Economic Trends

September 2010 (August 13, 2010-September 9, 2010)

In This Issue:

FEDERAL RESERVE BANK
of CLEVELAND

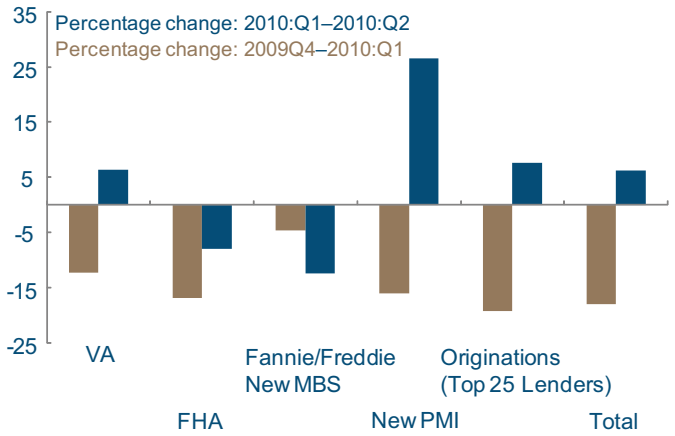
Where Does the Mortgage Market Go from Here?

08.27.10

by Yuliya Demyanyk and Matthew Koepke

Mortgage Indicators

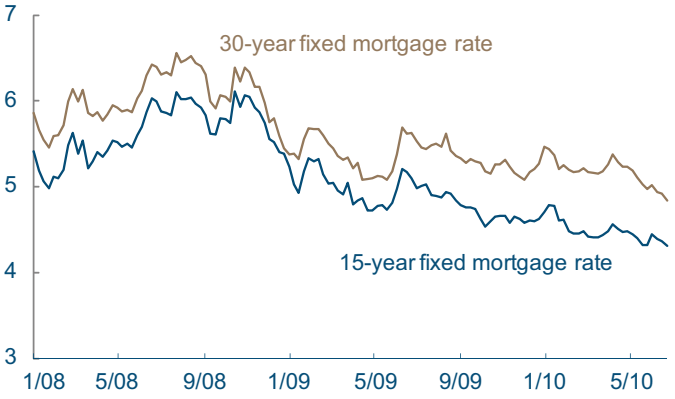
Quarterly percentage change



Source: Inside Mortgage Finance.

Mortgage Interest Rates

Percentage rate



Source: Wall Street Journal.

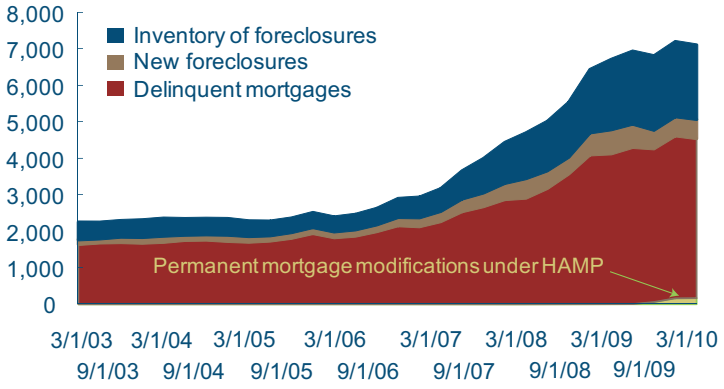
In the first quarter of 2010, it appeared that the mortgage market was running out of steam. An increase in mortgage originations in the second quarter, however, demonstrates that there still is demand for mortgages. According to Inside Mortgage Finance, VA-mortgage originations increased 6.3 percent from the first to the second quarter, originations from the top 25 lenders were up 7.6 percent over the same period, and total originations were up 6.3 percent. In addition, new private mortgage insurance was up 26.6 percent over last quarter. Private mortgage insurance is extra insurance lenders require when the amount of a loan exceeds 80 percent of the home's value. The increased availability of this type of insurance could make home ownership more accessible to homeowners who don't have enough for a 20 percent down payment.

According to a recent survey published in Inside Mortgage Finance, the improved second-quarter performance was driven by consumers taking advantage of the favorable interest rate environment and the extension of the homebuyer tax credit. Since October 2008, interest rates on 30-year fixed mortgages have fallen 155 basis points, from 6.39 percent to 4.84 percent. In addition to the favorable rates, many homebuyers decided to take advantage of the homebuyer tax credit, which gave first-time homebuyers a tax deduction of $8,000 and existing homeowners buying a new home a deduction of $6,500. The credit, which was set to expire in November 2009, was extended until April 2010.

While the second-quarter originations provide a glimmer of hope that the housing market is improving, significant challenges still lay ahead. This is evident when examining the number of delinquent mortgages, new foreclosures, and the inventory of foreclosures. Between March 2003 and June 2010, the number of delinquent loans increased from 1.6 million to nearly 4.4 million. Rising even more dramatically is the inventory of foreclosed homes,

Mortgage Delinquencies and Foreclosures

Number of mortgages (thousands)



Source: Mortgage Bankers Association.

which increased from 482 thousand to slightly over 2.0 million. As of June 2010, 6.9 million loans are classified as in trouble.

The difficulties involved in attempting to rectify the imbalances in the housing market can be demonstrated by examining the July Home Affordability Modification Program ("HAMP") Servicer Performance Report. According to the report, even though nearly 3.1 million delinquent loans were eligible for modification and 1.3 million modification trials have been started since May 2009, the number of permanent modifications started since September of 2009 has been a mere 434 thousand. Given that there are currently 4.4 million delinquent borrowers and only 434 thousand permanent modifications in the works, it is likely that the real estate market will remain fragile for some time.

