

Economic Trends

October 2011 (September 9, 2011-October 11, 2011)

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FEDERAL RESERVE BANK
of CLEVELAND

Interest Rates Have Responded to the Fed's New Language

09.21.11

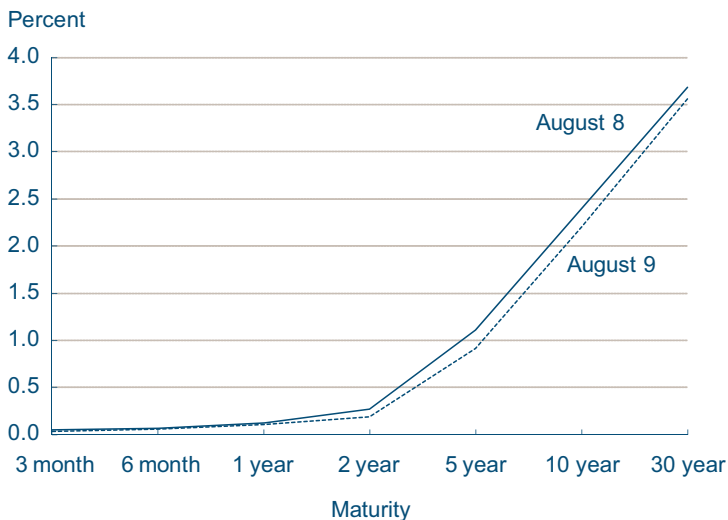
by Todd Clark and John Lindner

At its August policy meeting, the Federal Reserve took the unprecedented step of establishing a specific future date for policy action given current economic conditions. The intention was to clearly communicate to the public that, in light of what is currently known about the economic outlook, the Federal Reserve expects to keep interest rates extremely low for longer than the public previously believed. A quick look at some of the market reaction to the August Federal Open Market Committee (FOMC) statement shows that the change in statement language was successful in altering public expectations of future interest rates and, in turn, current interest rates.

This was a unique move in the realm of FOMC policy changes, partly because it was only operational through the language in the Committee's statement, and partly because of the reference to a specific date. The FOMC made a similar move when it added the "extended period" language in March 2009. By making a tentative commitment to not raise interest rates until the middle of 2013, the Committee was attempting to alter the expectations of market participants. It worked. Since the announcement, forecasts for a variety of interest rates have fallen, at least in part due to the lower expectations for future interest rates.

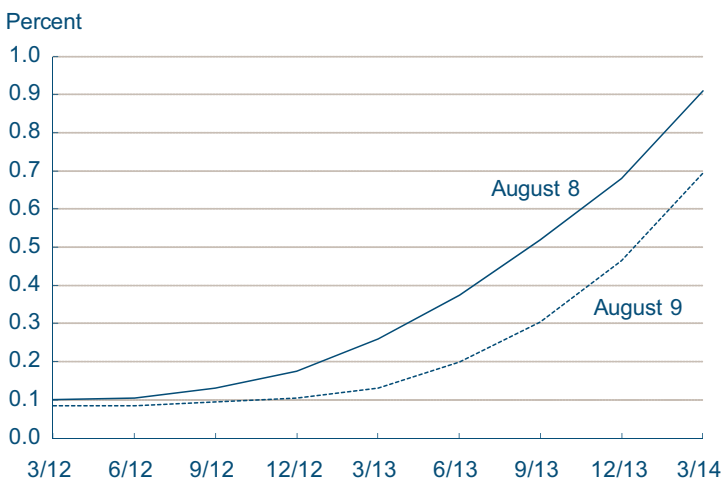
Despite the emphasis on expectations, this shift out in time for raising short-term interest rates has also had influences on current interest rates. The yields on Treasury securities maturing within one year were already at extremely low rates, but yields on maturities of 2 years or longer have fallen noticeably since the announcement. The 2-year Treasury rate fell 8 basis points (bp) to 0.19 percent, while the rates on the 5-year and 10-year securities each fell 20 bp to 0.91 percent and 2.20 percent, respectively. So, even though no open market operations were used to adjust interest rates, the rates trading today responded to a change in their expected future values.

Treasury Yield Curve



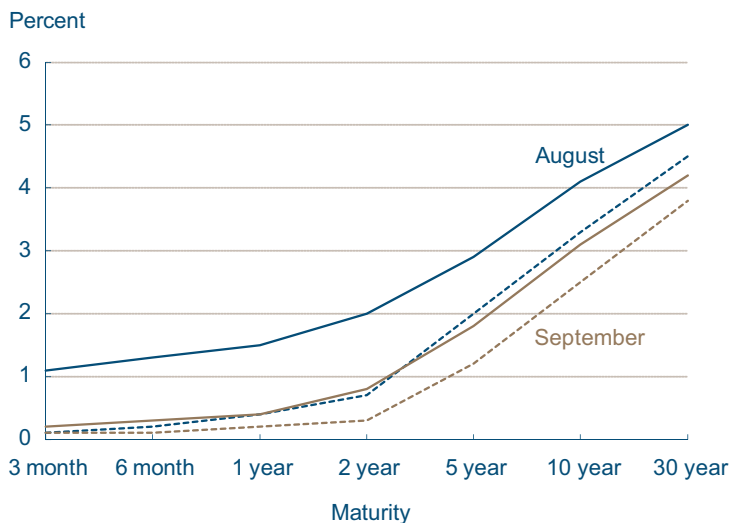
Source: Federal Reserve Board.

Fed Funds Futures Implied Rates



Source: Wall Street Journal.

Blue Chip Forecasted Yield Curve



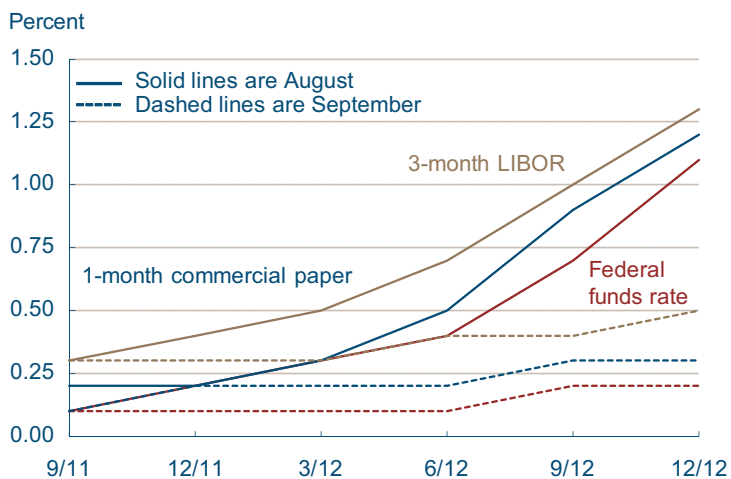
Notes: Solid lines are 2012:Q4 forecasts. Dashed lines are 2011:Q4 forecasts.
Sources: Blue Chip Financial Forecasts, Treasury securities.

This idea of a future market value is better highlighted by looking at a type of derivative called a federal funds rate future contract. These contracts allow banks to borrow interbank (federal) funds at a specified rate at some date in the future. When the FOMC announced its commitment to keep the federal funds rate in the 0 to 25 bp range until the middle of 2013, the futures contracts shifted downward dramatically to incorporate the expectation that the federal funds rate would remain low. For example, on the day before the announcement, the June 2013 future contract was trading at a price that implied a federal funds rate of 38 bp. Following the meeting, the same June 2013 contract implied a federal funds rate of 20 bp, back in the target range currently adopted by the FOMC.

Another way to see how this policy has worked is to look at a similar Treasury yield curve as the picture above, this time with forecasts for future interest rates. The monthly forecasts highlighted below come from a survey of economic forecasters. Forecasts for Treasury yields at the end of 2011 have declined markedly from September to August, especially beginning at the 2-year maturity, where expected rates fell 40 bp to 0.30 percent. Larger monthly declines were also apparent for securities with longer maturities. Forecasts for the end of 2012 were revised even more dramatically from August to September, falling by an average of more than 100 bp across the yield curve. Admittedly, though, the large changes in these forecasts from August to September reflect more than just the Federal Reserve's policy change; factors such as disappointing news about the strength of the economic recovery also pushed down forecasts of interest rates from August to September.

One interesting aspect of these changes in forecasts of the yield curve is the shift in both short-term and long-term interest rates. This shift is especially visible in the forecasts for the end of 2012. Forecasts for the federal funds rate in late 2012 fell from over 1.00 percent to less than 0.25 percent. Similar declines could be seen for other short-term rates like the 1-month commercial paper rate and the 3-month LIBOR, each of which shed 75 to 100 bp from their December 2012 forecasts. The change in policy seems to have shifted expectations for interest rates across the maturity spectrum.

