Economic Trends

October 2009 (Covering September 11, 2009 to October 8, 2009)

In This Issue:

FEDERAL RESERVE BANK
of CLEVELAND

August Price Statistics

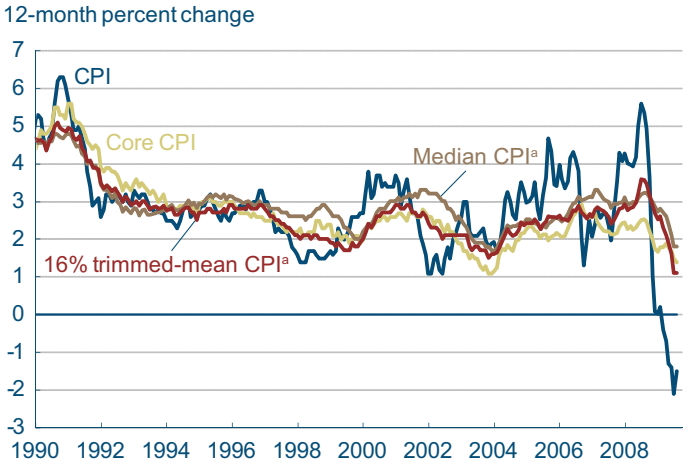
09.28.09
by Brent Meyer

August Price Statistics

	Percent change, last					
	1mo.[a]	3mo.[a]	6mo.[a]	12mo.	5yr.[a]	2008 average
Consumer Price Index						
All items	5.5	4.9	2.3	−1.5	2.6	0.3
Less food and energy	0.8	1.4	1.9	1.4	2.2	1.8
Median[b]	1.8	0.9	1.2	1.8	2.6	2.9
16% trimmed mean[b]	1.3	1.2	1.0	1.1	2.5	2.7
Producer Price Index						
Finished goods	23.1	11.0	4.3	−4.3	3.3	0.2
Less food and energy	2.1	2.4	1.4	2.3	2.4	4.3

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



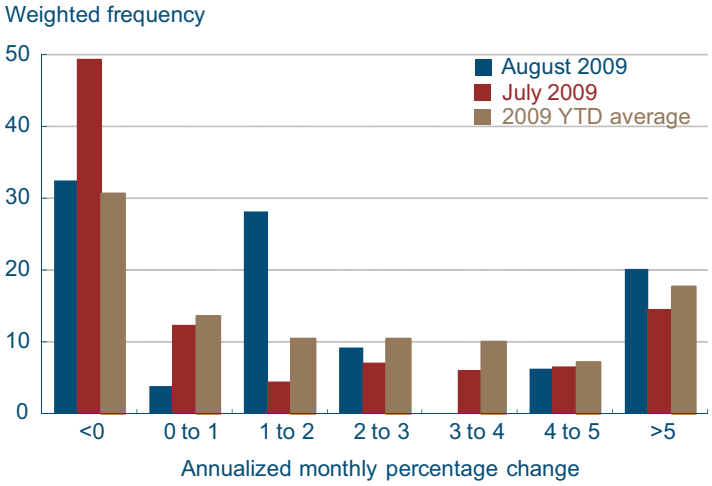
a. Calculated by the Federal Reserve Bank of Cleveland.
Sources: U.S. Department of Labor, Bureau of Labor Statistics, Federal Reserve Bank of Cleveland.

The CPI jumped up 9.3 percent (annualized rate) The CPI jumped up 5.5 percent (annualized rate) in August, almost entirely on a spike in gasoline prices (the BLS says roughly 80 percent of the increase in the overall index was due to the increase in gas prices). Still, the 12-month growth rate in the series is down 1.5 percent. The core CPI (excluding food and energy prices) rose 0.8 percent in August, pushing its 12-month trend down 0.1 percentage point to 1.4 percent.

There were a couple rather curious price moves during the month. First, the price for new vehicles fell 14.7 percent in August, its largest monthly price decrease since the early 1970s. This is in part due to how the BLS calculated the effect of the CARS rebate on the price of new vehicles. Also, used car and truck prices jumped up 25 percent in August (their largest increase since 2004). A seasonal adjustment usually tamps down August used car prices, and this month was not an exception, though without seasonal adjustment used cars prices jumped up an outsized 33 percent. The increase could be attributed to the fact that the CARS rebate motivated consumers to head to the dealership and those that didn't qualify for the rebate ended up getting a "cherry of a deal" on a used car, but it could simply be a measurement error as well (perhaps because the sample may have been skewed). Elsewhere, OER (owners' equivalent rent), which comprises roughly 25 percent of the overall CPI market basket, rose 1.0 percent in August after a virtually flat reading in July.

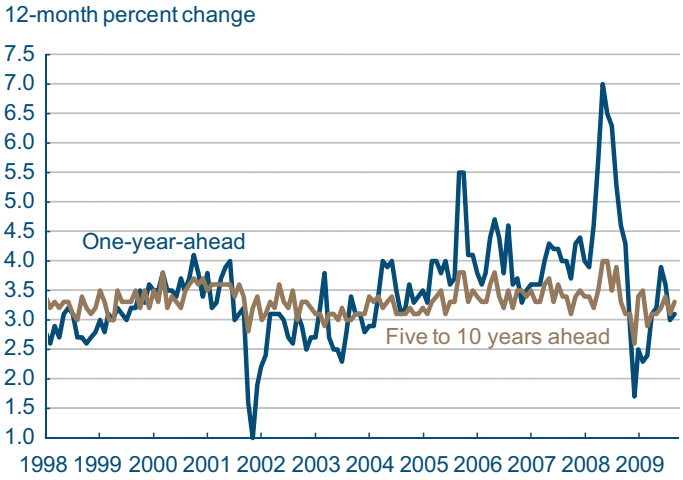
The measures of underlying inflation trends produced by the Federal Reserve Bank of Cleveland—the median CPI and the 16 percent trimmed-mean CPI—rebounded a little from July's relatively low readings (both increased 0.2 percent). The median CPI rose 1.8 percent in August, while the 16 percent trimmed-mean CPI was up 1.3 percent. Over the last 12 months, they are up 1.8 percent and 1.1 percent, respectively.

CPI Component Price Change Distribution



Source: Bureau of Labor Statistics.

Household Inflation Expectations



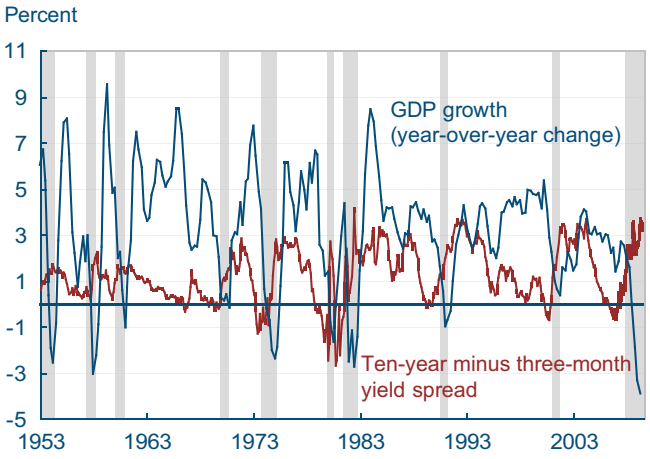
Note: Mean expected change as measured by the University of Michigan's *Survey of Consumers*.
Source: University of Michigan.

The underlying price change distribution showed less softness in August, as roughly 30 percent of the index (by expenditure weight) exhibited outright price decreases, compared to nearly one-half of the index in July. Still, just 26 percent of the consumer market basket rose at rates exceeding 3.0 percent in August, compared to an average of 35 percent so far this year.

Both one-year ahead and longer-term (5 to10 years ahead) average inflation expectations from the University of Michigan's Survey of Consumers ticked up in early September. One-year-ahead expectations rose 0.1 percentage point to 3.1 percent, while longer-term expectations increased from 3.1 percent in August to 3.3 percent. While short-term expectations have bounced around over the past year (likely following food and energy prices), it is not clear that longer-term expectations have shifted in any meaningful way recently, as the series has remained close to its five-year average of 3.4 percent.

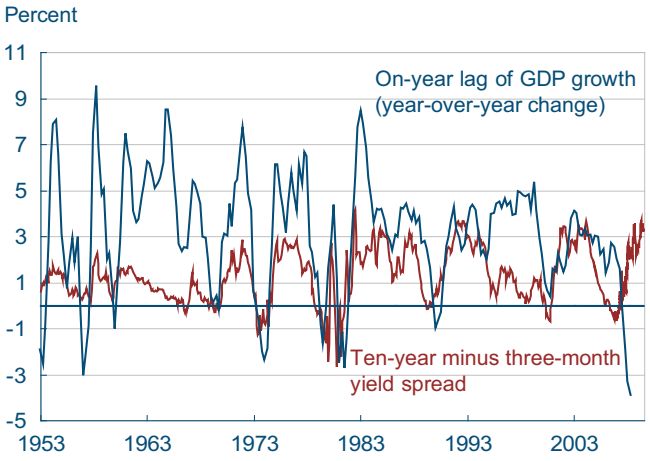
The Yield Curve, September 2009

Yield Curve Spread and Real GDP Growth



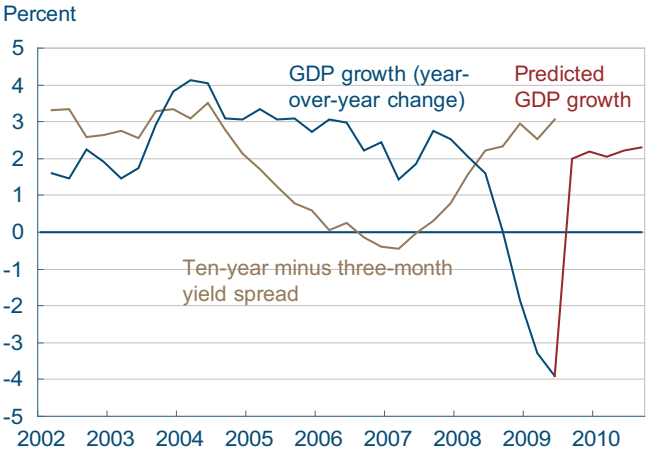
Sources: Bureau of Economic Analysis, Federal Reserve Board.