To read the July Home Affordability Modification Program ("HAMP") Servicer Performance Report, visit
http://www.financialstability.gov/docs/JulyMHAPublic2010.pdf

Eurodollar Futures, Taylor Rules, and the Conduct of Future Monetary Policy

09.10.10
by Charles T. Carlstrom and John Lindner

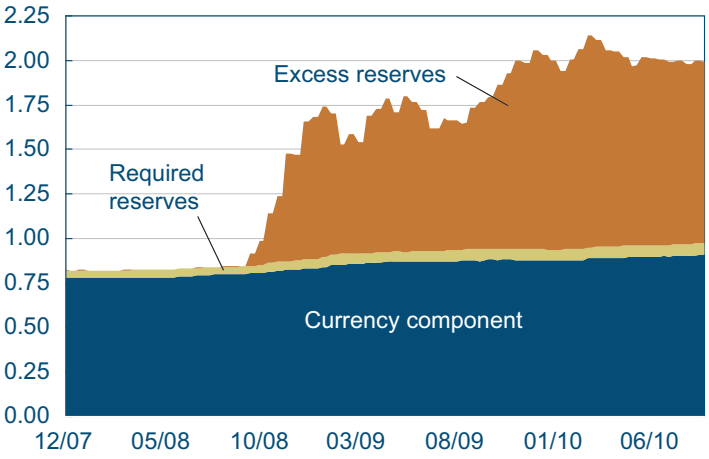
When interest rates are zero and policymakers would like to lower rates further, the usual monetary policy operations are no longer effective. Traditional open market operations, in which the Fed swaps collateral into or out of the financial system for cash, can't affect rates—or economic activity—because short-term bonds and excess bank reserves are perfect substitutes in a zero-interest-rate environment. The substitutability means that when the Fed buys short-term debt from banks, that does not insure that the money banks are receiving in payment will be lent out. Instead, banks simply substitute the T-bills that were on their balance sheet (which effectively earn zero percent interest) with excess reserves. When open market operations (with short-term bills) only increase the balances of excess reserves, the operations will be ineffective in increasing prices and output. This substitutability is one reason that the level of excess reserves exploded during the recent recession.

Monetary authorities must instead find alternative ways of stimulating the economy and increasing inflation. One policy option is to signal the future path of interest rates. Monetary policy is not given by just today's funds rate but the path of future funds rates as well. By promising low rates not just today, but also in the future, long-term rates can also be reduced. This reduction in long-term rates increases investment and thus output.

In order to achieve lower expected long-term interest rates, the Fed needs to convey a message to the markets that alters their expectations for the policy rate path going forward. Some elements of the Fed's recent Federal Open Market Committee (FOMC) statements might suggest that it is sending such a message. In the last several statements, the FOMC said: "The Committee will maintain the target range for the federal funds rate at 0 to 1/4 percent and continues to anticipate …exceptionally low

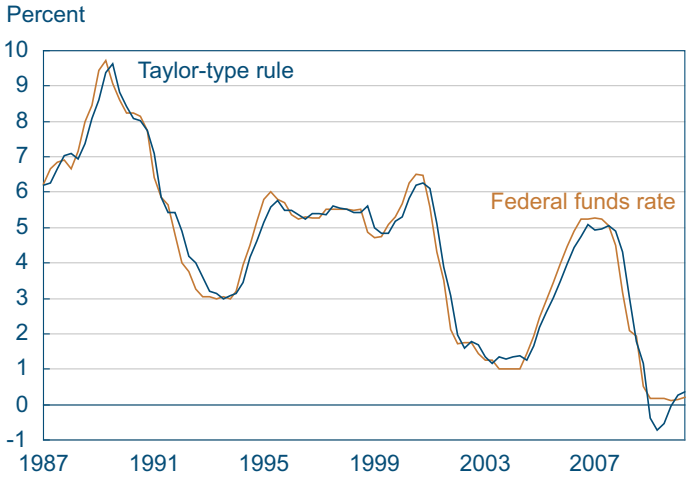
Components of the Monetary Base

Trillions of dollars, seasonally adjusted



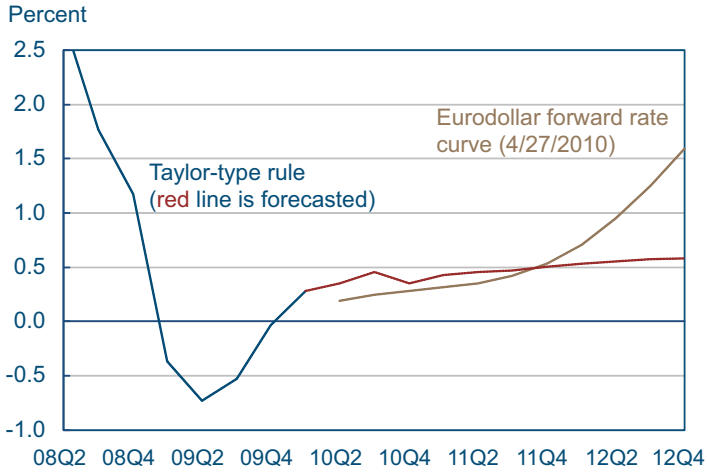
Source: Federal Reserve Board.

Taylor-Type Rule and Federal Funds Rate



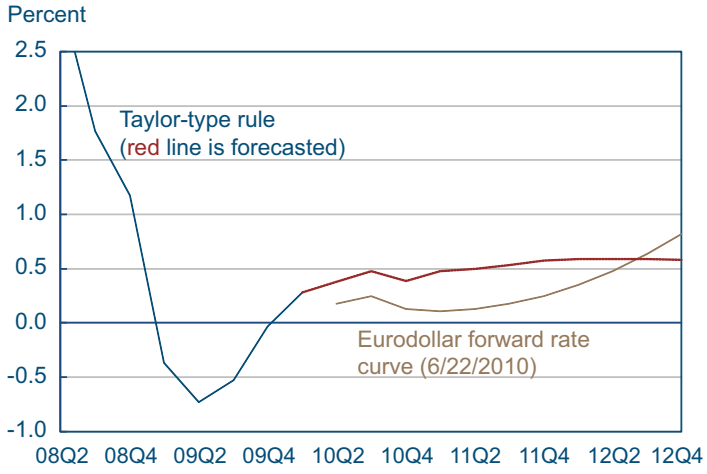
Sources: Federal Reserve Board; BEA.

Taylor-Type Rule and Eurodollar Curve: April



Note: Forward rate curve has been adjusted for term and maturity mismatch.
Source: Federal Reserve Board; BEA; April internal forecast.

Taylor-Type Rule and Eurodollar Curve: June



Note: Forward rate curve has been adjusted for term and maturity mismatch.
Source: Federal Reserve Board; BEA; April internal forecast.

levels of the federal funds rate for an extended period."

But the lines omitted in that excerpt are very important, as they seem to indicate that the reason the funds rate will be low is because of "economic conditions, including low rates of resource utilization, subdued inflation trends, and stable inflation expectations." If low rates are solely due to the fact that the Fed will continue to respond to inflation, output, and the output gap as it typically does, then the Fed's statement will not stimulate the economy since it is not affecting the anticipated course of future policy.