Blue Chip Forecasted Short-Term Rates

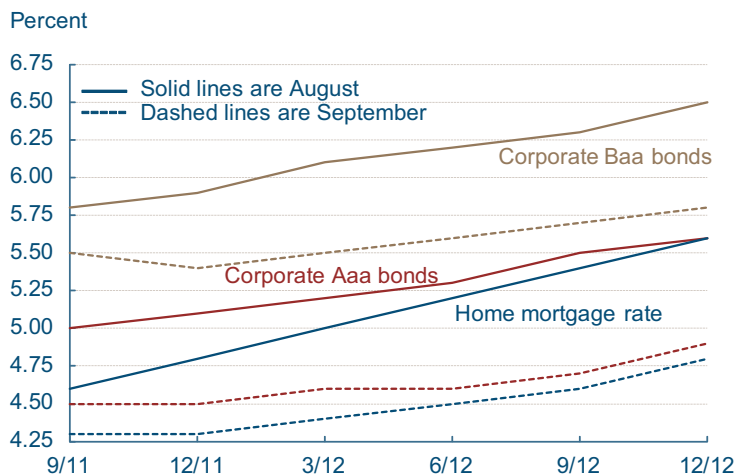


Source: Blue Chip Financial Forecasts.

But since short-term rates are now expected to rise less quickly, long-term investors will demand lower long-term interest rates. This is apparent in the downward shift in forecasts for long-term interest rates. Highly-rated corporate bond yields in December 2012 were expected to be 5.60 percent in August, but September's forecast is for a 4.80 percent yield at the end of 2012. Similar declines occurred for the forecasts of lower-rated corporate bond yields and for home mortgage rates.

Clearly, the August announcement comes with some caveats. Most importantly, this policy commitment is conditional on the economy evolving as expected based on the information available at the time of the August FOMC meeting. Should the economy improve more rapidly or slowly than expected today, or should inflation prove either higher or lower than anticipated, the timing of the first increase in the federal funds rate target could change. But as intended, the announcement has had significant effects on current market interest rates, as well as the forecasts for those interest rates in the future.

Blue Chip Forecasted Long-Term Rates



Source: Blue Chip Financial Forecasts.

Yield Curve and Predicted GDP Growth

Covering August 26, 2011—September 23, 2011
by Joseph G. Haubrich and Margaret Jacobson

Highlights

	September	August	July
3-month Treasury bill rate (percent)	0.01	0.01	0.03
10-year Treasury bond rate (percent)	1.87	2.19	2.97
Yield curve slope (basis points)	186	219	294
Prediction for GDP growth (percent)	0.80	0.08	0.82
Probability of recession in 1 year (percent)	7.0	4.8	1.7

Overview of the Latest Yield Curve Figures

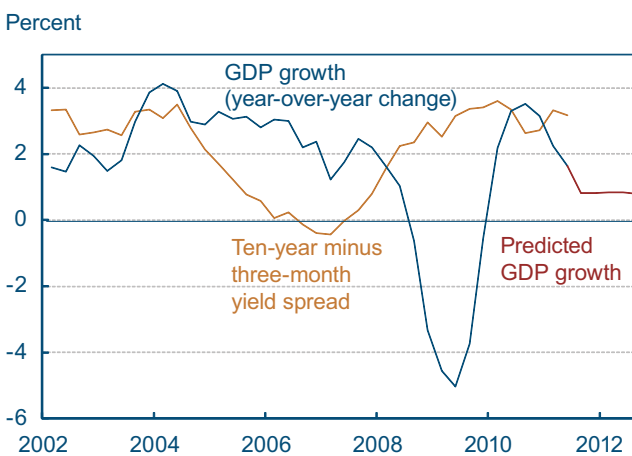
Since last month and in the wake of the Maturity Extension Program and Reinvestment Policy of the Federal Reserve, more colloquially known as Operation Twist, or Let's Twist Again, the yield curve has flattened as long rates fell. Short rates did not increase however, making it a somewhat one-sided twist. The three-month Treasury bill rate stayed at 0.01 percent (for the week ending September 23), even with August and down from July's 0.03 percent. The ten-year rate dropped below 2 percent (1.86 percent), down from August's 2.19 percent, and over a full 1 point below July's 2.97. Naturally, the slope dropped, and at 186 it is the lowest it has been since early 2008.

Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 0.8 percent rate over the next year, even with July and August's projections. The strong influence of the recent recession is leading towards relatively low growth rates. Although the time horizons do not match exactly, the forecast comes in on the more pessimistic side of other predictions. But like them, it does show moderate growth for the year.

Following the usual pattern, the flatter slope indicates a higher probability of recession. Using the yield curve to predict whether or not the economy will be in recession in the future, we estimate that the expected chance of the economy being in a recession next September is 7 percent, up from August's 4.8 percent, and up noticeably from June and July's 1.7 percent, albeit still a fairly low number. So although our approach is somewhat pessimistic as regards the level of growth over the next year, it is quite optimistic about the recovery continuing.

The slope of the yield curve—the difference between the yields on short- and long-term maturity bonds—has achieved some notoriety as a simple forecaster of economic growth. The rule of thumb

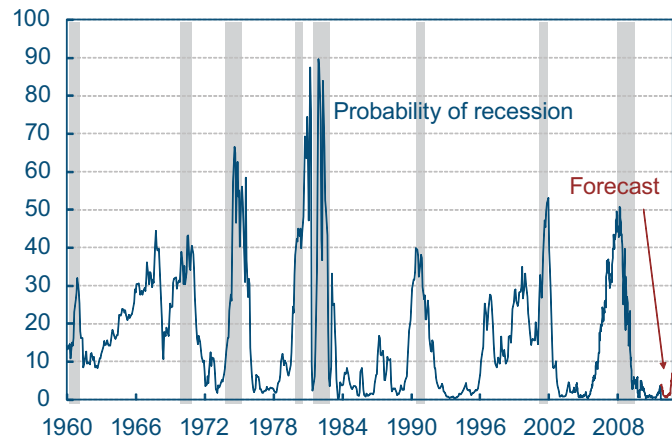
Yield-Curve-Predicted GDP Growth



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

Recession Probability from Yield Curve

Percent probability, as predicted by a probit model



Note: Shaded bars indicate recessions.

Sources: NBER, Federal Reserve Board; Authors' calculations.

is that an inverted yield curve (short rates above long rates) indicates a recession in about a year, and yield curve inversions have preceded each of the last seven recessions (as defined by the NBER). One of the recessions predicted by the yield curve was the most recent one. The yield curve inverted in August 2006, a bit more than a year before the current recession started in December 2007. There have been two notable false positives: an inversion in late 1966 and a very flat curve in late 1998.

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

Predicting GDP Growth

We use past values of the yield spread and GDP growth to project what real GDP will be in the future. We typically calculate and post the prediction for real GDP growth one year forward.

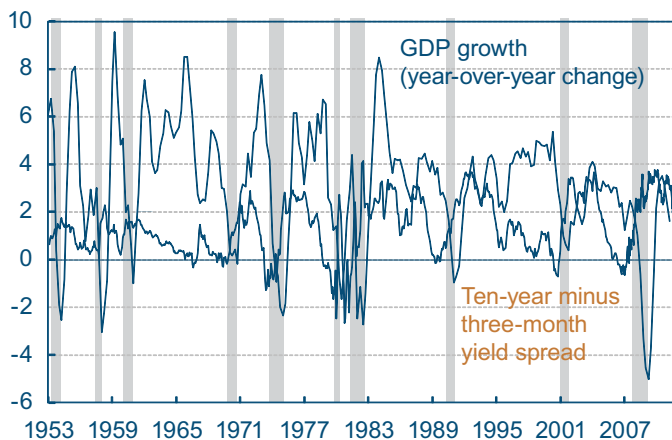
Predicting the Probability of Recession

While we can use the yield curve to predict whether future GDP growth will be above or below average, it does not do so well in predicting an actual number, especially in the case of recessions. Alternatively, we can employ features of the yield curve to predict whether or not the economy will be in a recession at a given point in the future. Typically, we calculate and post the probability of recession one year forward.

Of course, it might not be advisable to take these numbers quite so literally, for two reasons. First, this probability is itself subject to error, as is the case with all statistical estimates. Second, other researchers have postulated that the underlying determinants of the yield spread today are materially different from the determinants that generated yield spreads during prior decades. Differences could arise from changes in international capital flows and inflation expectations, for example. The bottom line is that yield curves contain important information for business cycle analysis, but, like other

Yield Curve Spread and Real GDP Growth

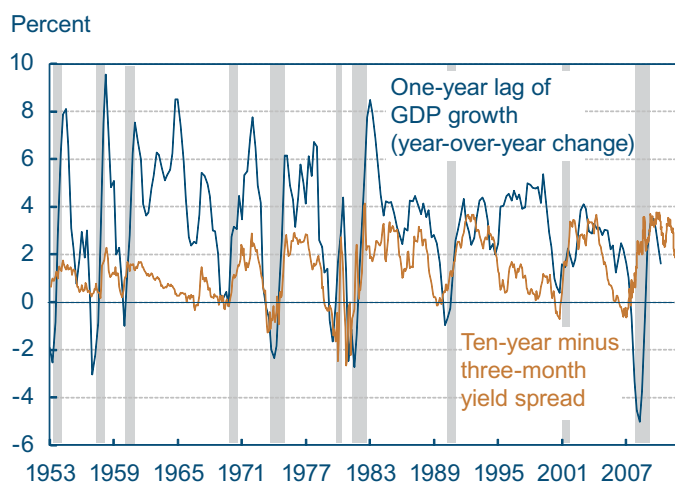
Percent



Note: Shaded bars indicate recessions.