Yield Spread and Lagged Real GDP Growth



Sources: Bureau of Economic Analysis, Federal Reserve Board.

Yield-Curve-Predicted GDP Growth



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

09.23.09
by Joseph G. Haubrich and Kent Cherny

Since last month, the yield curve has steepened slightly, with long rates edging up as short rates edged down. The difference between these rates, 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 seven recessions (as defined by the NBER). In particular, 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.

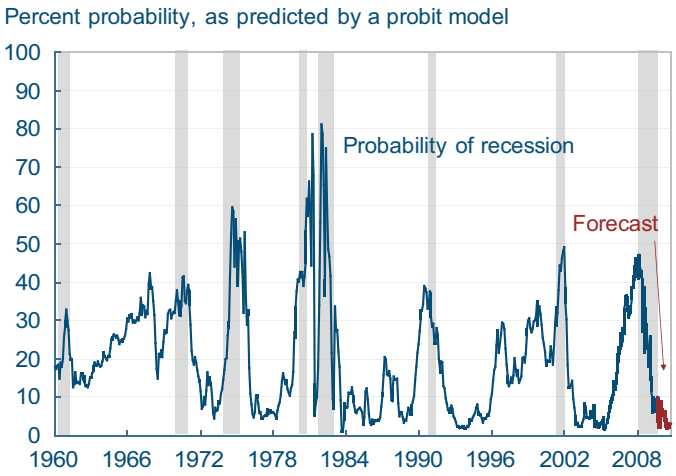
More generally, a flat curve indicates weak growth, and conversely, a steep curve indicates strong growth. One measure of slope, the spread between ten-year Treasury bonds and three-month Treasury bills, bears out this relation, particularly when real GDP growth is lagged a year to line up growth with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

Since last month, the three-month rate dipped to 0.11 percent (for the week ending September 18), down from August's 0.17 percent and July's 0.19 percent.

The ten-year rate dropped to 3.46 percent, down a mere 2 basis points from August's 3.48 and still below July's 3.62 percent. The slope increased to 335 basis points, up from August's 331 basis points but still down from July's 343 basis points. Projecting forward using past values of the spread and GDP growth suggests that real GDP will grow at about a 2.3 percent rate over the next year, the same prediction as last month. This is a bit below, but not that far from other forecasts.

While such an approach predicts when growth is above or below average, it does not do so well in predicting the actual number, especially in the case of recessions. Thus, it is sometimes preferable to focus on using the yield curve to predict a discrete

Recession Probability from Yield Curve



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

Durations of Yield Curve Inversions and Recessions

Recessions	Duration (months)	
	Recessions	Yield curve inversion (before and during recession)
1970	11	11
1973-1975	16	15
1980	6	17
1981-1982	16	11
1990-1991	8	5
2001	8	7
2008-present	20 (through August 2009)	10

Note: Yield curve inversions are not necessarily continuous month-to-month periods.
Sources: Bureau of Economic Analysis, Federal Reserve Board, and authors' calculations.

To read more on other forecasts:
http://www.econbrowser.com/archives/2008/11/gdp_mean_estima.html

Econbrowser's The Administration's Economic Forecast against Updated Alternatives:
http://www.econbrowser.com/archives/2009/05/the_administrat_2.html

For Paul Krugman's column:
http://krugman.blogs.nytimes.com/2008/12/27/the-yield-curve-wonkish/

"Does the Yield Curve Yield Signal Recession?," by Joseph G. Haubrich. 2006. Federal Reserve Bank of Cleveland, *Economic Commentary* is available at:
http://www.clevelandfed.org/Research/Commentary/2006/0415.pdf

event: whether or not the economy is in recession. Looking at that relationship, the expected chance of the economy being in a recession next August stands at 3.0 percent, up from August's 2.6 percent, which was up from July's very low 1.8 percent. GDP revisions account for some of the increase in the numbers since July. See this article for more on the revisions.

The probability of recession coming out of the yield curve is very low, but remember that the forecast is for where the economy will be in a year, not where it is now. However, consider that in the spring of 2007, the yield curve was predicting a 40 percent chance of a recession in 2008, something that looked out of step with other forecasts at the time.

Another way to get at the question of when the recovery will start is to compare the duration of past recessions with the duration of the preceding interest rate inversions. The chart below makes the comparison for the recent period. The 1980 episode is anomalous, but in general longer inversions tend to be followed by longer recessions. Following this pattern, the current recession is already longer than expected.

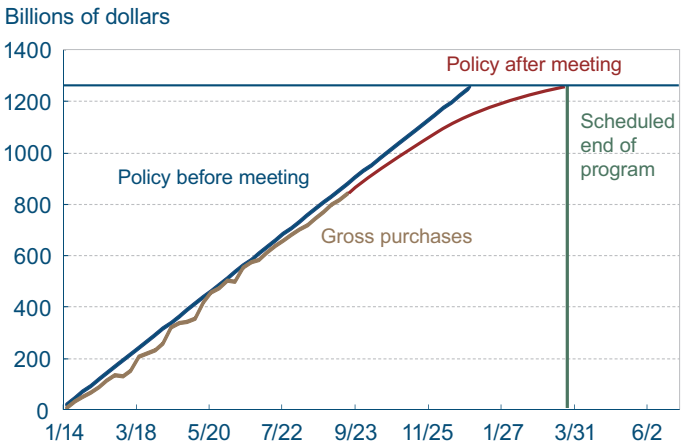
Of course, it might not be advisable to take these number quite so literally, for two reasons. (Not even counting Paul Krugman's concerns.) First, this probability is itself subject to error, as is the case with all statistical estimates. Second, other researchers have postulated that the underlying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

For more detail on these and other issues related to using the yield curve to predict recessions, see the Commentary "Does the Yield Curve Signal Recession?"

The Policy Statement: A Slowdown of Asset Purchases

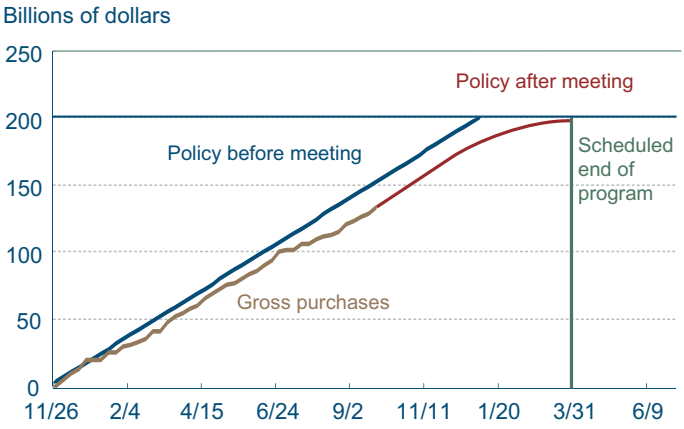
09.23.09
by John B. Carlson and John Lindner

Mortgage-Backed Securities Purchases



Source: Federal Reserve Bank of New York.

Agency Debt Purchases



Source: Federal Reserve Bank of New York

Until the federal funds rate hit its zero bound, open market operations at the Trading Desk of the Federal Reserve Bank of New York were guided by a target federal funds rate set by the FOMC at its meetings. Since late 2008, however, the Fed has been purchasing a wider scope of assets, and open market operations have been guided by policy directives that specify both the quantity limit and the timing of those purchases. Today, the Fed announced that it would change the timing but not the purchase limits for both mortgage-backed securities and agency debt:

> "To provide support to mortgage lending and housing markets and to improve overall conditions in private credit markets, the Federal Reserve will purchase a total of $1.25 trillion of agency mortgage-backed securities and up to $200 billion of agency debt. The Committee will gradually slow the pace of these purchases in order to promote a smooth transition in markets and anticipates that they will be executed by the end of the first quarter of 2010."

The change was similar to the one made for Treasury securities at the August meeting. While today's statement reaffirmed the target pace for reaching the $300 billion limit for those purchases (the end of October), it allowed for flexibility in responding to financial and economic conditions with future changes in both the timing and quantity limits.