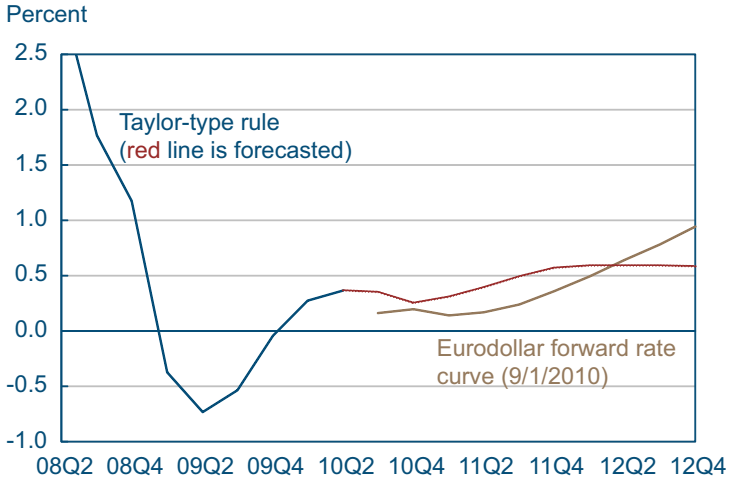
To investigate whether the markets expect future funds rates to be lower than what would normally occur given the current state of economic conditions, we need a way of ascertaining how policy has typically responded to economic conditions as well as a measure of what markets expect. For the policy reaction function we can use a Taylor-type interest rate rule. While there are many possible economic conditions on which the Fed can base its rate decisions, we include inflation, current output growth, and lagged federal funds rates. The following chart illustrates that such a simple "rule" tracks the funds rate quite closely.

The question is whether markets expect future fed funds rates to be higher or lower than would be predicted by this rule going forward. To extend this Taylor-type rule we use internal forecasts of inflation and output growth. To get an idea of what markets expect for the future path of the funds rate we use Eurodollar futures, correcting for the risk in the Eurodollar market that is not present in the fed funds market. These futures are thought to be a good estimate of market expectations of future funds rates.

If we start this analysis in April, we see that the market was expecting much higher funds rates in the future than would have been expected given the forecasts for future economic conditions. In April, future policy by this metric was not accommodative but was actually restrictive.

But by the June FOMC meeting the situation had changed dramatically. Now the market's expecta-

Taylor-Type Rule and Eurodollar Curve: September



Note: Forward rate curve has been adjusted for term and maturity mismatch.
Source: Federal Reserve Board; BEA; April internal forecast.

tion of future funds rates was almost always below what would be expected from a Taylor-type interest rate rule. This indicates that future policy was now accommodative. These market expectations had fallen on the big news around this time of debt concerns in Greece and Portugal.

Repeating this analysis for early September, we see that market forecasts and a Taylor-type rule are very similar, suggesting that future policy is neither more restrictive nor accommodative than would typically be expected from economic conditions. Extending the market's expectations out even further by promising low rates for a "hyperextended" period of time is likely to be stimulative. But the impact of such a language change will probably be minimal, given that markets are already expecting the next funds rate increase to occur in the middle of 2012.

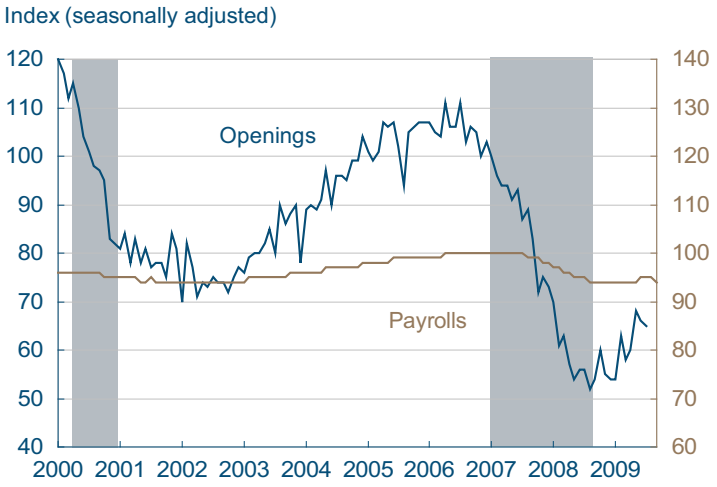
For more on Eurodollar futures, visit http://www.clevelandfed.org/research/trends/2010/0410/01monpol.cfm

The Great Recession and its Impact on Different Industries

09.10.10

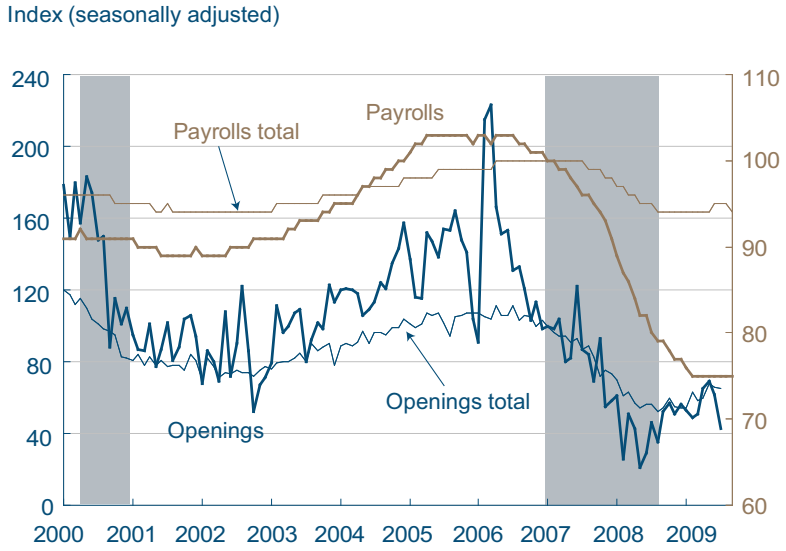
by Murat Tasci and John Lindner

Total Private Sector Job Openings and Payrolls



Source: Bureau of Labor Statistics.