Source: Bureau of Economic Analysis; Federal Reserve Board.

Yield Curve Spread and Lagged Real GDP Growth



Note: Shaded bars indicate recessions.

Source: Bureau of Economic Analysis; Federal Reserve Board.

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?” Our friends at the Federal Reserve Bank of New York also maintain a website with much useful information on the topic, including their own estimate of recession probabilities.

Recent Changes in the Relationship between Education and Male Labor Market Outcomes

09.14.11

by Dionissi Aliprantis and Mary Zenker

There is reason to believe that educational attainment is one of the key determinants of outcomes in the labor market. For example, people who graduate high school are more often unemployed on average than those who get a college degree, and a smaller proportion of high school graduates joins the workforce. These labor market outcomes have been highly correlated with educational attainment over the last 20 years (as we showed in a recent article).

As a result, social scientists have devoted considerable attention to understanding the relationship between educational attainment and labor market outcomes. A key finding has been that this relationship has changed in recent decades. In particular, there has been a well-documented increase in the wage premium for educational attainment: The more education one now obtains, the more one tends to earn.

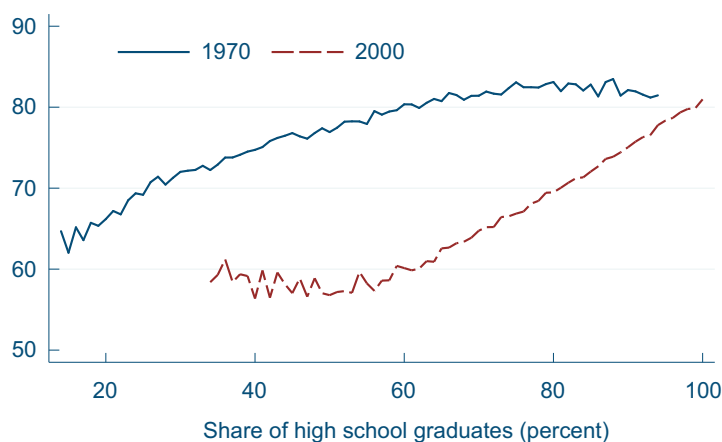
Much of the work that has been done to understand the relationship between educational attainment and labor market outcomes has focused on individuals. But it is important to look at neighborhoods as well because the characteristics of a given neighborhood may influence the outcomes of the individuals who live there.

We examined decennial census data to study trends in educational attainment and labor market outcomes at the neighborhood level. Data on education and labor market outcomes are available at the level of the census tract from the National Historical Geographic Information System (NHGIS). Census tracts are often used to define neighborhoods because they typically have around 4,000 residents and are delineated so that each contains a relatively homogeneous population.

The data indicate a number of major changes for men between 1970 and 2000. First of all, male la-

Average Male Labor Force Participation Rate by High School Graduation Rate

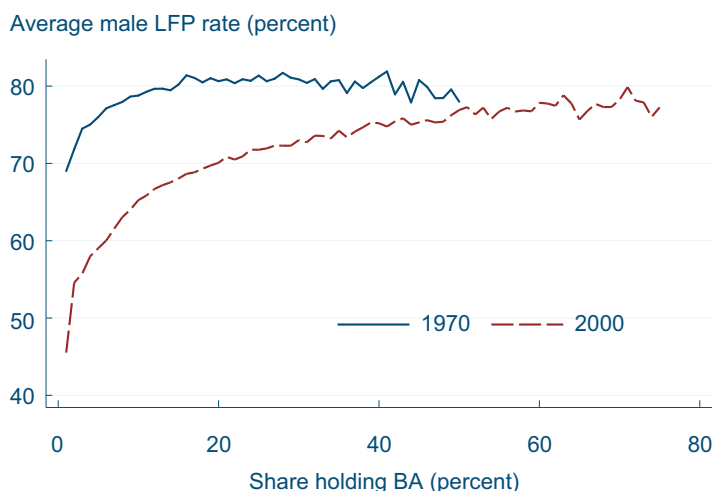
Average male LFP rate (percent)



Note: Labor force participation rates are the average in census tracts by high school graduation rates.

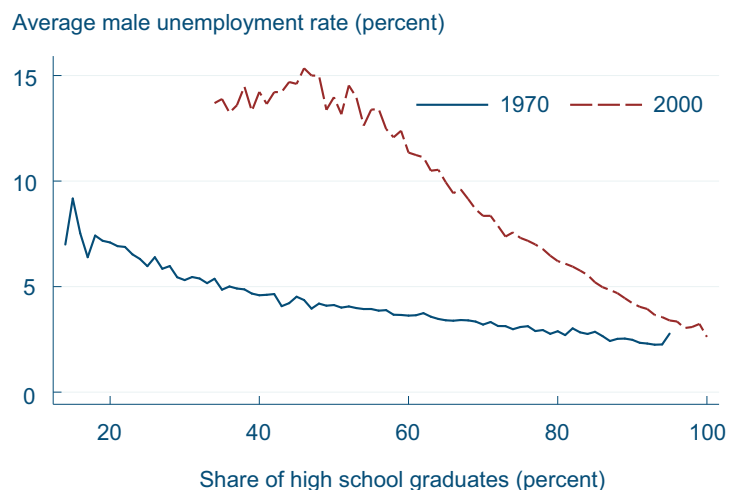
Sources: U.S. Census Bureau; NHGIS.

Average Male Labor Force Participation Rate by Bachelor's Degree Attainment Rate



Note: Labor force participation rates are the average in census tracts by share of the population holding bachelor's degrees.
Sources: U.S. Census Bureau; NHGIS.

Average Unemployment Rate by High School Graduation Rate



Note: Labor force participation rates are the average in census tracts by high school graduation rates.
Sources: U.S. Census Bureau; NHGIS.

labor force participation (LFP) rates fell in neighborhoods at every level of educational attainment. One pattern that remained the same is that male LFP rates were higher in neighborhoods with higher educational attainment.

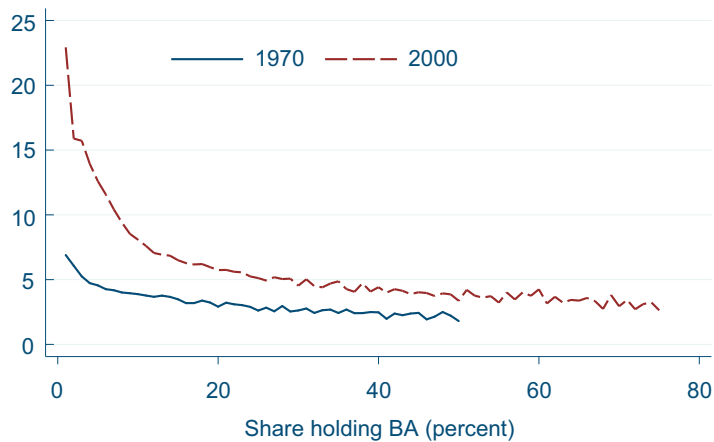
Another change we observe at the neighborhood level from 1970 to 2000 is the relationship between LFP and high school graduation rates. In 1970, male LFP increased as one moved from neighborhoods with the lowest high school graduation rates (15 percent–30 percent) to neighborhoods with slightly higher graduation rates. By 2000 this had changed. Moving from neighborhoods with the lowest high school graduation rates (now 35 percent) to neighborhoods with higher graduation rates, we see no increase in the average male labor force participation rate. Only at high school graduation rates of 60 percent or higher do we see the expected rise in male LFP.

Unemployment increased for men at all levels of educational attainment between 1970 and 2000, and this increase was felt most strongly at lower levels of attainment. In neighborhoods where more than 10 percent of the residents have earned a bachelor's degree (BA), the increase in unemployment from 1970 to 2000 is fairly constant. But in neighborhoods where less than 10 percent of the residents have a BA, the difference in average male unemployment over the period is much greater. For example, in neighborhoods where 30 percent of residents hold BAs, male unemployment rose 1.9 percent between 1970 and 2000. But for neighborhoods where 5 percent of residents held BAs, this change was 8.0 percent. These differences continue to grow in neighborhoods with decreasing BA attainment rates.