To read more on the change made to treasury securities in August visithttp://www.clevelandfed.org/research/trends/2009/0909/02monpol.cfm

The Supplemental Financing Program

09.28.09
by Joseph Haubrich and John Lindner

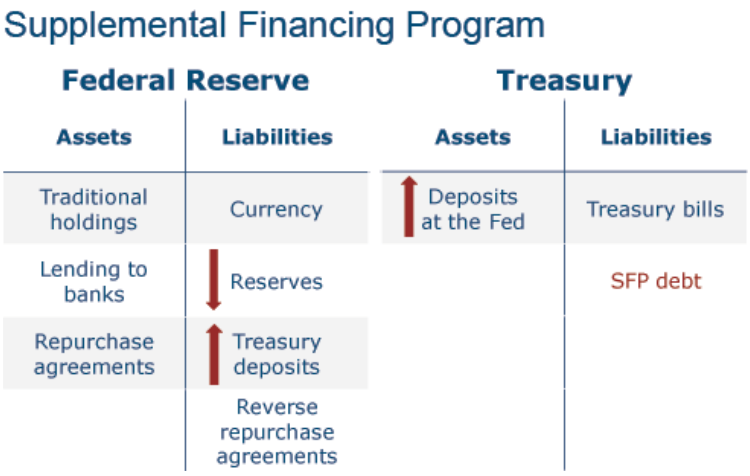
Prior to the financial crisis, the Federal Reserve balance sheet had followed a steady growth path of about 5.5 percent per year, and its total value had topped $900 billion. During the financial crisis, the assets side of the Fed's books saw an enormous expansion when it began to extend its lending and liquidity programs, growing at an average rate large enough to double its value each year and exceeding the $2 trillion mark. The most notable expansion occurred immediately following the collapse of Lehman Brothers in mid-September 2008.

Growth in the liabilities side followed suit, keeping the balance sheet, well, balanced. A large part of this liability growth occurred in the balance of excess reserves held at the Federal Reserve.

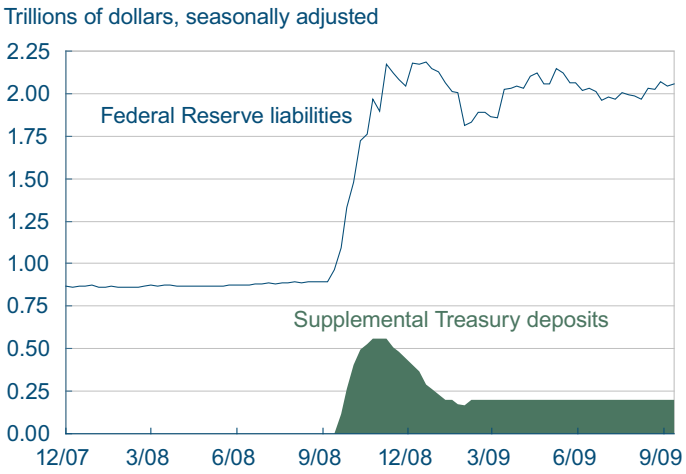
When Lehman Brothers collapsed, there was an instant need for an influx of extra liquidity into the market. The Federal Reserve expanded its existing credit-easing policies and extended new programs to provide this liquidity and to lend to struggling financial institutions. These institutions would in turn keep the liquidity as reserves with the Federal Reserve, providing a backstop for them in the adverse economy.

At the time, a concern about the mounting excess reserves, and thus the monetary base, began to surface. In normal times, the Federal Reserve could have drained the excess reserves by selling Treasury securities to the public. (Payments for these securities would clear by having the Fed reduce the reserve account of the purchaser's bank.) With no public market for Treasury securities, though, an alternative was created. The Treasury announced its Supplemental Financing Program (SFP) two days after the collapse of Lehman Brothers.

Established to help the Federal Reserve manage the expansion of the reserve accounts being created by the infusion of new liquidity, the program is actually an extension of the typical Treasury deposits held at the Federal Reserve. Treasury bills were

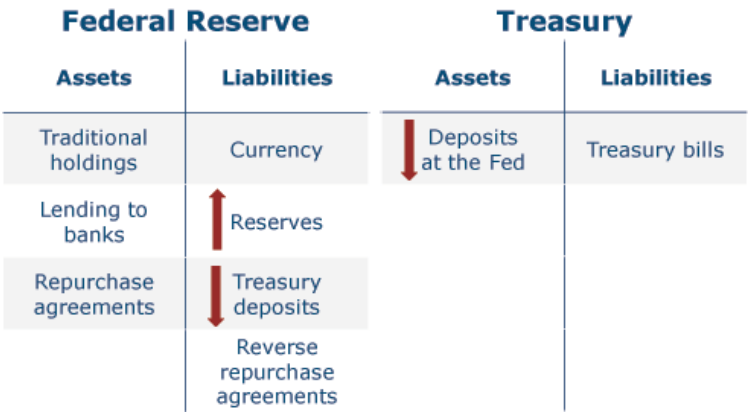


Supplemental Financing Program



Note: Liabilities do not include Treasury cash holdings, foreign official deposits, service-related balances and adjustments or other liabilities and capital.
Source: Federal Reserve Board.

Post-Supplemental Financing Program



sold at special auctions designed specifically for the program to dealers and depository institutions already associated with the Federal Reserve. Proceeds from the auctions were deposited at the Fed by the Treasury into the SFP account, reducing the total excess reserves.

The Treasury has continued to fund credit-easing policies in this way, and it now finds itself approaching its legal debt limit of $12.1 trillion. A temporary solution to this limit is to start to trim down the supplemental account held with the Federal Reserve. Almost exactly a year after the program's inception, the Treasury announced its intent to reduce the balance of the account to $15 billion, a reduction of nearly $185 billion. Such an action will create a chain effect throughout the market that will ultimately produce a change on the Federal Reserve's balance sheet.

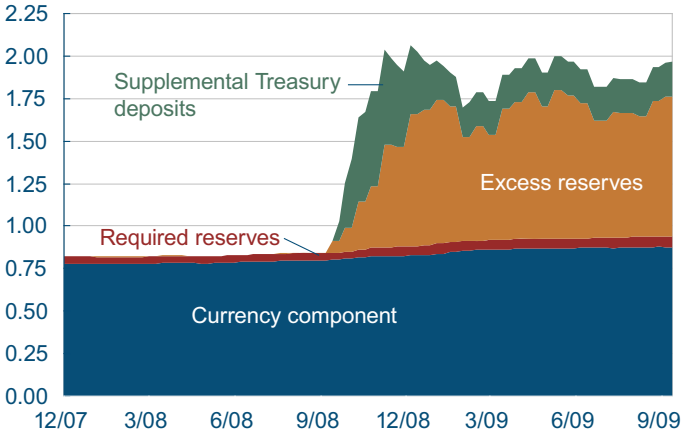
When the Treasury deposits are withdrawn from the Federal Reserve's balance sheet, the Treasury will use the cash recovered from the operation to pay off part of its debt. As mentioned, the debt was in the form of Treasury bills issued to the public. In the midst of a slow recovery, the cash that will be returned to the public will find its way to the depository institutions that work closely with the Fed. Following this would be the return of those funds to the Federal Reserve's balance sheet as reserve liabilities.

What results is a growth in the monetary base, but the transition will have very little if any effect on the Fed's credit-easing policies. It might be harder to see, but it is true that the consequences of this action are far from a simple printing of money. The growth in the monetary base that results is a shifting of funds between Federal Reserve accounts. Based upon the current state of the economy, the growth will likely go unrealized.

Two major factors will help to keep the growth in check. First and foremost, the depository institutions that receive these new deposits are still facing very large capital constraints. These constraints will discourage institutions from lending their reserve balances as they continue to work to stabilize their operations. Secondly, the ability of the Fed to pay interest on reserves should allow the Fed to control

Monetary Base

Trillions of dollars, seasonally adjusted



Source: Federal Reserve Board.

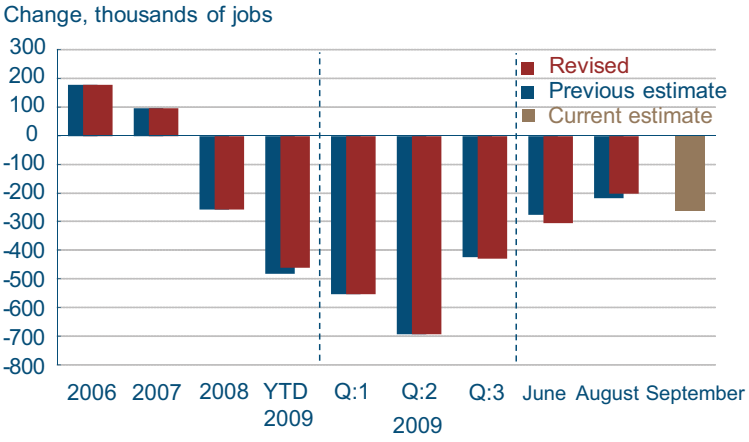
the expansion of the monetary base, even though the applicability of this practice is still largely untested. So, at the present time, it appears as if the transformation of the Federal Reserve's liabilities will be only a simple transition in account balances and will have little effect on credit-easing policy.

To see the Federal Reserve Bank of Cleveland's credit easing policy tools visit
http://www.clevelandfed.org/research/data/credit_easing/index.cfm

The Employment Situation, September 2009

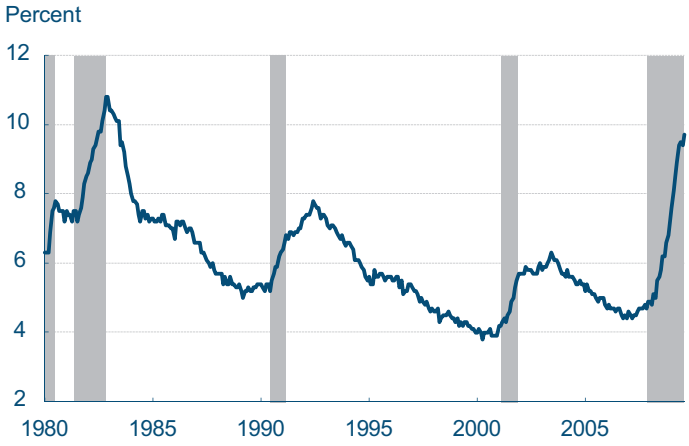
10.02.09
by Murat Tasci and Beth Mowry

Average Nonfarm Employment Change



Source: Bureau of Labor Statistics.