Construction Sector Job Openings and Payrolls



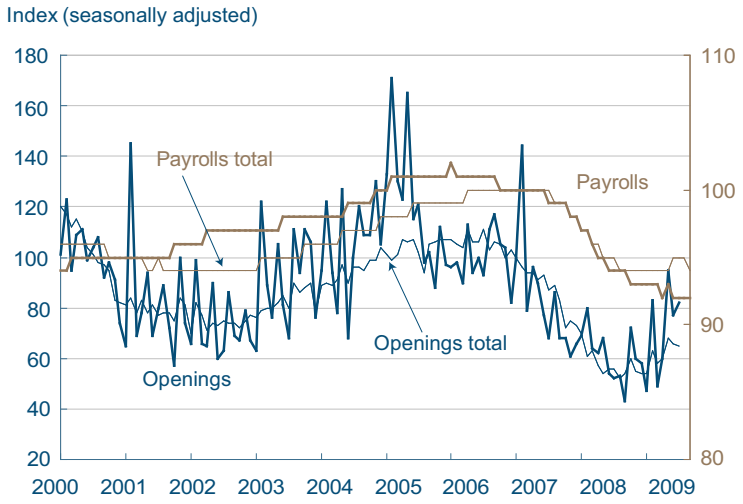
Source: Bureau of Labor Statistics.

The recent recession, now called the Great Recession by many, had significant adverse effects on the labor market overall. Even though the recovery has apparently begun and output has been growing since the second quarter of 2009, payroll employment is still about 6 percent less than it was at its prerecession peak in December 2007. New jobs are being created, but at a relatively modest pace—about 100,000 jobs a month on average have been added to nonfarm payrolls since the beginning of 2010.

This anemic hiring indicates a low demand for labor. However, the job openings data don't look so grim. In contrast to payroll employment, the current level of job openings is a lot higher than it was at its recession trough in July 2009, when it hit 52 percent. Total job openings in the economy currently stand at 65 percent of their prerecession level. But while this is evidence that firms are looking for workers to fill vacant positions, it has not translated into a sustained increase in actual hiring.

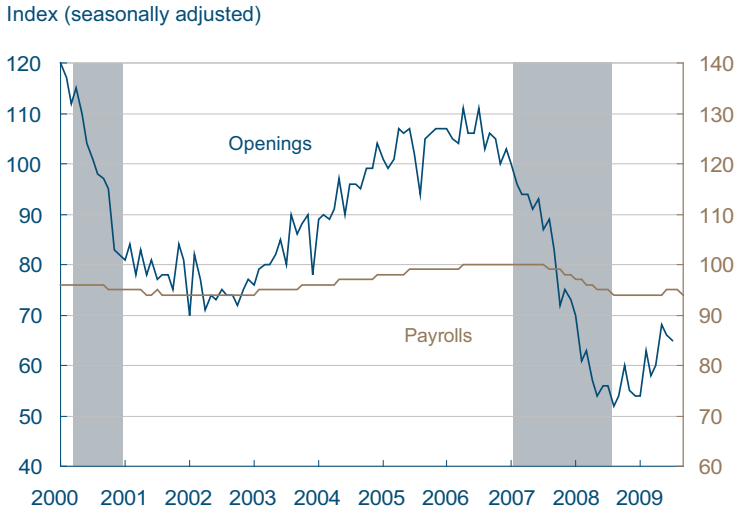
This is not uncommon at the early phases of a recovery, since it takes time for firms to find the right match among the large pool of unemployed. But there is another reason employment growth could be sluggish, and it's more of a concern. It could be that firms are willing to hire, but they are unable to find the workers they need among those who are unemployed. That problem is sometimes dubbed a "mismatch" of (worker) skills and (company) needs. If the mismatch is significant, one obvious place it might show up is if some sectors were affected by the recession differently than others. Since the Great Recession was accompanied by problems in the housing and the financial markets, some economists have argued that employment in these sectors might never go back to their prerecession levels. If this is true, we might see these sectors recovering more slowly than others, as workers who lost their jobs in these industries might lack the skills that are required for other sectors. There

Financial Sector Job Openings and Payrolls



Source: Bureau of Labor Statistics.

Total Private Sector Job Openings and Payrolls



Source: Bureau of Labor Statistics

is not a clear way to see whether this has in fact happened, but we can look at the responses of payroll employment and job openings across different sectors as a start.

Construction was probably one of the sectors most affected by problems in the housing market. As a result, employment in this sector has shrunk by 25 percent since December 2007. Note that construction employment started to decline before the recession officially hit, but the timing coincides with many of the housing problems that arose before the recession. The job loss in this sector stands in stark contrast to the total employment loss of 6 percent. The disproportionately stronger effects of the recession on the construction sector are also evident in the job openings numbers. At one point toward the end of the recession, the number of job openings was barely 20 percent of the level in December 2007. If one takes into account the fact that construction employment was already in a declining trend by that time, the significance of the decline in labor demand is more obvious.

Another sector that was hard hit by the recession is the financial services sector (including insurance and real estate services). Contrary to what one might expect, the financial services sector did not experience a much larger loss than the aggregate economy. Total employment in the sector was about 8 percent lower than it prerecession level by the end of August. However, the response of labor demand was a little more pronounced. Job openings slumped by about 55 percent by mid-2009 before starting to climb upward. The average figure in the second quarter was around 80 percent of the prerecession level in December 2007.

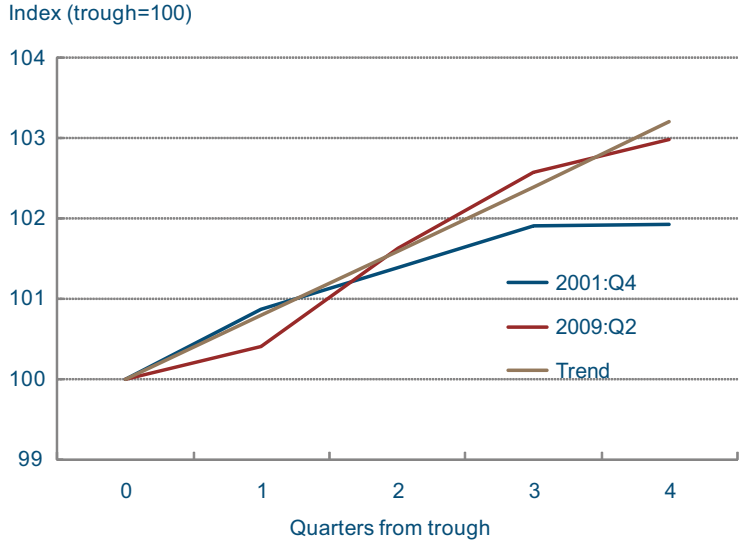
This limited evidence suggests that those industries thought to be disproportionately affected by the recession, did in fact respond differently.