Neighborhood high school graduation rates are also predictive of the increase in unemployment between 1970 and 2000. In neighborhoods in which nearly all adults graduated from high school, there were only modest increases in unemployment rates between these years. However, as we look at neighborhoods with lower and lower high school graduation rates, we see the increase in the average male unemployment rate between 1970 and 2000 was larger and larger. For example, between 1970

Average Unemployment Rate by Bachelor's Degree Attainment Rate

Average male unemployment rate (percent)



Note: Labor force participation rates are the average in census tracts by share of the population holding bachelor's degrees.
Sources: U.S. Census Bureau; NHGIS.

and 2000, average male unemployment increased by 1.7 percentage points in neighborhoods with a high school graduation rate of 90 percent. This increase was 7.7 percent in neighborhoods with a high school graduation rate of 60 percent.

Overall, the data we have considered suggest that in recent decades educational attainment has become more important in determining labor market outcomes at the neighborhood level.

A Slow Recovery in the Banking Sector

09.30.11

by Matthew Koepke and James B. Thomson

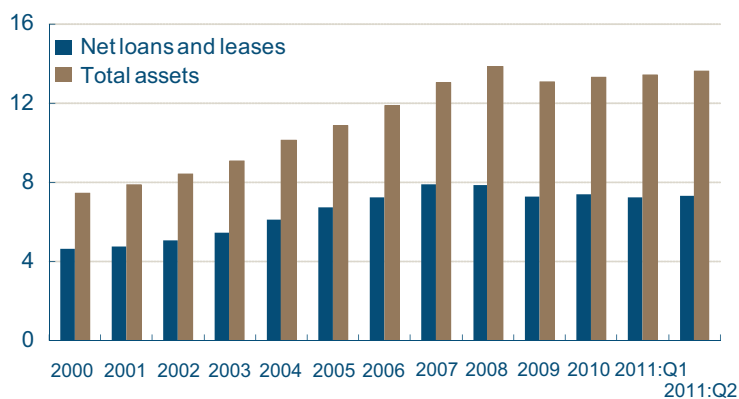
As the banking sector recovers from the financial crisis and the subsequent recession, its recovery has mirrored the slow and fragile recovery of the general economy. According to the most recent data from the Federal Deposit Insurance Corporation (FDIC), assets at FDIC-insured institutions grew 1.4 percent in the second quarter of 2011 and are up 3.0 percent on a year-over-year basis. However, despite the growth in total assets, loans and leases at depository institutions actually fell from the fourth quarter of 2010 to the second quarter of 2011, declining 0.8 percent. Moreover, on a year-over-year basis, loans and leases at FDIC-insured institutions fell 1.1 percent, suggesting that the recovery in the banking sector has stalled.

In addition to stagnant loan growth, another sign of weakness in the banking sector is the large number of problem institutions in the system. Problem institutions are FDIC-insured banks and thrifts with substandard examination ratings. According to the FDIC, year-to-date there are 865 problem institutions with \$372 billion in assets compared to 884 problem institutions with \$390 billion in assets for all of 2010. While there has been a slight improvement in this number, the continued high level of problem depository institutions is another indicator that this sector of the financial system remains very fragile.

One promising sign that the banking sector is on the mend is the decline in the amount of nonperforming loans (loans 90 days or more past due and nonaccruing). Nonperforming loans spiked in 2009 to \$395 billion, representing 5.4 percent of total loans and leases. Real estate loans—commercial and primary residence—drove the increase in nonperforming loans through the end of 2009, accounting for 80 percent of total nonperforming loans. According the FDIC’s second-quarter data, nonperforming loans have fallen nearly 6.5 percent since the end of the first quarter, going from \$342 billion to \$320 billion. Their share within total loans has

Assets and Loans of All FDIC-Insured Institutions

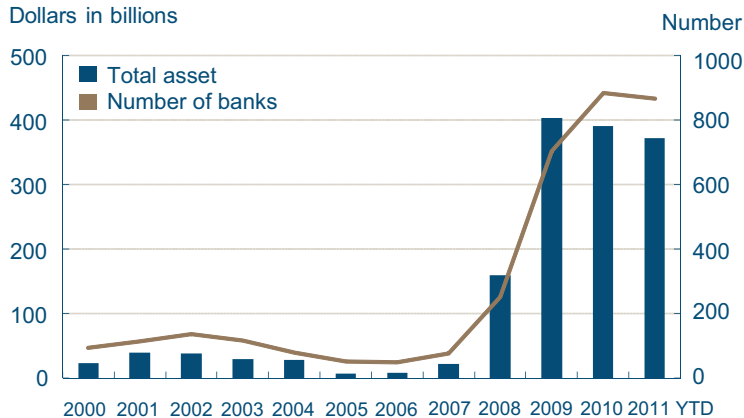
Dollars in trillions



Sources: FDIC, Haver Analytics.

Number of Problem Banks and Total Assets

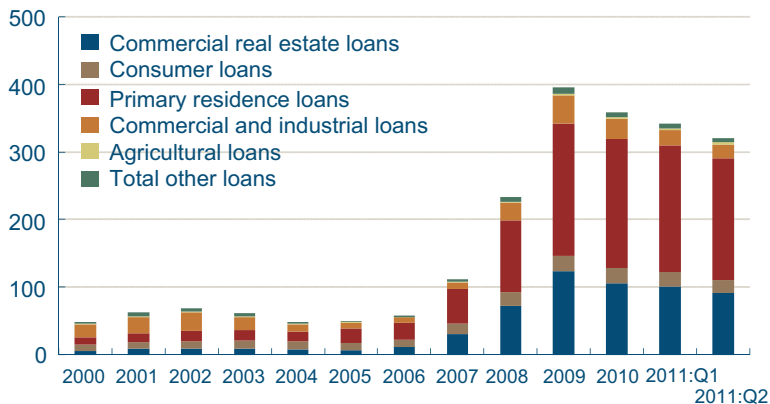
Dollars in billions



Sources: FDIC, Haver Analytics.

Loans 90 Days Past Due and Nonaccruing

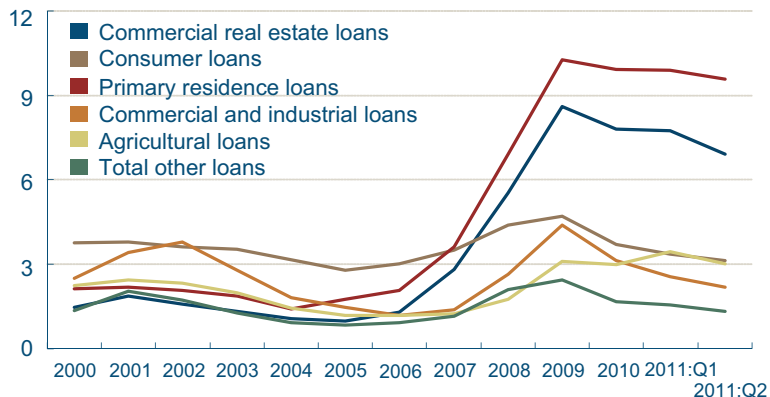
Dollars in billions



Source: FDIC.

Noncurrent Loan Rates

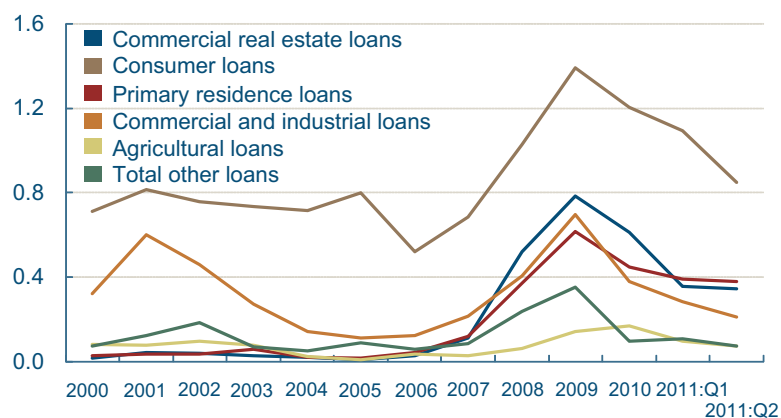
Percent of loans



Source: FDIC.

Net Charge-Offs

Percent of loans



Source: FDIC.

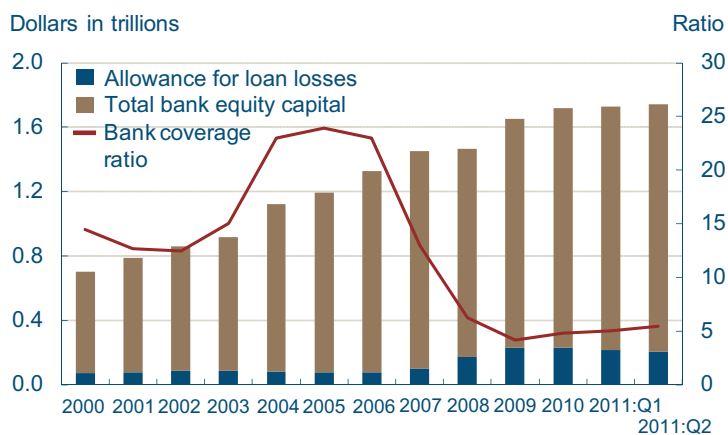
been steadily declining since the end of 2009, coming in at 4.4 percent at the end of the second quarter. However, it is important to note that while the total amount of nonperforming loans has declined since 2009, the share of real estate loans within the total has increased to 85 percent, suggesting that real estate loans are still having a deleterious impact on asset quality.