Unemployment Rate



Note: Seasonally adjusted rate for the civilian population, age 16+.
Source: Bureau of Labor Statistics

Nonfarm payroll losses picked up pace in September, falling by a larger-than-expected 263,000 jobs after a loss of 201,000 in August. Net revisions tacked an additional 13,000 losses onto estimates for July and August, mostly stemming from downward revisions in the government sector. Payroll employment has now fallen by 7.2 million since the start of the recession. However, monthly losses in the third quarter have averaged 256,000, compared to 691,000 in the first quarter and 428,000 in the second.

The unemployment rate ticked up 0.1 percentage point to 9.8 percent, as the number of unemployed people grew by 214,000, and 571,000 people exited the labor force. This is the highest rate since June 1983 and is the result of a steady climb begun in May 2008, with the exception of just one month. The lone exception was July 2009, when the rate did not climb only because a large number of the unemployed left the labor force.

Meanwhile, the employment-to-population ratio, considered a less volatile measure of labor market duress, fell to 58.8 percent, the lowest it's been since 1984. Average weekly hours of production workers were again cut back and now stand at 33.0, matching the series low set in June.

September's uptick in payroll decline was not broadly experienced across industries. While losses nearly tripled in government and trade, transportation, and utilites, most other industries have actually improved since August. Goods-producing industries shed 116,000 jobs last month, split roughly between construction and manufacturing. Losses at motor vehicle and parts manufacturers lessened considerably, from 16,000 in August to 3,500 in September, perhaps owing to the resumption of production after the Cash-for-Clunkers program drained dealer inventories.

Service-providing industries lost 147,000 jobs over the month. The greatest decline in services occurred

in trade, transportation, and utilities (–60,000), with retail trade contributing the majority of those losses. Industries that saw a smaller drop in September were financial activities (–10,000), leisure and hospitality (–9,000), professional and business services (–8,000), and information, which broke even with zero losses for the first time since February 2008. The professional and business services category has seen substantial improvement since June, when job decline had been in the triple-digits for over half a year. Gains in education and health services slowed to just 3,000, compared to 46,000 in August, due to a loss of 16,900 in educational services. Health care by itself, though, added 20,000 jobs. The government shed jobs for the fifth straight month (–53,000), after having been one of the few job creators earlier in the recession, along with healthcare.

Labor Market Conditions and Revisions

Average monthly change (thousands of employees, NAICS)

	July current	Revision to July	August current	Revision to August	September 2009
Payroll employment	−304	−28	−201	15	−263
Goods-producing	−116	6	−132	4	−116
Construction	−69	4	−60	5	−64
Heavy and civil engineering	−7.7	1	−6	2	−12
Residential[a]	−19.8	4	−20	3	−13
Nonresidential[b]	−42	−1	−34	0	−39
Manufacturing	−41	2	−66	−3	−51
Durable goods	−23	1	−55	−4	−43
Nondurable goods	−18	1	−11	1	−8
Service-providing	−188	−31	−69	11	−147
Retail trade	−45	−1	−9	1	−39
Financial activities[c]	−14	3	−25	3	−10
PBS[d]	−31	2	−19	3	−8
Temporary help services	−6	2	−7	0	−2
Education and health services	14	−7	46	−6	3
Leisure and hospitality	1	0	−14	7	−9
Government	−58	−30	−19	−1	−53
Local educational services	−55	−24	−17	−8	−13

a. Includes construction of residential buildings and residential specialty trade contractors.
b. Includes construction of nonresidential buildings and nonresidential specialty trade contractors.
c. Includes 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.

Real GDP: Second-Quarter 2009 Final Estimate

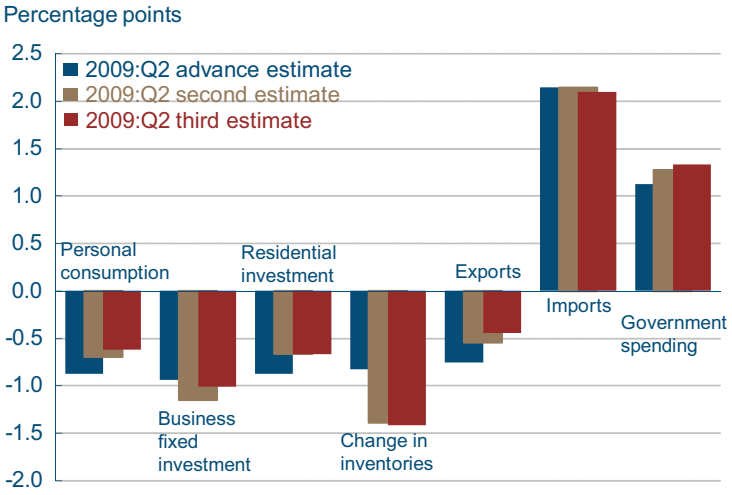
10.05.06
by John Lindner

Real GDP and Components, 2009:Q2 Revised Estimate

	Quarterly change (billions of 2000$)	Annualized percent change, last: Quarter	Four quarters
Real GDP	−23.9	−0.7	−3.8
Personal consumption	−20.2	−0.9	−1.7
Durables	−15.5	−5.6	−8.8
Nondurables	−9.8	−1.9	−2.7
Services	2.8	0.2	−0.2
Business fixed investment	−32.8	−9.6	−19.7
Equipment	−11.0	−4.9	−20.2
Structures	−19.4	−17.3	−18.9
Residential investment	−23.5	−23.2	−25.6
Government spending	41.4	6.7	2.5
National defense	22.4	14.0	7.7
Net exports	56.1	—	—
Exports	−15.0	−4.1	−15.0
Imports	−71.2	−41.7	−18.5
Private inventories	−160.2	—	—

Source: Bureau of Economic Analysis.

Contribution to Percent Change in Real GDP



Source: Bureau of Economic Analysis

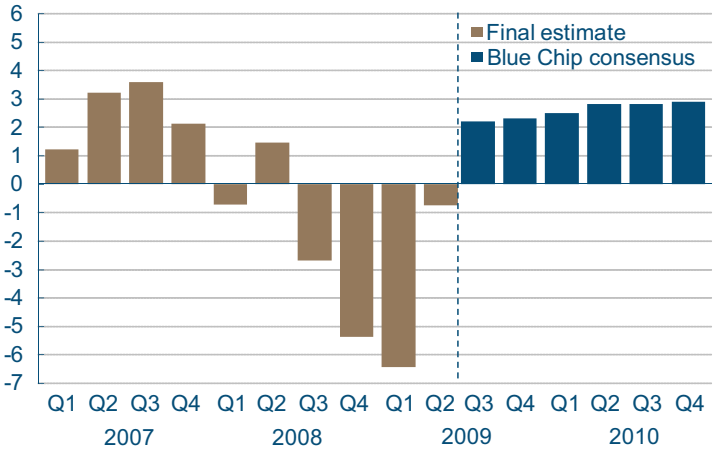
Real GDP was revised upward in the final second-quarter revision. Instead of falling at an annualized rate of −1.0 percent as reported in the second estimate, it now is estimated to have fallen only −0.7 percent. Nonresidential investment in equipment was revised up from an 8.4 percent decrease to a 4.9 percent decline, helping to bring the growth rate in overall business fixed investment up 1.3 percentage points (pp) to −9.6 percent. The consumer side looked nearly the same after the revision. Real personal consumption was revised up again, from −1.0 percent to −0.9 percent. Residential investment was revised down from −22.8 percent to −23.2 percent and looks to have somewhat offset the change in personal consumption. There were also upward revisions to exports and government spending. The upward revision to government spending added an additional 0.3 pp to its growth, while exports subtracted 0.9 pp less from net exports.

Revisions to export and import growth offset each other in terms of real GDP growth. Gains in the growth of consumption, business fixed investment, and government spending contributed a substantial portion to real GDP growth in the third estimate, each adding about 0.1 pp to the total.

The Blue Chip consensus forecast for 2009 real GDP growth remained at −2.6 percent in the September survey, though the projection for the second half of 2009 increased again, likely due to some optimism about recent data releases. Most noticeable was the 0.6 pp increase in the third-quarter consensus forecast, which came in at 3.0 percent. The consensus estimate for 2010 growth ticked up again, this month by 0.1 pp to 2.4 percent, its fourth upward revision in five months, though—at 2.4 percent—that remains below its long-run trend. Looking ahead through the rest of the year, even pessimists are predicting positive GDP growth for the rest of this year and into 2010.

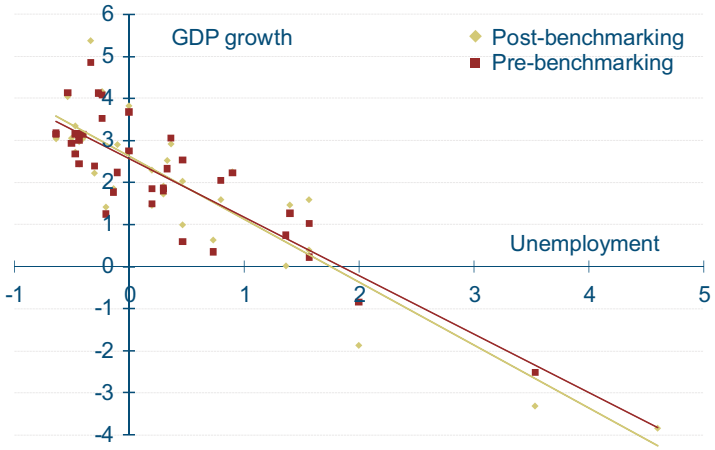
Real GDP Growth

Annualized quarterly percent change



Source: Blue Chip Economic Indicators, June 2009; Bureau of Economic Analysis.