Households' Balance Sheets and the Recovery

09.10.10
by Pedro Amaral

Since the Second World War, real GDP in the United States has grown, on average, at a yearly rate of 3.2 percent. This is what economists call "trend growth." Whenever the U.S. economy is faced with a recession and grows below trend for a while, a recovery period typically follows in which growth is above trend. In a previous Trends article I pointed out that the current recovery and the previous one are weak in the context of past recessions. As the figure below illustrates, in these two instances, unlike in previous recoveries, GDP grew either at or below trend for the year following the trough.

Recovering from Troughs



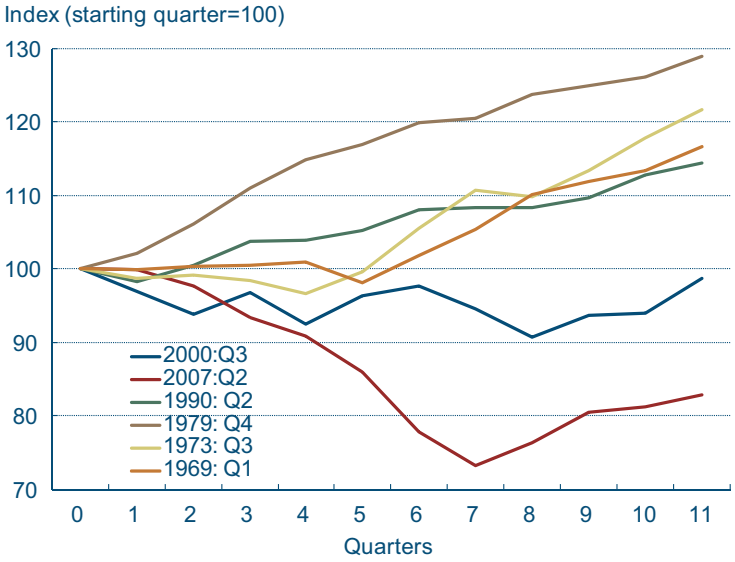
Sources: Bureau of Economic Analysis and author's calculations.

The latest numbers from the National Income and Product Accounts suggest that the state of the recovery is not as bad as one might think at first glance. Looking at the behavior of the different GDP components reveals some short-term effects that are likely to go away in the third quarter. While overall GDP grew at a rate of only 1.6 percent, gross domestic purchases, a series which subtracts exports from GDP and adds imports, grew at the healthy pace of 4.9 percent. This means net exports "robbed" GDP of 3.3 percentage growth points. In fact, imports alone grew at a yearly equivalent rate of 32.4 percent, a clearly unsustainable rate that no doubt owes much to the broad appreciation in the U.S. dollar vis-à-vis the currencies of major U.S. trading partners.

Even if things do improve slightly in the near future, we would still be growing along with the trend and not above it as in most recoveries. The reasons for the sluggish pace of the two latest recoveries are to be found in the differences between these two recessions and previous ones. While many factors may qualify, I will focus on the effect of the downturns on households' balance sheets.

The chart below shows the behavior of households' (and nonprofit organizations') net worth in the last six recessions. It is apparent that in the last two the damage to households' balance sheets was

Households' Net Worth During Recessions



Sources: Flow of Funds Accounts of the United States.

both deeper with and more protracted than in the previous episodes. What was behind the drop in the latest recession? During this period, liabilities were roughly constant, so the drop happened because of declines in asset values caused by the real-estate collapse and the subsequent depreciation in financial assets. In the 2000 recession the drop was due to the stock market collapse. In contrast, in the twin recessions of the early 1980s, net worth never decreased, and in the early 1990s it dropped only about 2 percent.

The drops in household net worth help explain the protracted recoveries after the last two recessions. Personal consumption expenditures are the single biggest component of GDP at around 70 percent. If there is to be a solid recovery, consumption needs to increase at a substantially higher rate than the 1.7 percent it has averaged over the last year. But households are not going to start consuming at substantially higher rates until they have fixed their balance sheet problems. This is why the savings rate has been so high lately: Households are working hard at improving their wealth to income ratios at the expense of consumption. In previous recessions, since net worth did not fall by a substantial amount, this was not a problem. As incomes started growing again, consumption followed suit. Right now, an important part of that income growth is being channeled to savings. As the chart above illustrates, net worth is still well below prerecession levels and, barring an increase in asset prices (real-estate prices or stock market prices), the only way to increase it is by saving more and consuming less, further delaying the recovery.

Finally, note that this figure hides a lot of heterogeneity in terms of asset holdings across households. At the peak that preceded the most recent recession, real estate represented roughly a third of total household assets, while most of the remainder was in the form of other financial assets (stocks, bonds and related derivatives). Households at the very top of the income scale hold a disproportionate amount of wealth in the form of these financial assets, which in turn means that the vast majority of households have most of their wealth in the form of housing. Since real-estate-related assets declined by 30 percent from peak to trough (compared to

a 22 percent decline in other financial assets), the decline shown in the graph, as large as it seems, actually underestimates the losses most households suffered.

To read more about the current recovery, visit http://www.clevelandfed.org/research/trends/2010/0510/01gropro.cfm

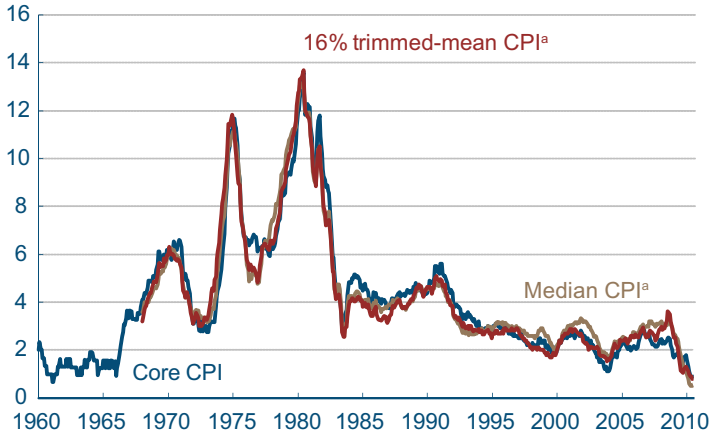
Inflation: Soft but Stable?

