted the majority.

Income Stream

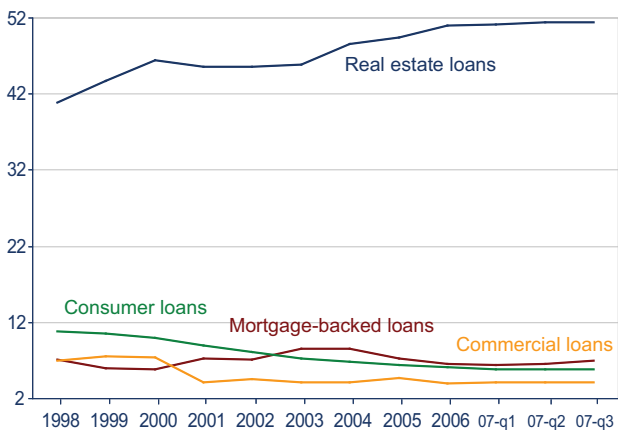


Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income.

The income stream of Fourth District community banks has been deteriorating slightly in recent years. Return on assets (ROA) fell from 1.7 percent in 1998 to 1.3 percent in the third quarter of 2007. (ROA is measured by income before tax and extraordinary items, because one bank's extraordinary items can distort the averages in some years.) The decline is in part due to weakening net interest margins (interest income minus interest expense divided by earning assets). Currently at 3.63 percent, the net interest margin is at its lowest level in over

Balance Sheet Composition

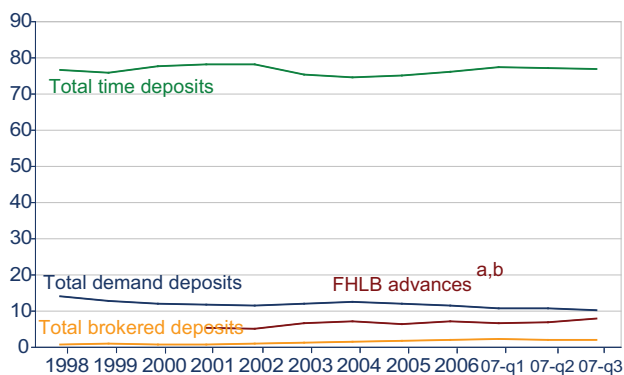
Percent of assets



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

Liabilities

Percent of liabilities



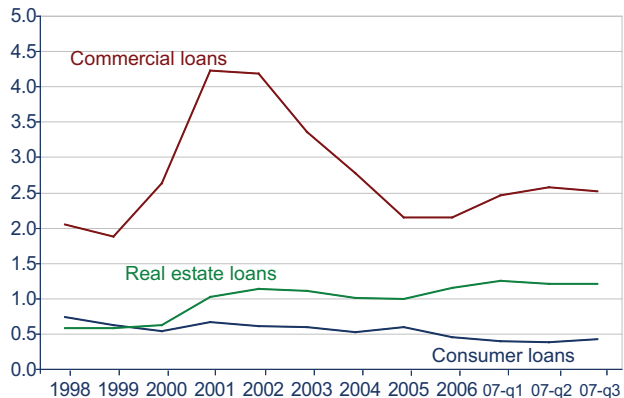
a. Federal Home Loan Bank advances.

b. Data start in 2001.

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

Problem Loans

Percent of loans



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

eight years.

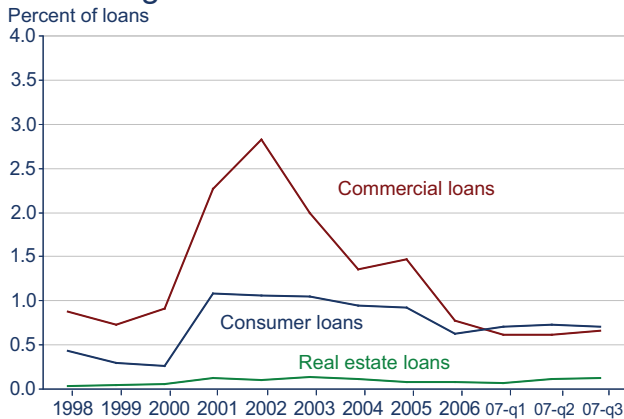
One probable cause of concern is the elevated level of income earned but not received. At 0.68 percent, this figure is at its highest level in 10 years. The last time it was close to this figure was in 2001. If a loan agreement allows a borrower to pay an amount that does not cover the interest accrued 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 or other some other factor forces an unusually large number of borrowers to default on their loans, the bank's capital may be impaired.