Okun's Law



Notes: GDP growth is the year over year change in GDP in a given quarter.
Unemployment is the change in unemployment rate over a 6% NAIRU.
Data goes back through 2000:Q1.
Sources: Bureau of Labor Statistics, Bureau of Economic Analysis.

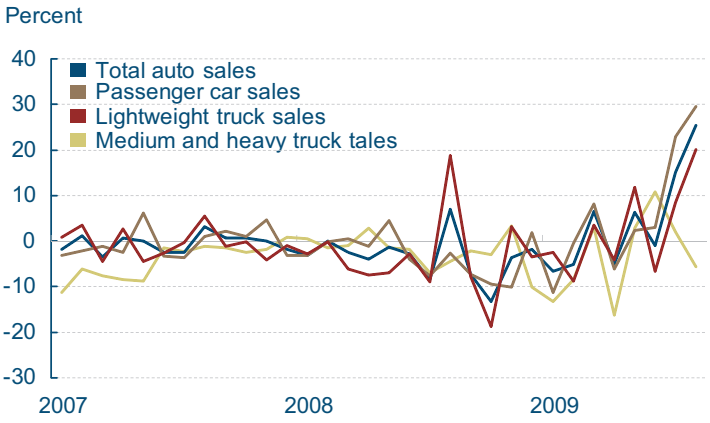
Results from two special questions on the Blue Chip survey support the view that employment growth will again lag during this recovery. The consensus forecast was for a peak unemployment rate of 10.1 percent in this cycle. Over 80 percent of respondents predict that the unemployment rate will not fall back below 7 percent until the second half of 2012 (the natural rate of unemployment is estimated to be somewhere around 6 percent). Currently, the unemployment rate is at 9.8 percent, and anecdotes suggest that employers are reluctant to hire people back.

A historical pattern, referred to as Okun's law, posits that there is an inverse relationship between changes in the unemployment rate and GDP growth, with year-over-year GDP growth moving twice as fast as the change in the unemployment rate. Prior to the BEA benchmarking in July, fears that this relationship was losing strength through this recession had been aired. Assuming a constant natural rate of unemployment, the year-over-year percentage point change in the unemployment rate was plotted against year-over-year GDP growth rates from both pre- and post-benchmarking data. So far this relationship appears to be holding true.

The Effects of "Cash for Clunkers" on the Auto Industry

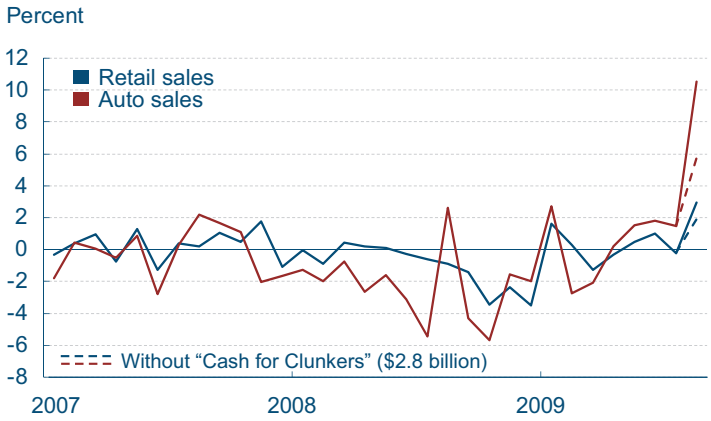
10.06.09
by Kyle Fee

Auto Sales, Monthly Growth (Units)



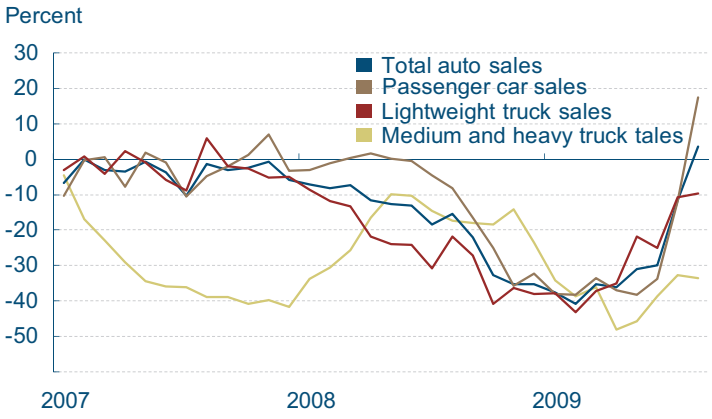
Source: Bureau of Economic Analysis.

Retail Sales, Monthly Growth (dollars)



Source: Census Bureau, Department of Transportation.

Auto Sales, Year-Over-Year Growth (Units)



Source: Bureau of Economic Analysis.

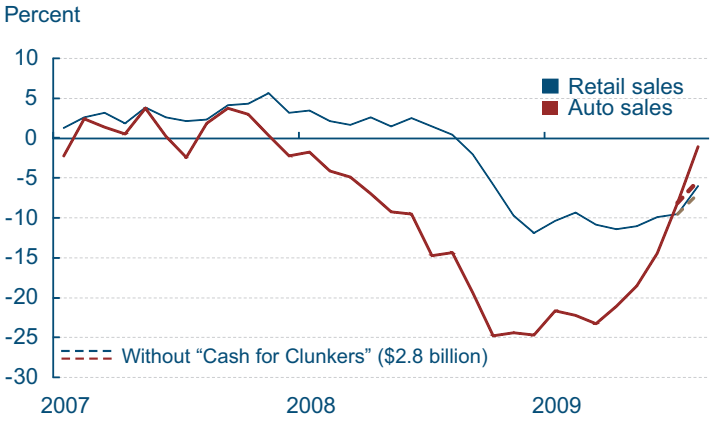
As of October 1, the "Cash for Clunkers" program has processed 670,557 reimbursements totaling $2.8 billion dollars. The program has received rave reviews in the media for its short-term success, but the open question is whether short-term successes facilitate long-term growth. Will the program jump start the restructured auto industry or will it result in mere transitory demand shifts, "stealing" from future consumption?

There is no doubt that the "Cash for Clunkers" program—known officially as the Car Allowance Rebate System (CARS)—provided a much-needed shot in the arm for the ailing auto industry. From July to August, total auto sales increased 25.4 percent. Passenger car sales grew 29.7 percent, lightweight truck sales 20.2 percent. As expected with a program that was intended to improve fuel efficiency, sales of medium and heavy truck decreased 5.6 percent. In dollar terms, auto sales increased 10.6 percent—for comparison, total retail sales increased 3.0 percent over the same period. Note though, that removing the government contribution of $2.8 billion drops the increase in auto sales to 5.7 percent and total retail sales to 1.9 percent.

Thanks to the "Cash for Clunkers" program, auto sales have increased markedly relative to this same time last year—total sales are up 3.6 percent, and passenger car sales are up 17.4 percent. On the other hand, lightweight truck sales remained negative (–9.6 percent), as did and medium and heavy truck sales (–33.5 percent). In dollar terms, auto sales and total retail sales decreased year over year, 1.0 percent and 6.0 percent, respectively. Removing the $2.8 billion government contribution from the calculations knocks down auto sales to –5.3 percent and total retail sales to 6.9 percent, year-over-year.

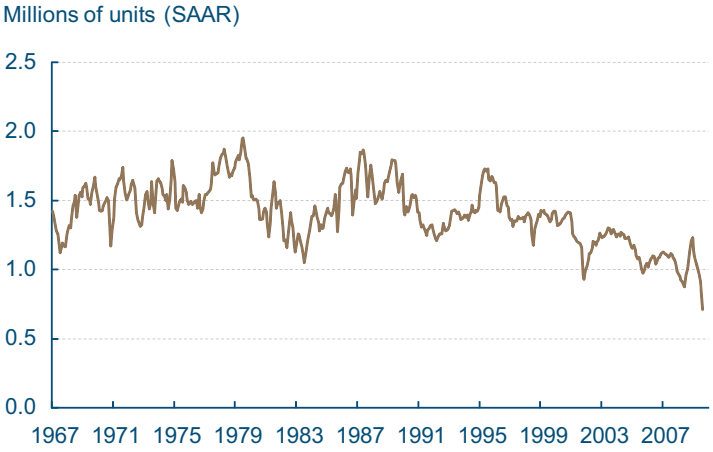
Another benefit of the CARS program can be seen in the continued decline in domestic auto inventories. In August, inventories decreased 16.3 percent to 708,700 units, a new record low even in the age

Retail Sales, Year-over-Year-Growth (dollars)



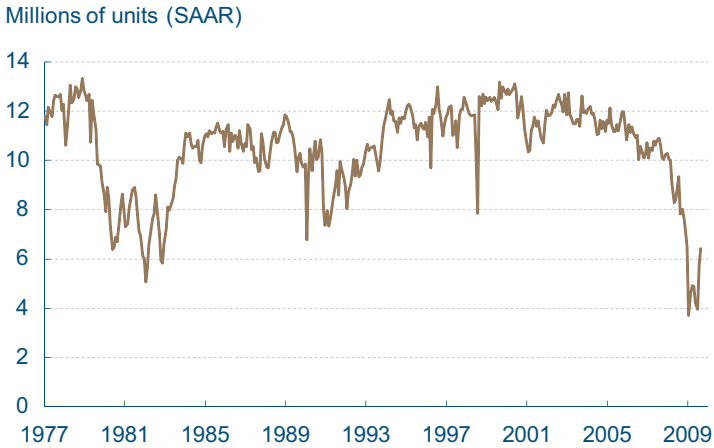
Source: Census Bureau, Department of Transportation.