08.27.10
by Brent Meyer

We have experienced a dramatic disinflation—a slowing in the growth rate of inflation—over the past couple of years, with the 12-month growth rates of several measures of underlying inflation trends falling from around 3.0 percent in mid-2008 to lows not seen in nearly five decades. In fact, over the past year, measures of underlying inflation produced by the Federal Reserve Bank of Cleveland—the median CPI and 16 percent trimmed-mean CPI—are up just 0.6 percent and 0.9 percent, respectively. With measured inflation rates that low, speculation abounds that disinflation will eventually give way to deflation. A quick glance at the most recent report on consumer prices might splash some cold water on that discussion. But then, a deeper dig through the report reveals details that might support continued low rates of inflation.

Consumer Price Index

12-month percent change



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

The overall CPI jumped up 3.8 percent in July, though that rise was driven largely by a large spike in energy prices. Excluding food and energy prices (the core CPI), the index rose 1.6 percent during the month and is now up 1.7 percent over the past three months, a far cry from its growth rate of –0.2 percent over the first three months of this year. There have been some noisy price movements over the past few months bolstering those relatively higher core readings. For example, an increase in tobacco taxes pushed up tobacco prices, and prices in various apparel categories jumped around in a volatile fashion (likely symptomatic of seasonal adjustment or mismeasurement issues). Implicitly, the core CPI takes all price changes in a given month except for food and energy prices as a signal of underlying inflation.

The Federal Reserve Bank of Cleveland's trimmed-mean measures, which were designed to lessen the impact of extreme component price swings on the reading of underlying inflation, usually clear up the picture that can sometimes be muddled by the core CPI. Unfortunately, while the median and 16 percent trimmed-mean measures have been running

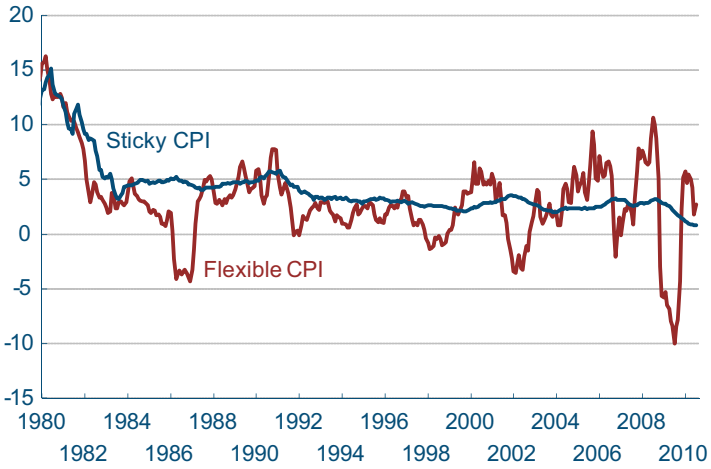
July Price Statistics

	Percent change, last					
	1mo.[a]	3mo.[a]	6mo.[a]	12mo.	5yr.[a]	2009 average
Consumer Price Index						
All items	3.8	0.0	0.0	1.2	2.2	2.8
Less food and energy	1.6	1.7	1.1	0.9	2.0	1.8
Median[b]	0.8	0.8	0.3	0.6	2.4	1.2
16% trimmed mean[b]	1.8	0.8	0.6	0.9	2.2	1.3
Sticky price	0.9	0.8	0.8	0.8	2.3	1.4
Flexible price	11.4	−2.0	−1.9	2.7	5.1	5.4

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.

Disaggregated CPI

12-month percent change



a. Calculated by the Federal Reserve Banks of Cleveland and Atlanta.
Sources: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland and Federal Reserve Bank of Atlanta.

softer than the core CPI over the past three months (0.8 percent versus 1.7 percent), they disagreed by a full percentage point in July. The median CPI rose 0.8 percent during the month, while the 16 percent trim increased 1.8 percent. So, which measure should we believe this month?

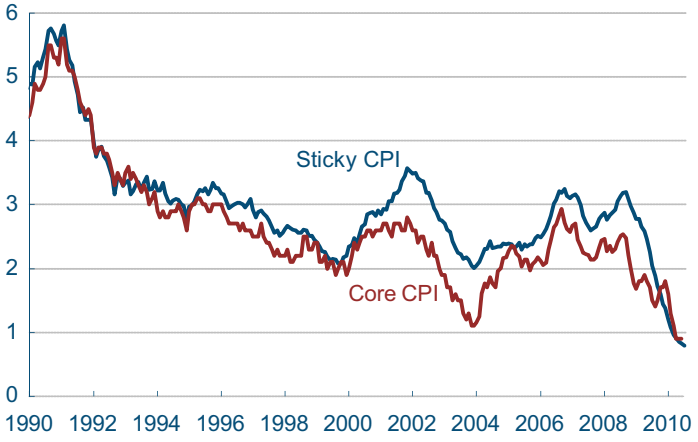
To help us answer that question, we need to employ another measure of inflation that combines the disaggregated data in a different way. Recent work by Mike Bryan and Brent Meyer (here), separates the components comprising the overall CPI into flexible and sticky goods. They find that flexible-priced components tend to be very noisy and can easily respond to changing economic conditions, while sticky-priced components tend to be more forward-looking and better indicators of future inflation.

One way to think about sticky prices is that, for some goods and services, it is costly to change prices frequently. The classic example is menu costs: It is costly for restaurants to continually print new menus, so they set their prices infrequently (when is the last time prices changed on McDonald's dollar menu?). In order to maintain profits in between price changes (or at least produce above marginal cost), price-setters likely incorporate expectations of future inflation into their pricing decisions today. We may be able to exploit this aspect of pricing behavior when trying to calculate underlying inflation trends.

Recently, the growth rate in the sticky CPI has been quite soft relative to its longer-term (five-year) trend growth rate of 2.3 percent. Also, compared to the core CPI, the sticky CPI has been on a sharper disinflationary path over the last two years—falling from a 12-month growth rate of 3.1 percent in mid-2008 to just 0.8 percent as of July (a series low with data back until 1968). Moreover, in July the sticky CPI rose 0.9 percent, consistent with its near-term trend, while the flexible CPI jumped up 11.4 percent after three consecutive monthly declines. After stripping away food and energy prices from the flexible price series, it still rose 5.2 percent in July and is up roughly 6.0 percent over the past three months, compared to its three-month annualized growth rate of –0.1 percent through the first three months of this year. Based on this evidence,

Sticky Versus Core CPI

12-month percent change



Source: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland and Federal Reserve Bank of Atlanta.

it seems that the price increases from the more volatile flexible price series have been putting upward pressure on some underlying inflation measures, while the sticky-price series has continued on its subdued (but positive) inflation trend.