While nonperforming loans have been steadily declining, the percent of noncurrent loans seems to have stagnated at a high level. Again the problems in noncurrent loans stem from real estate loans, which accounted for 81 percent of total noncurrent loans in the second quarter of 2011. Primary residence loans accounted for the largest proportion of noncurrent loans, representing 55 percent of the total. Moreover, primary residence noncurrent rates declined only 70 basis points from 2009 to the second quarter of 2011 (10.3 percent to 9.6 percent). The only other loan category where noncurrent rates fell less was agricultural loans, which declined 10 basis points (3.1 percent to 3.0 percent). As long as noncurrent rates continue to remain elevated for primary residence loans, it is likely that the banking sector will continue to have a slow and fragile recovery.

For all loan categories, losses as represented by net charge-offs (loans charged-off less recoveries) as a percent of loans declined in the second quarter of 2011. Net charge-offs declined the most for consumer loans, falling 50 basis points from 2009 to the second quarter of 2011 (1.4 percent to 0.85 percent). Net charge-off rates for commercial real estate loans and primary residences seem to have leveled off after falling significantly from 2009 to the first quarter of 2011. Meanwhile, net charge-offs related to commercial and industrial loans continue to fall at a relatively high rate, declining nearly 50 basis points from 2009 to the second quarter of 2011.

Finally, despite some encouraging signs that the deterioration of loan quality is slowing and loan performance is stabilizing, concerns remain about the ability of FDIC-insured institutions to absorb loan losses going forward. From the fourth quarter of 2005 to the fourth quarter of 2009, the cover-

Bank Coverage Ratio



Source: FDIC.

age ratio, which measures the ratio of loan loss reserves and equity capital to nonperforming loans, fell from 23.9 to 4.2. Since then, the coverage ratio has improved to 5.5; however, the coverage ratio at FDIC-insured institutions remains less than half of the average coverage ratio of 12.6 over the past decade.

So, even though there have been some improvements in loan performance at FDIC-insured institutions, the amount of nonperforming loans, noncurrent loans, and net charge offs remain relatively high and the ability of banks to cover the losses from those loans remains relatively low. This combination suggests that the banking system is still very fragile, three years after the financial crisis.

The Global Slowdown and Central Banks' Responses

10.06.11

by Pedro Amaral and Margaret Jacobson

After hitting a peak sometime in the middle of 2010, the economic recovery seems to have stalled. This observation seems to be true not only of the U.S. economy, but also of other developed economies and some emerging economies.

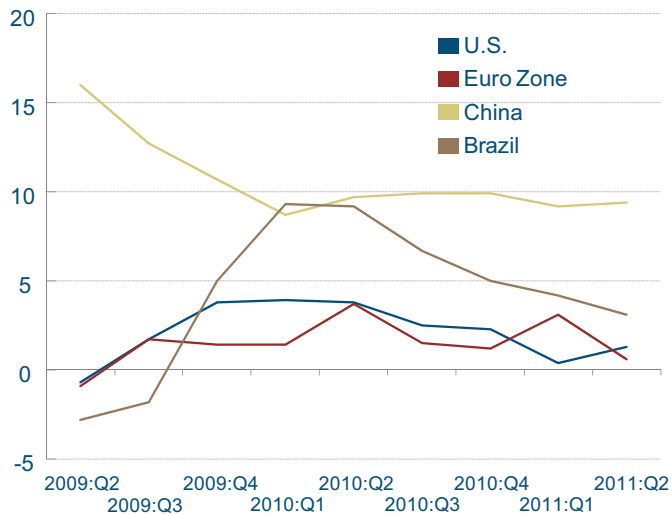
Both developed and emerging economies are facing very uncertain times. As a result, consumers and businesses are wary of using their funds and are playing it safe. While consumers avoid expenditures in durables and increase their level of precautionary savings, businesses put investment and expansion plans on hold and choose instead to hold risk-free assets. Uncertainty about future macroeconomic variables is precisely one of the channels Margaret Jacobson and Filippo Occhino identify as contributing to investment's softness in the latest U.S. recovery.

In the developed world, the proximate source of this uncertainty seems to be tied to fiscal issues. In the United States the picture is stark: the fiscal year has just ended, but no formal budget has been approved (last year's budget was not complete until April), the deadline for the super-committee charged with finding \$1.5 trillion in debt cuts looms closer, the legal standing of the states' challenges to the healthcare reform legislation is uncertain, and the \$450 billion presidential job initiative is still in legislative limbo. On top of all that, there is a presidential election in 13 months. But when it comes to uncertainty, the United States has nothing on the Euro Zone. Across the Atlantic, the status of the whole monetary union is being questioned as its debt crisis continues to unravel.

The source of uncertainty in emerging economies is not fiscal, at least not directly. Instead, many emerging economies are very dependent on exports. China, for example, exports roughly a quarter of its GDP according to official statistics. The dependence on exports means that when the developed world's growth prospects are uncertain, so are

Sample Quarterly Growth Rates in Developed and Emerging Economies

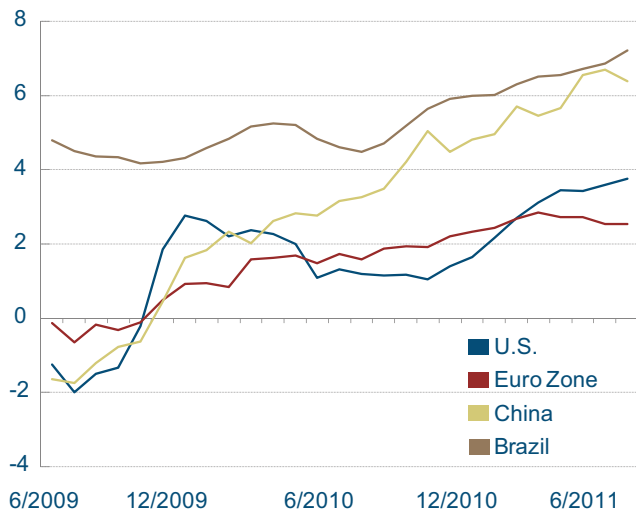
Percent (annual equivalent)



Sources: Bureau of Economic Analysis, Eurostat, Instituto Brasileiro de Geografia e Estatística.

Selected Headline Inflation Rates

Percent (12-month change)



Sources: Bureau of Labor Statistics, Eurostat, Haver Analytics, Instituto Brasileiro de Geografia e Estatística

those of emerging-market economies. Emerging economies depend on exports because their middle classes are still in the process of developing enough purchasing power to sustain continued domestic demand.

Central banks around the world find themselves front and center in one of the largest contractions since the Great Depression. Their part is one that seems increasingly more difficult to play, as measures of headline inflation have not subsided since mid-2010, the time when output growth started to sputter. It should be noted that while the Federal Reserve's explicit dual mandate is unusual as far as central banks go, even central banks that have only a strict inflation target seek to achieve their goal while sacrificing as little output as possible.

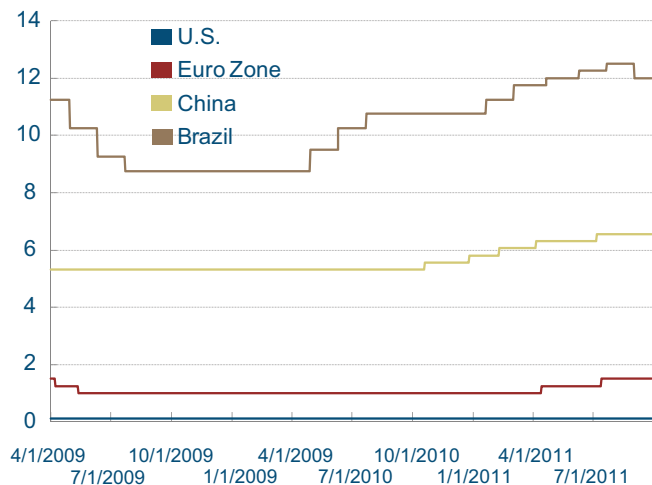
Central banks around the world have been reacting to the slowdown. In the United States, the Federal Reserve's stance has been rather accommodative since the start of the recession. The federal funds rate remains as low as it can be, and unorthodox balance sheet approaches have been taken to deal with concerns about output, unemployment, and housing markets. Such moves have continued even in the face of increasing inflation (a core measure of U.S. inflation is currently at 2 percent, below the headline measure, but on its way up).