Domestic Auto Inventories



Note: SAAR is the seasonally adjusted annual rate.
Source: Bureau of Economic Analysis.

Industrial Production, Autos and Light Trucks



Note: SAAR is the seasonally adjusted annual rate.
Source: Federal Reserve Board.

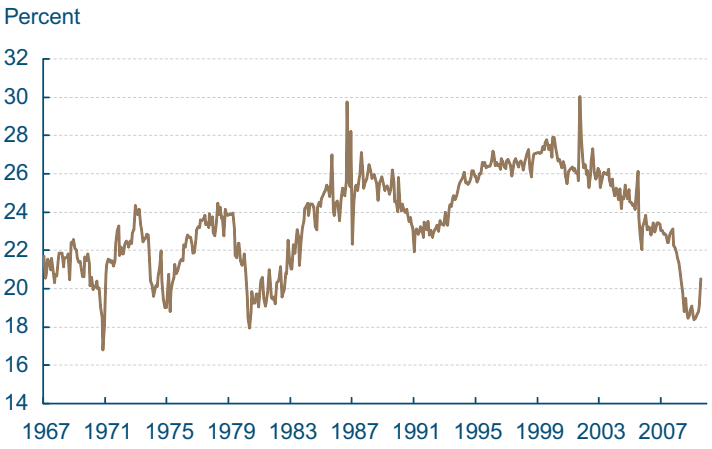
of lean inventories. August also saw auto and light truck production continue increases off of historic lows seen in June. Sharp inventory declines point to further increases in auto production, as automakers will need to rebuild inventories. However, automakers face the difficult task of determining the optimal production schedule to obtain the best mix and level of inventory in the face of uncertain consumer demand.

The inventory-to-sales ratio is one measure to keep an eye on as automakers rebuild inventory levels. The ratio hit an all-time high of 4.6 in January 2009, after a year of falling sales and elevated inventories as the consumer pulled back. Auto production shutdowns over the spring and summer have helped bring the ratio down amid weak sales. The "Cash for Clunkers" program accelerated the decline in inventories, causing the ratio to slide from 2.4 in July to 1.6 in August.

It would be naïve to expect the level of auto sales to continue at rates seen in August, which makes managing the inventory rebuild that much trickier. Even with the "Cash for Clunkers" program, auto sales accounted for only 20.5 percent of total retail sales, breaking the 20 percent mark for the first time since May 2008. Moreover, auto sales as a percentage of total retail sales are well off of the 2000-2007 average of 25.2 percent.

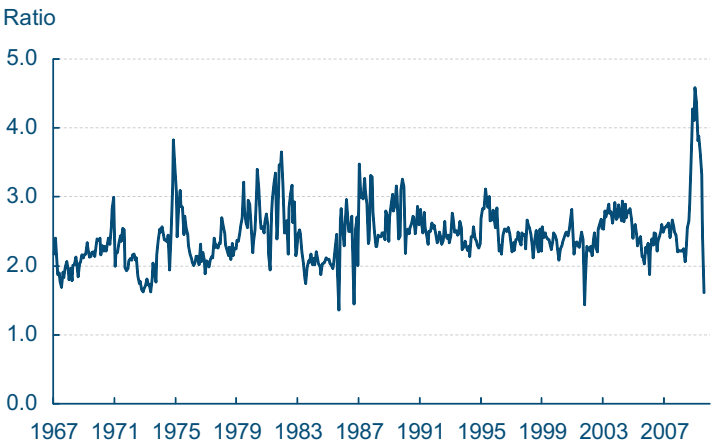
In the end, the CARS program subsidized total auto sales, decreased inventories, and increased production, providing temporary relief to an ailing and restructuring domestic auto industry. However, the risk going forward is that long-term health of the automakers relies on a debt-burdened consumer, who may pull back on auto sales in the near term because of a government-enacted policy that basically "stole" from future demand. Under these circumstances, automakers must be careful when ramping up production in the fourth quarter to avoid building up inventories in the face of declining sales.

Auto Sales as a Percentage of Total Retail Sales



Source: Census Bureau.

Domestic Auto Inventory-to-Sales Ratio (units)

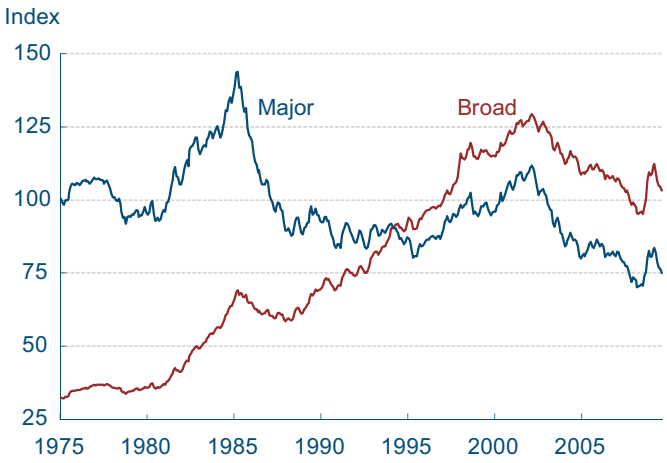


Source: Bureau of Economic Analysis.

With the Dollar Depreciating, Can Inflation Be Far Behind?

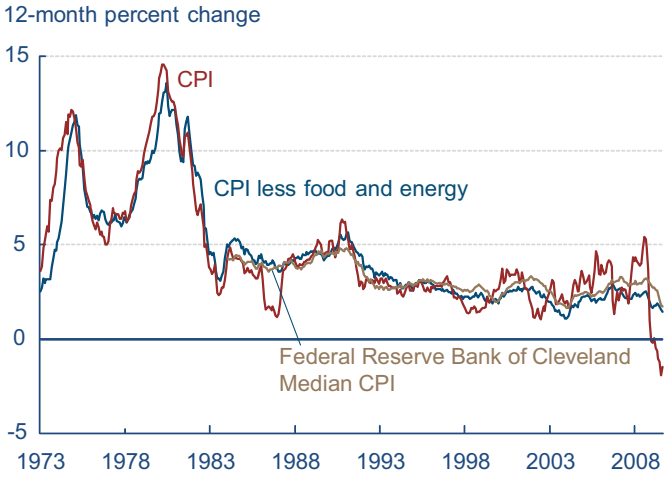
09.29.09
by Owen F. Humpage and Caroline Herrell

Exchange Rate Measures



Sources: Federal Reserve Board and Haver Analytics.

Inflation Measures



Sources: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, Haver Analytics.

Many people believe that a falling dollar in the foreign-exchange market portends future inflation, and they do so for a very good reason: a monetary impulse is very likely to cause the dollar to fly south well before consumer prices take off. Unfortunately for forecasting buffs, other factors besides monetary spurts affect dollar exchange rates, and these things muddy the ability of exchange-rate changes to forecast future inflation patterns. All and all, exchange rates do contain useful information for predicting inflation, but forecasting inflation simply with an exchange rate is a little like eating dinner with only a knife.

The dollar has lost a lot of ground in the past few years, heightening concerns among some people about future inflation. Relative to the currencies of the other major developed countries, the dollar has depreciated 40 percent since its peak in February 2002. If we toss the currencies of the key developing countries into the mix, the pattern in only slightly better. The dollar has depreciated 23 percent since early 2002 by this broader measure. Although the dollar reversed course through much of last year, it once again seems to be on a downward trajectory.

The connection between an exchange rate and inflation is neither simple nor straightforward, because the relationship depends on how each respond to money impulses. Inflation, after all, is a drop in the purchasing power of money that results when a central bank creates more money than the public wants to hold. As the public subsequently unloads the unwanted money for goods and services, all prices, including wages, eventually rise. If the public also exchanges the unwanted money for foreign goods and services, the dollar will depreciate in the foreign-exchange market. While inflation eventually leads to a rise in all prices, it does not do so evenly. Some prices respond to monetary impulses faster than others. Many prices are set under contracts or by custom and adjust only at discrete

intervals. Exchange rates, however, adjust continuously. Moreover, foreign-exchange traders are highly efficient processors of information. If they believe that monetary policy will produce inflation down the road, they are very likely to build that expectation into their exchange-rate quotes today. For these reasons, if the Federal Reserve creates too much money, the dollar is very likely to depreciate well in advance of any rise in the consumer price index or any other price measure.

Unfortunately, exchange rates also respond to other things besides domestic monetary impulses. Foreign inflation rates are just such a factor. Strictly speaking, exchange-rate changes reflect international inflation differentials, not the absolute level of inflation in a specific country. If the United States maintains a 3 percent inflation rate year in and year out but the rest of the world consistently maintains 1 percent inflation rate, the dollar will tend to depreciate by 2 percent per year. If then both the U.S. and world inflation rates rise by 1 percentage point, the dollar will continue to depreciate by 2 percent per year, and this depreciation does not forecast a change in the U.S. inflation rate. Exchange rates can also change for reasons that don't have anything to do with inflation. If China, Brazil, or Europe look like better investment sites than the United State, funds will flow away from the United States and to these places, and the dollar will depreciate against their currencies.