For more on Mike Bryan and Brent Meyer's work, visit http://www.clevelandfed.org/research/commentary/2010/2010-2.cfm.

Small Business Lending

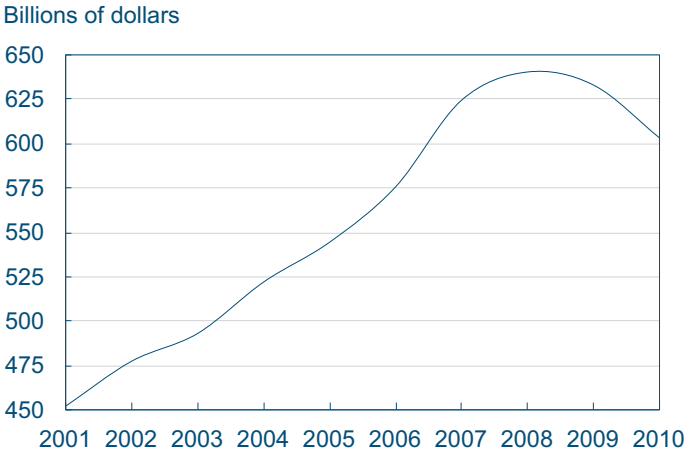
08.20.10
by Robert J. Sadowski

Although the U.S. economy stabilized in the middle of 2009 and is now expanding at a moderate pace, many small business owners who want to take advantage of growth opportunities report having difficulty obtaining credit for equipment purchases, operating capital, or committing to strategic acquisitions. From the perspective of the firm owner, bankers appear to be reluctant to lend regardless of credit history or ability to repay. In turn, bankers say that while lending standards remain tight, they have the capital and are anxious to lend, but demand is low. Bankers often cite as evidence the use of credit lines, which is well below historic norms.

Call Reports—one of the periodic reports all regulated financial institutions are required to file with their respective regulators (and officially named the Report of Condition and Income)—contain information that can be used to gauge the state of small business lending across the United States and in the Fourth District. One item institutions report is loans to small businesses and small farms. Examining those data shows that nationwide, total outstanding loan volume to small businesses declined 5.8 percent, or $37 billion, between June 2008 and March 2010, with the number of loans dropping by almost 14 percent. Looking at individual loan categories shows that those with original amounts between $100,000 and $250,000 declined the most in terms of outstanding volume (9.6 percent).

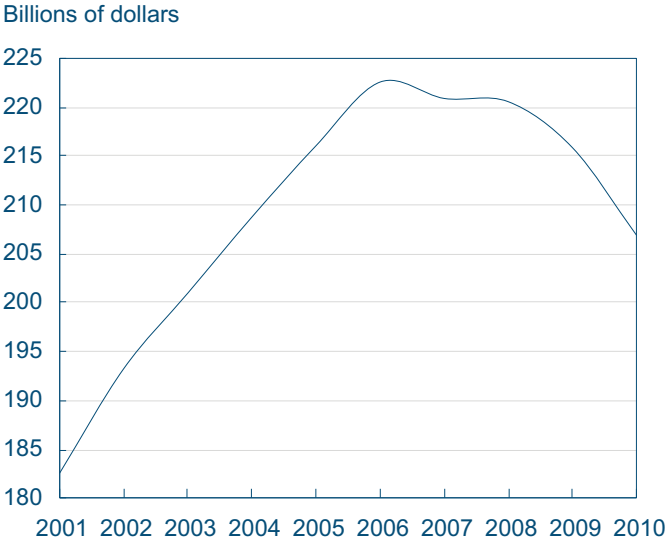
Nationally, community banks and large banks hold the highest shares of small business loans in terms of volume. (Banks are usually categorized by total asset value. Community banks have less than $1 billion; regional banks have $1 billion to $10 billion; large banks more than $10 billion; and mega banks more than $400 billion.) Community bankers reported that their small business loan portfolios dropped by 6.2 percent between 2008 and 2010, with loans under $100,000 posting the largest outstanding volume decline at 13.4 percent. This suggests that it may be microbusiness owners

Small Business Lending: All Banks



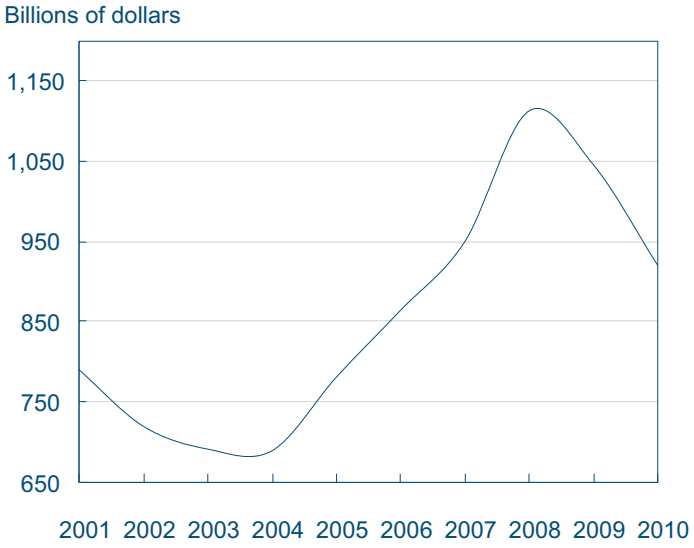
Source: Bank Call Reports (*Reports of Condition and Income*).

Small Business Lending: All Community Banks



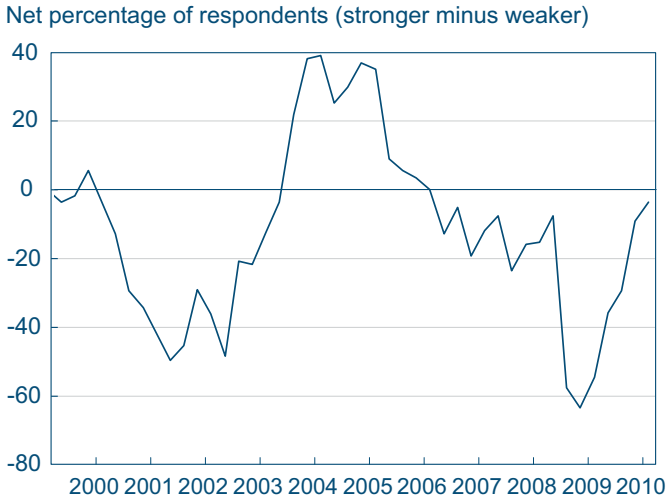
Source: Bank Call Reports (*Reports of Condition and Income*).