Meanwhile, in the Euro Zone, the European Central Bank's (ECB) stance has been arguably less accommodative. It tightened twice early this year, reflecting inflation concerns, but the tightening cycle is likely over. The ECB has not tightened further in its last two meetings, and it is reportedly not doing so at its October meeting. The question is, rather, whether it will decrease its policy rate in the face of disappointing growth data and subdued inflation.

In emerging economies, the picture is slightly different. Some economies, like Brazil, experienced large increases in capital flows during 2009-2010, which, together with increases in commodity and energy prices, added to the inflationary pressures. This resulted in a tightening cycle throughout the emerging-market world. On the year, policy rates are up 125 basis points in Brazil, 50 in Russia, 200

Selected Policy Rates

Percent



Sources: Federal Reserve Board, European Central Bank, Banco Central do Brasil, Bloomberg.

in India, and 75 in China. More recently, though, the Banco Central do Brazil has started cutting its policy rate. Could the trend in emerging markets' monetary policy be shifting?

Labor Markets, Unemployment, and Wages

Incomes Are Down, Poverty Is Up

10.07.11
by Daniel Hartley

According to the latest Census Bureau data, real median income dropped from about \$50,600 in 2009 to about \$49,500 in 2010. That's a 2.3 percent drop for the year (all dollar amounts in this article are adjusted for inflation to be comparable to dollar amounts in 2010). These numbers reflect all money income that households receive, such as social security, pension checks, and unemployment or disability compensation, but do not reflect non-monetary governmental assistance such as subsidized public housing or food stamps. Also, income is reported on a pretax basis.

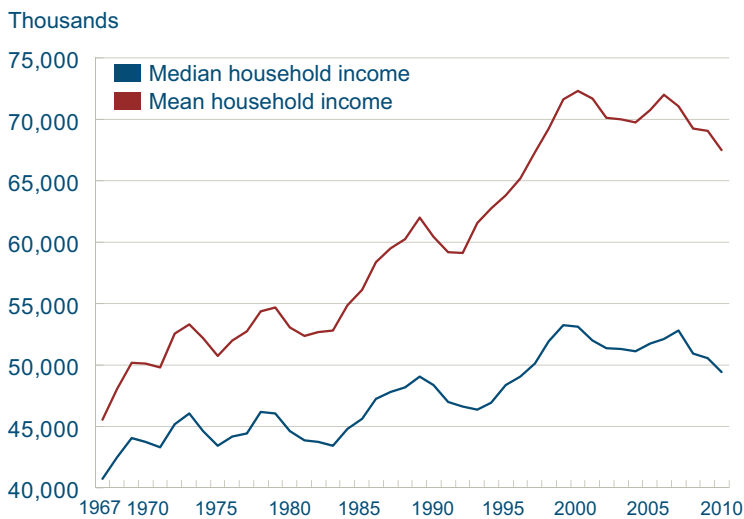
Over the longer term, both mean and median household incomes have returned to levels last seen in the mid-to-late 1990s. This has prompted journalists to refer to the past 10 years as a lost decade in terms of U.S. incomes.

A natural question to ask is to what degree these trends in household income are driven by the high and persistent level of unemployment that we have experienced since the most recent recession. Looking at only at the earnings of men and women who have full-time employment reveals that real earnings have roughly held steady since 2007 for both men and women. In fact, the earnings of full-time employed women are about the same as they were in 2002. Before then, they had been climbing steadily. In contrast, the median real earnings of full-time employed men have been roughly unchanged since the beginning of the 1970s.

In terms of real 2010 dollars, the fraction of households with more than \$100,000 in income has stayed near 20 percent since 1998, while the fraction earning between \$25,000 and \$100,000 has fallen by about 2 percentage points. This means that the fraction of households with income below \$25,000 has risen by about 2 percentage points since 1998.

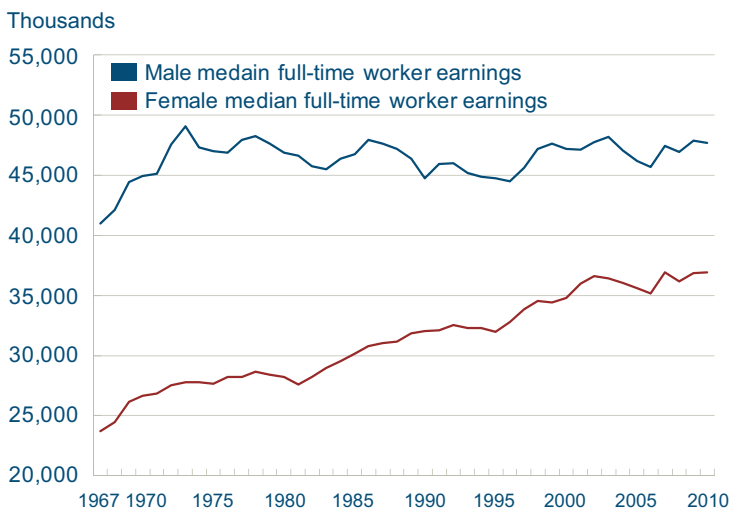
The recent increase in the fraction of households with income under \$25,000 is also reflected in the

Median and Mean Real Household Income



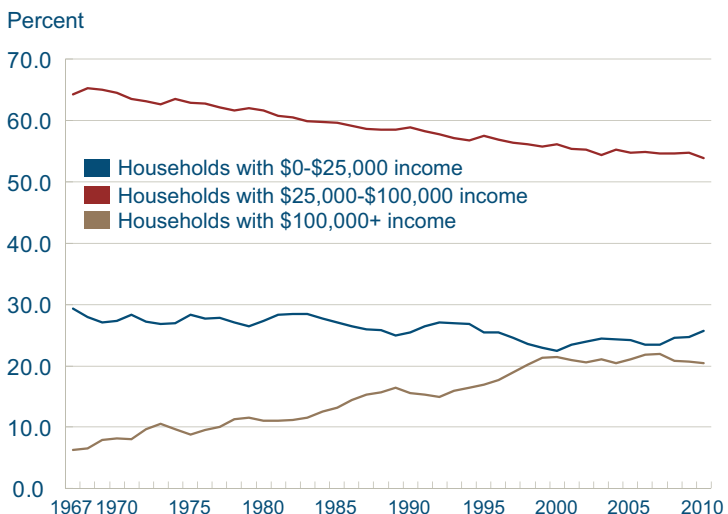
Source: "Income, Poverty, and Health Insurance Coverage in the United States: 2010," U.S. Census Bureau, 2011.

Median Earnings for Full-time Workers



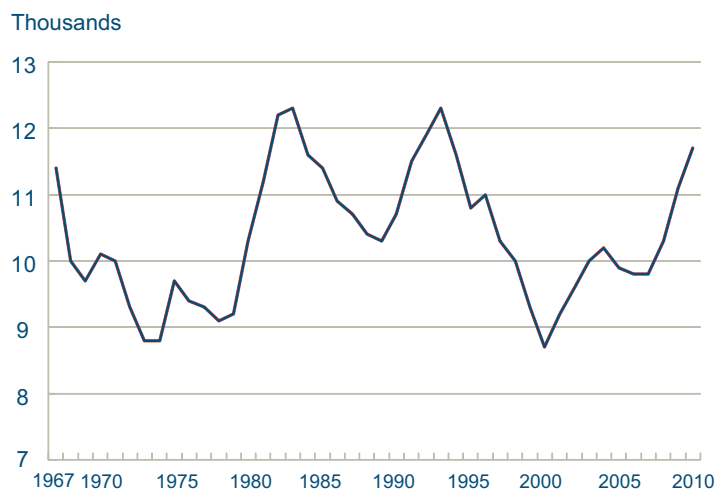
Note: Only counts earnings from work.
Source: "Income, Poverty, and Health Insurance Coverage in the United States: 2010," U.S. Census Bureau, 2011.

Income Dispersion



Source: "Income, Poverty, and Health Insurance Coverage in the United States: 2010," U.S. Census Bureau, 2011.

Poverty Rate



Source: "Income, Poverty, and Health Insurance Coverage in the United States: 2010," U.S. Census Bureau, 2011.

poverty rate, which has risen by about 2 percentage points since 2007.

The U.S. Census Bureau measures poverty by comparing a family's income to a threshold which varies by the size of the family and the ages of its members, but does not vary geographically. The threshold is updated each year to reflect inflation. It was originally derived in the early 1960s and based on food budgets and the share of income that was spent on food at that time. The Census Bureau plans to begin releasing preliminary estimates using its new Supplemental Poverty Measure this month, which will address some of the critiques of the current measure. However, the current report is broadly consistent with anecdotal evidence that economic hardship has increased for many people since 2007. Incomes are down and poverty is up.