When push comes to shove, this is an empirical issue, so we investigated whether percentage changes in the Board of Governors' Broad and Major currency indexes contain useful information for predicting changes in future inflation rates. The results were mixed. We did find pretty clear evidence that changes in these exchange-rate indexes are useful for predicting changes in inflation as measured by the Federal Reserve Bank of Cleveland's median CPI. We also found that the signal was not confused because the effect also ran in the opposite direction: inflation changes induced movements in the exchange rates. The median CPI attempts to offer a cleaner measure inflation trends than other price indexes by abstracting as much as possible from the influence of individual price changes, such as jumps in petroleum prices.

Do Exchange-Rate Movements Predict Changes in the Inflation Rate?

		Inflation measure		
Exchange rate		CPI	Core	Median
Broad				
lags include	4	No	No	No
	8	No	No	Yes
	12	Yes	Yes	No
	18	No	No	No
Major				
lags include	4	No	No	Yes
	8	No	No	Yes
	12	Yes	No	No
	18	No	No	No

Sources: Haver Analytics, Board of Governors of the Federal Reserve System, U.S. Department of Commerce, Federal Reserve Bank of Cleveland.

Do Changes in the Inflation Rate Predict Exchange-Rate Movements?

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lags include	4	Yes	No	No
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	18	No	No	No
Major				
lags include	4	Yes	No	No
	8	Yes	No	No
	12	No	No	No
	18	No	No	No

Sources: Haver Analytics, Board of Governors of the Federal Reserve System, U.S. Department of Commerce, Federal Reserve Bank of Cleveland.

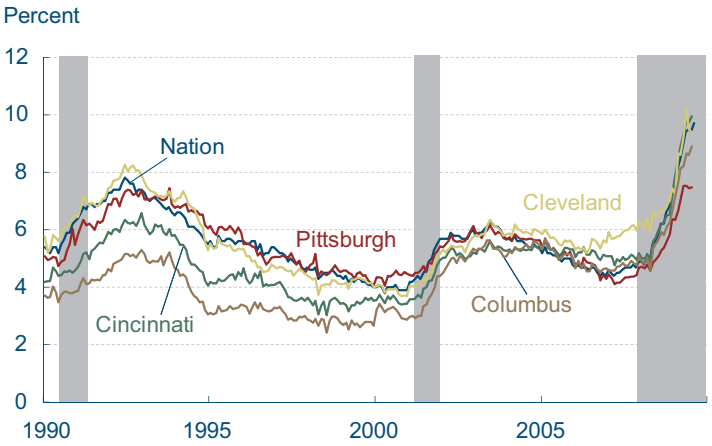
We also found evidence that movements in these exchange-rate indexes predicted changes in inflation as measured by the headline CPI, but you need 12-months' worth of data before you get any information. These same exchange-rate movements, however, are not useful for predicting changes in inflation after you strip out food and energy prices to get the core CPI. In addition, the results show that changes in the inflation rate, as measured by either the headline CPI or the core CPI, help predict changes in our two exchange-rate indexes over short intervals.

In an empirical sense then, exchange-rate changes do contain some information about future changes in inflation rates, but the results are not robust across alternative measures of inflation. Because of this lack of robustness and for the reasons outlined above, no one should "bet the ranch" on exchange-rate-based prediction of inflation. Most economists look at a whole slew of data—from GDP gaps to commodity price trends—before forming opinions about inflation trends. Exchange rates should be in the mix and used with caution.

Pittsburgh's Labor Market Performance over the Recession

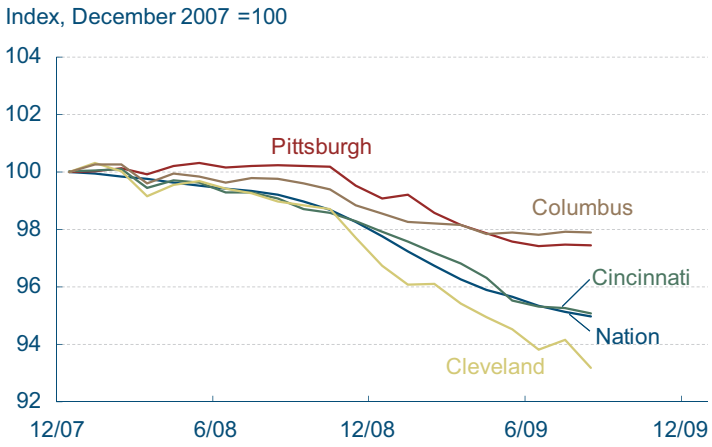
09.23.09
by Kyle Fee

Unemployment Rate



Note: Forth District cities are seasonally adjusted using X-11.
Source: Bureau of Labor Statistics.

Payroll Employment



Note: Forth District cities are seasonally adjusted using X-11.
Source: Bureau of Labor Statistics

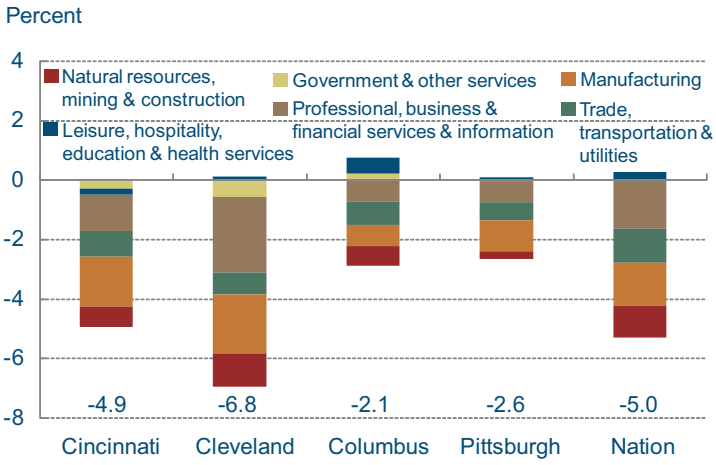
For two days, the leaders of the world's 20 largest economies will meet to discuss potential reforms to the global economic system. Where will this international meeting take place, you ask? London? New York? Tokyo? All wrong. None other than the Fourth District's own Pittsburgh, Pennsylvania. While not the center of the global finance universe, Pittsburgh's recent history provides its own story of economic reform. The economic metamorphosis from steel town to a health and high-tech services center is remarkable but nowhere are its successes more apparent than in the performance of Pittsburgh's labor market over the "Great Recession."

Unlike most of the Fourth District, Pittsburgh's local labor market has held up relatively well over this recession. Over the past 10 years, Pittsburgh's unemployment rate has closely tracked the nation's rate, although since December 2007, they have begun to diverge. Pittsburgh's unemployment rate has increased only 2.8 percent, while the national rate has increased 4.5 percent. Other large metropolitan areas in the Fourth District have experienced unemployment rate increases ranging from 3.1 percent to 4.7 percent. Pittsburgh's unemployment rate (7.5 percent) as of July 2009 is well below the nation's (9.4 percent) and other large Fourth District metropolitan statistical areas (MSAs).

Declines in payroll employment over this downturn have been severe across all locations, with losses ranging from –2.1 percent (Columbus, Ohio) to –6.8 percent (Cleveland, Ohio). Pittsburgh's payroll employment declined 2.6 percent, much less than the nation's loss of 5.0 percent employment over the recession.

Similar to other Fourth District MSAs, the main driver for Pittsburgh's employment losses has been the manufacturing sector, accounting for 40 percent of payroll declines. The professional, business, financial services and information sectors are large loss leaders in Cleveland (36.9), Columbus (34.0)

Components of Employment Growth, Since December 2007



Note: Seasonally adjusted using X-11.
Source: Bureau of Labor Statistics.

and the nation (32.5) while in Pittsburgh these sectors account for smaller proportion of losses (28.3). Similar comparisons can be made for the natural resources, mining, and construction sectors in Pittsburgh as well.

Going into the downturn, Pittsburgh's allocation of labor proved favorable. The once-industrial behemoth allocated only 8.7 percent of its workforce to the manufacturing sector in 2007. As discussed in "Employment Loss in Ohio's Manufacturing Industry," manufacturing employment declines have accelerated during this downturn, adversely affecting local labor markets significantly. On the other hand, Pittsburgh has 19.7 percent of its workforce in the education and health services sector, which has been one of the few sectors to produce jobs during the current downturn. The concentration in the complementary fields of education and medicine not only enabled Pittsburgh to withstand some the ill effects of the business cycle but also provide a solid foundation for future growth.

Do Changes in the Inflation Rate Predict Exchange-Rate Movements?

	Percent of employment				
	Cincinnati, OH	Cleveland, OH	Columbus, OH	Pittsburgh, PA	U.S.
Natural resources, mining and construction	4.8	3.8	4.0	5.4	6.1
Manufacturing	11.6	13.3	8.1	8.7	10.1
Trade, transportation and utilities	20.4	18.5	20.3	19.6	19.4
Information	1.5	1.7	2.0	1.9	2.2
Financial activities	6.3	6.7	7.7	5.9	6.0
Professional and business services	15.0	13.4	15.9	13.6	13.0
Education and health services	13.5	16.3	11.8	19.7	13.3
Leisure and hospitality	10.2	8.7	9.5	9.4	9.8
Other services	4.1	4.1	3.9	4.6	4.0
Government	12.7	13.3	16.7	11.0	16.1

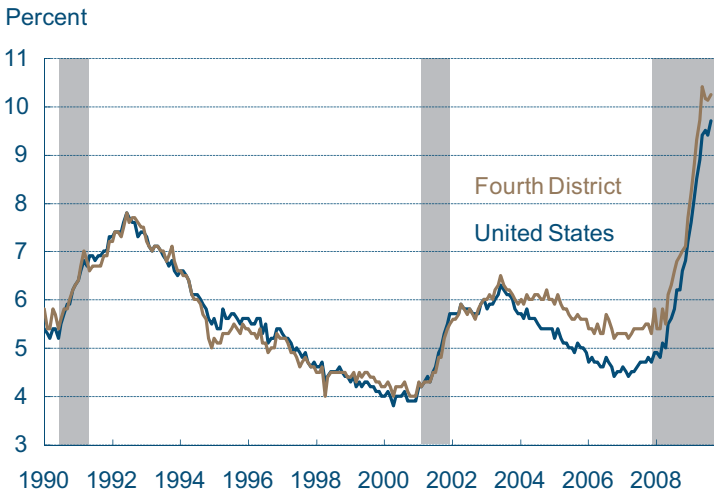
Source: Bureau of Labor Statistics.