Outstanding Commercial and Industrial Loan Volume: All Banks



Source: Bank Call Reports (*Reports of Condition and Income*).

Change in Demand for Commercial and Industrial Loans from Small Firms



Source: Federal Reserve Board /Haver Analytics.

(under 10 employees) who are actually experiencing the most difficulty obtaining credit. Loans aimed at microbusinesses are typically in the range of $5,000 to $35,000. Small business lending at large banks declined by 4.2 percent during this same time period; however, loan volume with original amounts of less than $100,000 rose by 1.7 percent.

The pattern is similar for lending to all firms. Between June 2008 and March 2010, total outstanding commercial and industrial loan volume held by all banks nationally declined by 17.3 percent, or about $193 billion. While similar, these figures mean that, on a relative basis, small business lending has not declined as much as overall commercial and industrial lending.

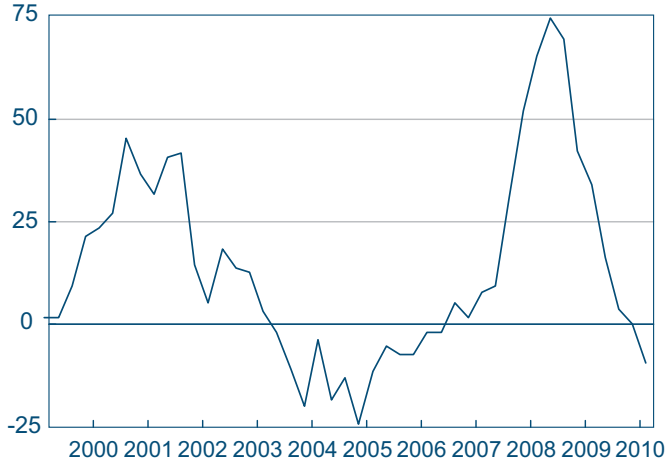
The Federal Reserve Board's Senior Loan Officer Survey is a useful tool for monitoring business loan supply and demand. According to the July 2010 survey results, about 4 percent of bankers, on net, said that loan demand by small firms was moderately weaker on a quarter-over-quarter basis. While the trend has been growing less negative during the past year, many business owners remain uncertain about the strength and sustainability of the economic recovery and are less inclined to borrow. Uncertainty is one of the primary reasons given by the majority of business owners we spoke with in the Fourth District for why they are not increasing current or near-term capital spending relative to actual spending during the past 12 months.

On the supply side, 9 percent of bankers, on net, said that credit standards for approving applications for commercial and industrial loans or credit lines have eased somewhat on a quarter-over-quarter basis. However, the improvement has been concentrated at large domestic banks. This means that tight credit standards remain firmly in place for the most part, and they are expected to be tighter than their long-run average level for the near term, especially for below-investment-grade firms.

Looking at call report data filed by Fourth District bankers, we found that it is more difficult to discern meaningful trends due to the many bank acquisitions and charter consolidations in recent years. Report data indicate that between June 2008 and March 2010, total outstanding loan volume

Tightening Commercial and Industrial Loan Standards for Small Firms

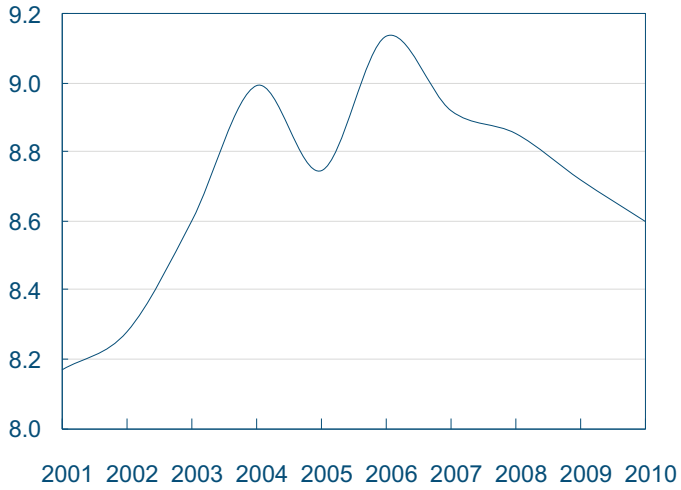
Net percentage of respondents (tightened minus eased)



Source: Federal Reserve Board /Haver Analytics.

Small Business Lending: Fourth District Community Banks

Billions of dollars



Source: Bank Call Reports (*Reports of Condition and Income*).

to small businesses by all District banks rose 7.0 percent, or about $4 billion. However, a substantial amount of the increase can be attributed to one large District bank that consolidated two out-of-District bank charters under a single Ohio bank charter at the beginning of the fourth quarter 2009.

Fourth District community banks reported that lending to small firms has been on a downward trend since June 2006. In fact, between 2006 and 2010, outstanding volume declined by over $500 million, or about 6 percent. The under-$100,000 loan category showed the largest volume drop at 18.5 percent, with the number of loans in this category falling by more than 21 percent. One activity we have recently undertaken in the District is to discuss lending conditions with small business owners through meetings and Beige Book contacts. These interactions provide us with anecdotal evidence regarding access to credit by small firms. Information obtained from these interactions again points to the microbusiness owner as experiencing the greatest effect of tight credit standards. Many manufacturers reported that while they are encountering some difficulties in credit markets, their "very small" suppliers and customers are experiencing far more difficulty obtaining a loan, or they are denied credit altogether.

There is little doubt as to the substantial pullback in lending to small businesses nationally and in the Fourth District. Anecdotal information suggests that until business owners are more confident in the sustainability of a robust economic recovery, credit demand will remain subdued. Even if demand does begin to pick up, the supply of credit may be more limited than before the recession. Many bankers do not anticipate any loosening of credit standards for the foreseeable future, and they tell us that current standards for loan applicants are the new norm.

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