Recent Fourth District Foreclosure Trends

10.11.11

by Guhan Venkatu

Foreclosure rates among Fourth District states remain at or near historic highs. Outside of West Virginia, which has seen its rate remain elevated but stable, these rates have continued to trend up since the recovery began in the second quarter of 2009.

This pattern differs noticeably from trends in the so-called sand states—Arizona, California, Florida, and Nevada. These states saw among the largest increases in foreclosure rates following the nationwide bust in housing market activity around 2005; however, since mid-2009, with the exception of Florida, foreclosure rates in the sand states have fallen sharply.

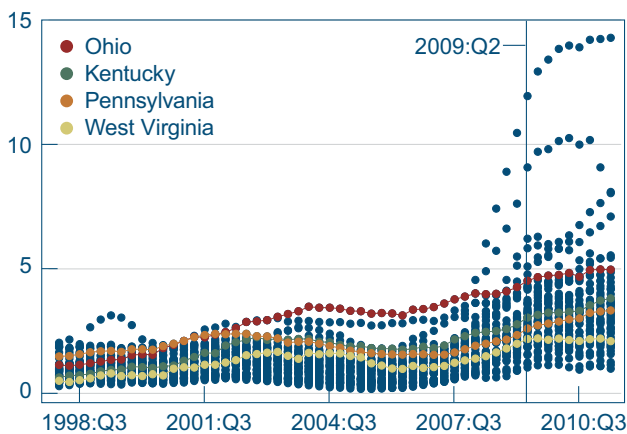
The declines have been so significant that Arizona and California, which had the nation's third- and fourth-highest foreclosure rates in the second quarter of 2009, respectively, had the thirteenth- and seventeenth-highest rates, respectively, two years later. By contrast, Ohio has continued to have one of the nation's highest state foreclosure rates—remaining in the top ten—while Kentucky and Pennsylvania have each seen their rankings worsen, from twenty-second- to fifteenth-worst for Kentucky and twenty-ninth- to twenty-fifth-worst for Pennsylvania.

What accounts for this divergence? Broadly speaking, states can use two different kinds of processes for resolving foreclosures, and these differences appear to be behind the differing patterns of recent foreclosure-rate changes. One approach, judicial, requires that a foreclosure proceed through the courts. Another approach, nonjudicial, is handled outside of court, generally by a third-party trustee who, at the time the loan was originated, was given the power to sell the property under certain conditions. States may employ one or both of these processes.

Judicial foreclosure timelines tend to be longer under normal circumstances. But they are also

Foreclosure Rates, Fourth District States

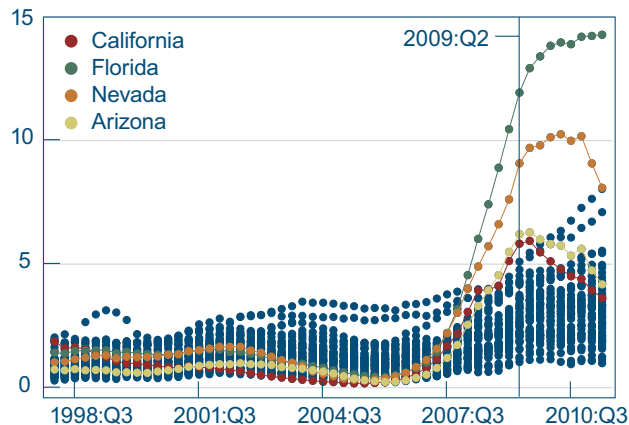
Foreclosure inventory (percent)



Note: Each dot is associated with a data point for one of the 50 states. All data are seasonally adjusted. Source: Mortgage Bankers Association.

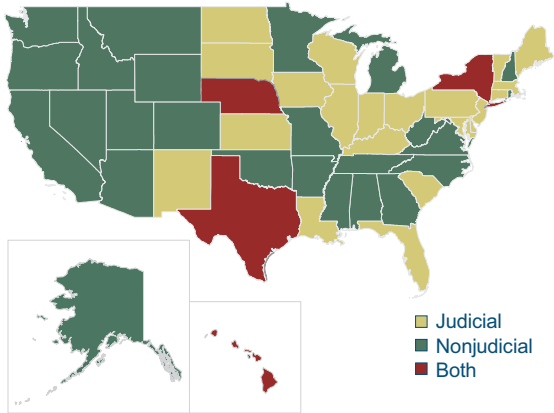
Foreclosure Rates, Sand States

Foreclosure inventory (percent)



Notes: Each dot is associated with a data point for one of the 50 states. All data are seasonally adjusted. Source: Mortgage Bankers Association.

Judicial and Nonjudicial Foreclosure States



Source: "Recourse and Residential Mortgage Default: Evidence from U.S. States," by Andra C. Ghent and Marianna Kudlyak, 2011. *Review of Financial Studies*, vol. 24, no. 9.

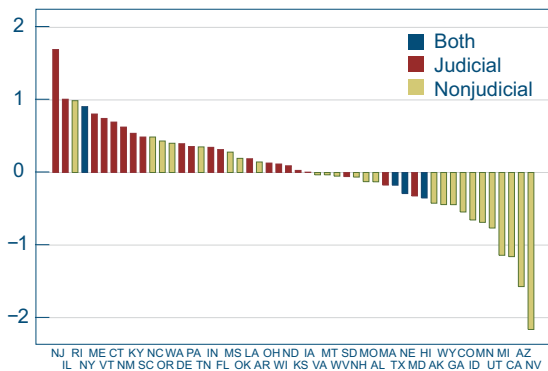
prone to getting even longer if courts face a flood of foreclosures, as has happened in the last several years. As a consequence, those states that rely on courts to process their foreclosures have generally seen their stock of foreclosures continue to build, often amassing a considerable backlog. By contrast, the states that rely more heavily on trustees' sales have in many cases seen their foreclosure rates fall.

This partially explains patterns evident in the Fourth District, where states that rely exclusively on a judicial foreclosure process—Ohio, Kentucky, and Pennsylvania—have seen little decline in their foreclosure rates. But this difference can be seen even more starkly in the sand states. Florida is the only state among these that relies exclusively on a judicial foreclosure process. It is also the only state among the sand states that hasn't seen a meaningful decline in its foreclosure rate. This has recently prompted Florida officials to consider changing the state's foreclosure process from one that's court-mediated to one that's not.

Of course, changes in new foreclosure filings could be contributing to differences in foreclosure rates as well. However, foreclosure filing rates fell for most states from the middle of 2010 to the middle of 2011. And unlike what we've observed for foreclosure rates, foreclosure filings don't appear to have been affected by differences in state foreclosure processes. This suggests that recent changes in foreclosure rates across states are being driven by differences in the rate at which loans are moving through and out of foreclosure, rather than the rate at which they are moving into foreclosure.

Change in Foreclosure Rates, by Type of Process

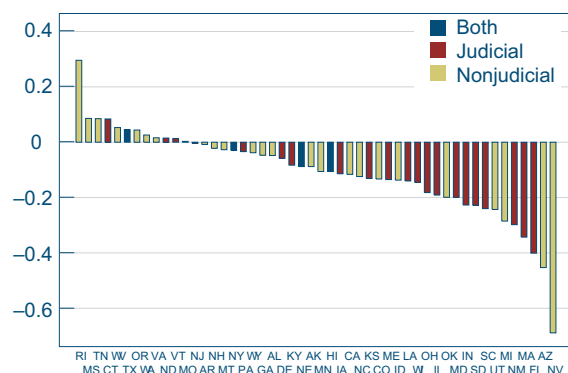
Four-quarter change, foreclosure inventory (percentage point)



Note: All data are seasonally adjusted. Source: Mortgage Bankers Association.

Change in Foreclosure Filing Rates, by Type of Process

Four-quarter change, foreclosure starts (percentage point)



Note: All data are seasonally adjusted. Source: Mortgage Bankers Association.

Market-Based Inflation Expectations Reflect No Fear of Inflation in the Medium and Long-Term

10.14.11

by Mehmet Pasaogullari

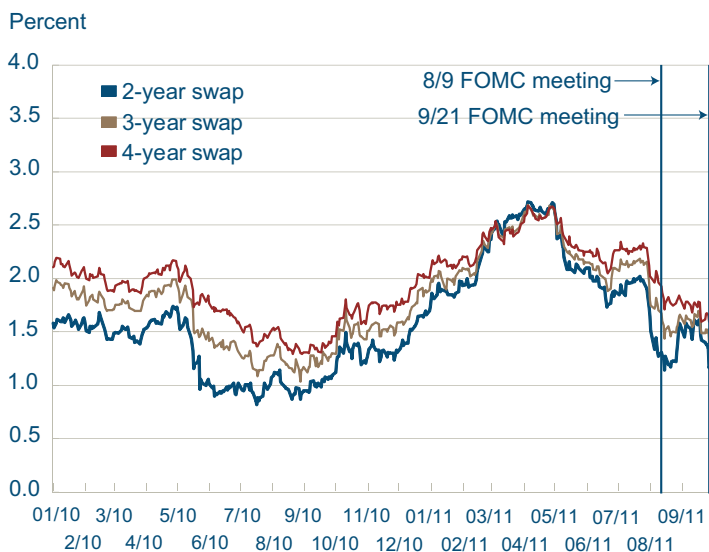
In normal times, the Federal Reserve can affect nominal and real interest rates by setting a target for the federal funds rate, an overnight rate for funds exchanged between banks. Because that rate has been near zero for some time, the Federal Reserve has turned to other policy tools. One such tool is the language used in policy statements and press releases. Another is the expansion of the types of securities it holds.