Fourth District community banks are heavily engaged in real estate-related lending. In the third quarter of 2007, 51.4 percent of their assets were in loans secured by real estate. Including mortgage-backed-securities, the share of real estate-related assets on the balance sheet was 58.4 percent.

Fourth District community banks finance their assets primarily through time deposits (about 77 percent of total liabilities). Brokered deposits—which are a riskier type of deposit for banks because they chase higher yields and are not a dependable source of funding—are used less frequently. Federal Home Loan Bank (FHLB) advances are loans from the FHLBs that are collateralized by the bank's small business loans and home mortgages. Although they have gained some popularity in recent years, FHLB advances are still a small fraction of community banks' liabilities (7.8 percent of total liabilities) and remain an important source of backup liquidity for most Fourth District community financial institutions.

Problem loans include loans that are past due for more than 90 days but are still receiving interest payments, as well as loans that are no longer accruing interest. Problem commercial loans rose sharply in 2001 and have returned to their 1998-2000 levels in recent years. Currently, 2.52 percent of all commercial loans are problem loans. Problem real estate loans are only 1.21 percent of all outstanding real estate-related loans, but they are at their highest level in over 9 years. Problem consumer loans continued their downward trend in the third quarter

Net Charge-Offs

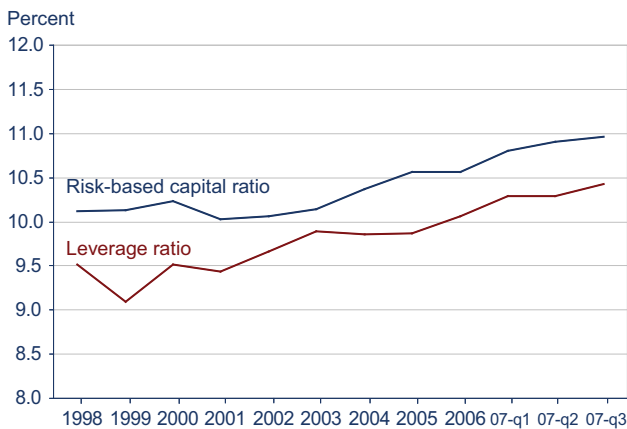


Source: Authors' calculation from Federal Financial Institutions Examination Council, Quarterly Banking Reports of Condition and Income.

of 2007. Currently, 0.43 percent of all outstanding consumer loans (credit cards, installment loans, etc.) are problem loans.

Net charge-offs are loans that are 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 with problem loans, there was a sharp increase in the net charge-offs of commercial loans in 2001 and 2002. Consumer loans followed a similar path but have remained slightly elevated since the recession. Fortunately, the charge-off level for commercial loans has returned to its pre-recession level. Net charge-offs in the third quarter of 2007 were limited to 0.66 percent of outstanding commercial loans, 0.71 percent of outstanding consumer loans, and 0.13 percent of outstanding real estate loans.

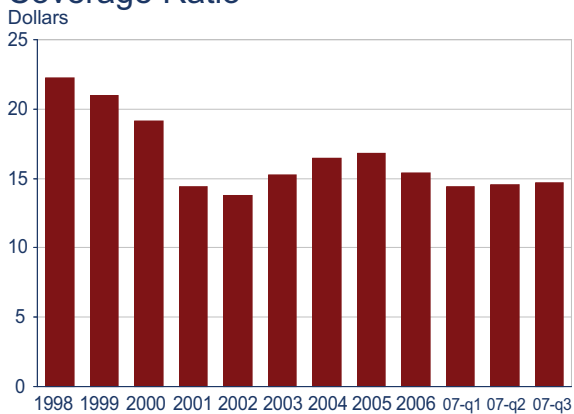
Capitalization



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

Capital is a bank's cushion against unexpected losses. The recent trend in capital ratios indicates that Fourth District community banks are protected by a large cushion. The leverage ratio (balance sheet capital over total assets) was above 10 percent, and the risk-based capital ratio (a ratio determined by assigning a larger capital charge on riskier assets) was about 11 percent in the third quarter of 2007. The growing ratios are signs of strength for community banks.

Coverage Ratio^a



a. 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.

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. As of the third quarter of 2007, Fourth District community banks had almost \$15 in capital and reserves for each \$1 of problem assets. While the coverage ratio declined considerably following the high charge-off periods of the early 2000s, balance sheets are still strong.

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