Some people have criticized these new actions, fearing that the Fed is going to create out-of-control inflation. One way to check how widespread these fears are is to look at market-based measures of inflation expectations. Market-based measures are useful in this regard because they reflect what investors expect future inflation will be—in fact, they have bet their own money on their expectations. What we can see from these measures is that the markets put negligible weight on a high inflationary environment in the medium- and long-term future. Actually, these expectations dropped significantly even after the Fed announced its most recent policy change.

We use two types of market-based measures of inflation expectations. One is the spread between nominal Treasuries and inflation-indexed Treasuries, and the other is inflation swap rates. The spread between nominal and inflation-indexed Treasuries is called the “breakeven inflation rate” or “inflation compensation.”

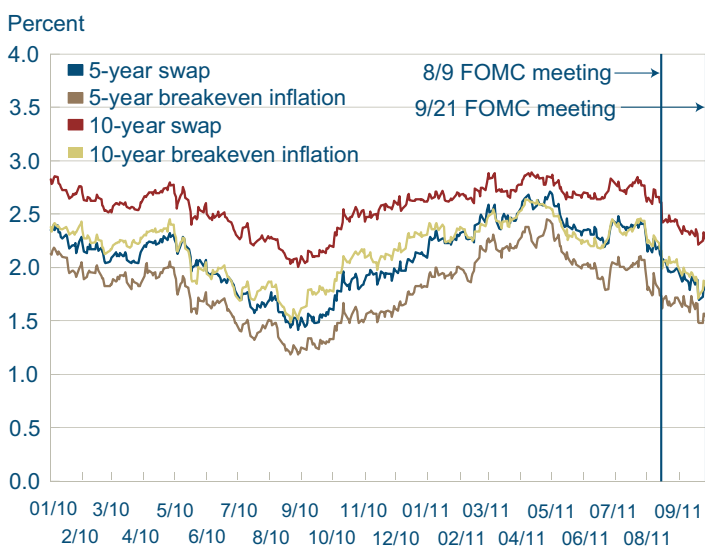
First we look at medium-term inflation expectations from inflation swaps (2 to 4-year maturity). These expectations followed a declining trend from the end of April to late August. Since then, their movement has been volatile, though at a low level. On August 25, 2011, the 2-year inflation swap was at 1.22 percent, about 1.5 percent lower than its peak in 2011. The same was also true for the 3- and 4-year inflation swaps, which were about

Medium-Term Measures of Inflation Expectations



Source: Bloomberg.

Longer-Term Measures of Inflation Expectations



Sources: Bloomberg; Federal Reserve Board.

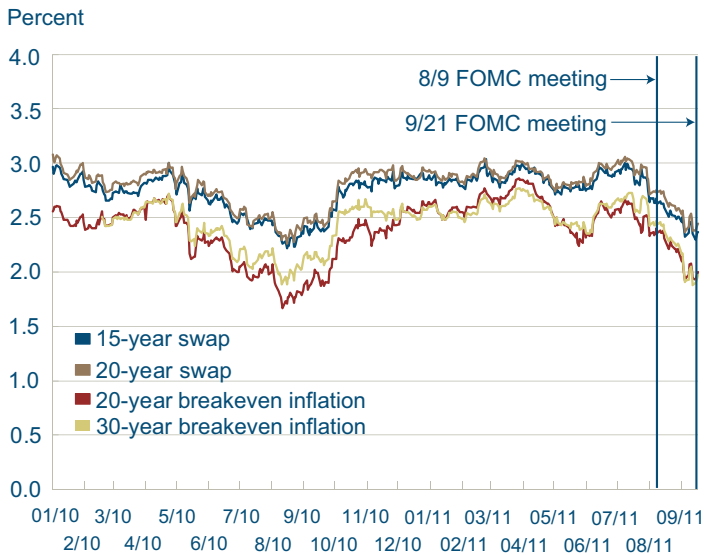
1.2 percent and 0.9 percent lower than their peaks in 2011, respectively. We saw a very modest increase in all the medium-term swaps on the day the August FOMC statement was released, August 9. After the last week of August, swap rates started to increase. For example, the 2-year swap rate increased to 1.61 percent on September 21, about a 47 basis point increase from its lowest level in 2011 (on August 18). However, after the September 21 FOMC announcement, we again see a declining trend. The same 2-year inflation swap rate had declined to 1.17 percent by the end of September.

Next, let's turn to the 5- and 10-year inflation swaps and breakeven inflation rates. We see that inflation swaps are higher than the breakeven inflation rates for the same maturities. The difference is most likely related to a liquidity premium that is incorporated into the yields of the inflation-indexed Treasury securities. Since the breakeven rate is the difference between the nominal and inflation-indexed (real) yields, a positive liquidity premium in the latter may underestimate inflation expectations. In addition, there are other sources of bias in the breakeven rate such tax differences. On average, the difference between the swap rates and the breakeven inflation rates for 2011 is 31 basis points for the 5-year maturity and 35 basis points for the 10-year maturity.

When we look at the evolution of these rates, we see that they have been declining since late July. There also have been no noticeable changes around the FOMC meetings. For example, the 5-year break-even rate declined from 2.11 percent on July 28, 2011, to 1.5 percent at the end of September. In the same period, the 10-year inflation swap rate fell 61 basis points, from 2.81 to 2.20 percent. Although these crude measures for long-term inflation expectations have fallen sizably recently, they are still about 20-30 basis points above their lowest level in the last two years. That level was reached in late August 2010, a period just before the Federal Reserve Chairman Ben Bernanke hinted at a further monetary expansion, dubbed QE2.

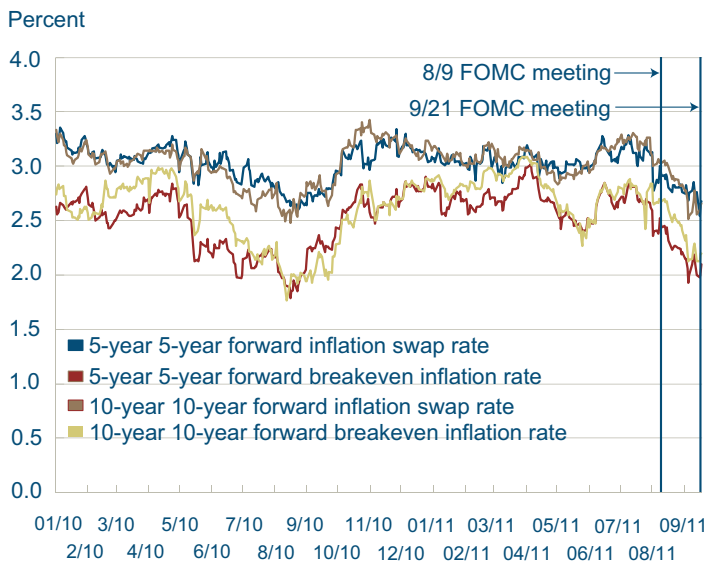
When we look at even longer measures of inflation expectations, we see that the decline of these expectations in the last two months is rather prevalent

Long-Term Measures of Inflation Expectations



Sources: Bloomberg; Federal Reserve Board.

Forward Measures of Long-Term Inflation Expectations



Sources: Bloomberg; Federal Reserve Board.

over the whole term structure. For instance, the 20-year inflation swap declined more than 60 basis points between the end of July and September, whereas the 30-year breakeven rate for the same period declined about 85 basis points to 1.88 percent.

Finally, let's look at the forward measures computed from the breakeven rates and the swap rates. These measures look at the period between a point in future and a further point in the future. Their appeal is that they give a view of future inflation abstracting from current short-term shocks. The evolution of these rates also reflects the same general decline as in the other market-based inflation expectations over the last two months.

Of course, we cannot associate all the swings in the market-based measures of inflation expectations with the policies or the policy announcements of the Fed. Like any other macroeconomic variable, the expectations are affected by other variables and beliefs about future economic conditions. Even when we look at the effects of just the statements, we have to recognize that other information could be figuring in, like the Federal Open Market Committee's assessment of recent economic conditions. It is very hard to disentangle the effects of such assessments from the announcements of the policy changes. However, looking at the data, it seems that market participants who actually bet their money on the future inflation outlook did not see an inflationary threat in the Fed's recent policy actions.

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ISSN 0748-2922