"Employment Loss in Ohio's Manufacturing Industry" http://www.clevelandfed.org/research/trends/2009/0409/02regact.cfm

Fourth District Employment Conditions

10.01.09
by Kyle Fee

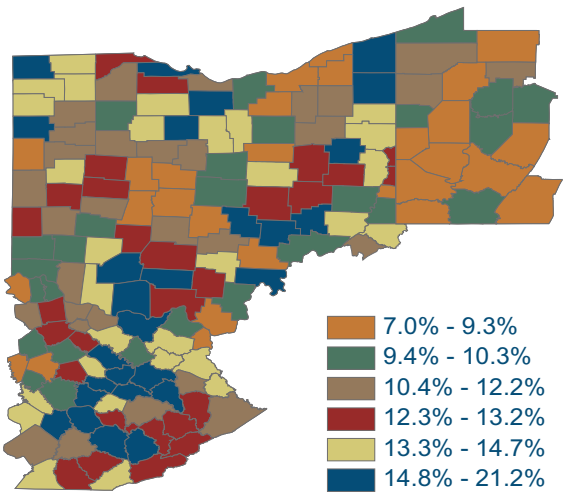
Unemployment Rate



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.

County Unemployment Rates

U.S. unemployment rate = 9.7%



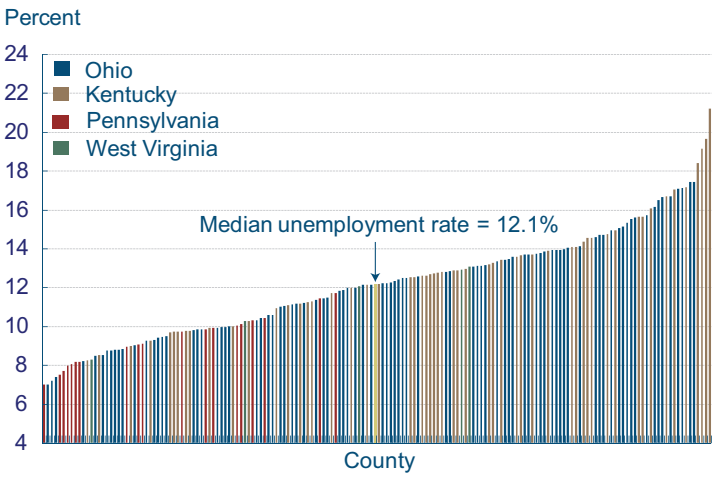
Note: Data are seasonally adjusted using the Census Bureau's X-11 procedure.
Source: U.S. Department of Labor, Bureau of Labor Statistics.

The District's unemployment rate increased 0.1 percentage point to 10.2 percent for the month of August. The decrease in the unemployment rate is attributed to increases in the number of people unemployed (0.6 percent), decreases in the number of people employed (–0.1 percent), and decreases in the labor force (–0.5 percent). The District's rate was higher than the national rate in August (0.5 percentage point), as it has been since early 2004. Since the recession began, the nation's monthly unemployment rate has averaged 0.7 percentage point lower than the Fourth District's unemployment rate. Since this time last year, the Fourth District and the national unemployment rates have each increased 3.5 percentage points.

There are significant differences in unemployment rates across counties in the Fourth District. Of the 169 counties that make up the District, 33 had an unemployment rate below the national rate in August and 136 counties had a higher rate. There were 121 District counties reporting double-digit unemployment rates. Large portions of the Fourth District have high levels of unemployment. Geographically isolated counties in Kentucky and southern Ohio have seen rates increase, as economic activity is limited in these remote areas. Distress from the auto-industry restructuring can be seen along the Ohio-Michigan border. Outside of Pennsylvania, lower levels of unemployment are limited to the interior of Ohio or the Cleveland-Columbus-Cincinnati corridor.

The distribution of unemployment rates among Fourth District counties ranges from 7.0 percent (Allegheny County, Pennsylvania) to 21.2 percent (Magoffin County, Kentucky), with the median county unemployment rate at 12.1 percent. Counties in Fourth District Pennsylvania generally populate the lower half of the distribution, while the few Fourth District counties in West Virginia moved to the middle of the distribution. Fourth District Kentucky and Ohio counties continue to dominate the

County Unemployment Rates



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

upper half of the distribution. These county-level patterns are reflected in statewide unemployment rates, as Ohio and Kentucky have unemployment rates of 10.8 percent and 11.1 percent, respectively, compared to Pennsylvania's 8.6 percent and West Virginia's 9.0 percent.

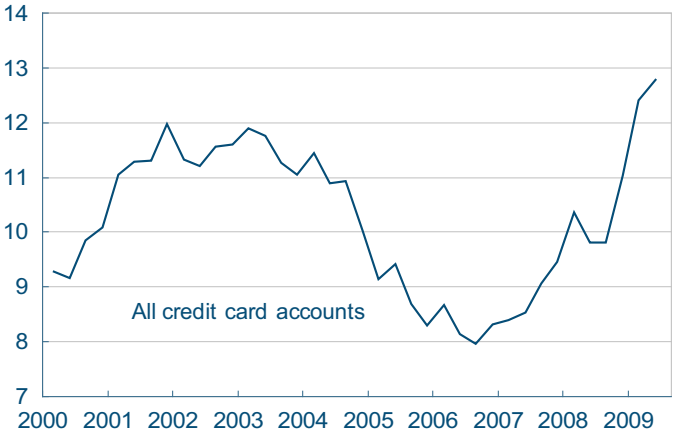
The Availability and Profitability of Credit Cards

10.05.09

by Kent Cherny and O. Emre Ergungor

Credit Card Interest Rates

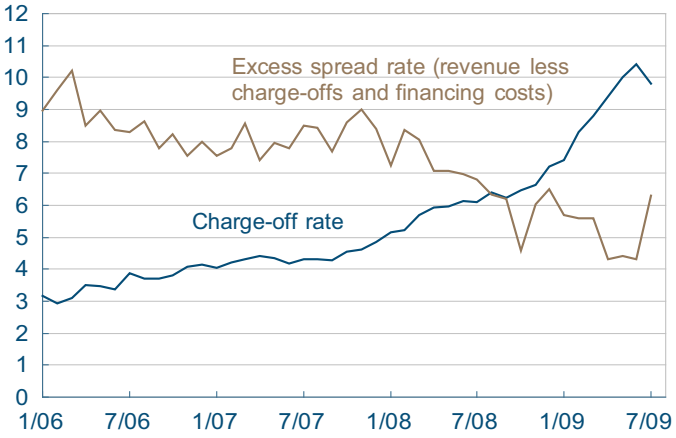
Percentage spread over one-year Treasury notee



Source: Federal Reserve Board.

Credit Card Profitability

Percentage rate



Source: Standard & Poor's.

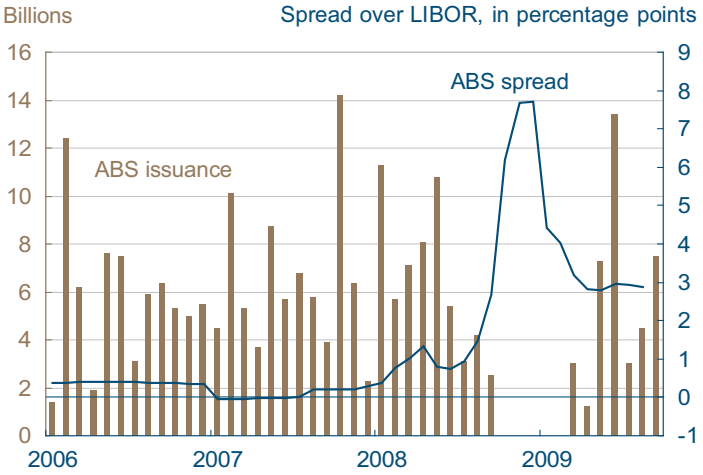
Credit cards serve a dual purpose in our economy. First, they are a means of payment in lieu of cash or checks. Used in this way, credit cards simplify people's day-to-day transactions and cash management needs. At the same time, credit cards are often used by individuals and small businesses for short- or medium-term unsecured borrowing. Individuals may use the revolving balance of a credit card to finance large purchases ahead of their income. Small businesses may rely on credit cards for their working capital needs.

Because they are not secured by marketable assets and have uncertain repayment periods, credit cards often carry substantially higher interest rates than secured debt like mortgages and auto loans. The rates can also serve as a barometer for the broader risk profile of consumers as well as the availability of credit to them. Interest rates for credit card holders have increased over the past two years.

Rates must compensate credit card issuers for the charge-offs they take on uncollectable balances, which is why they are a gauge of credit risk. Charge-offs can be particularly problematic during recessionary times, and the current recession is no exception. Charge-off rates have crept steadily upward since the recession began in late 2007. More recently, charge-offs dropped a bit and rates rose, which led to a slight rebound in credit card issuers' excess spread (a measure of profitability) of 2 percentage points in July.

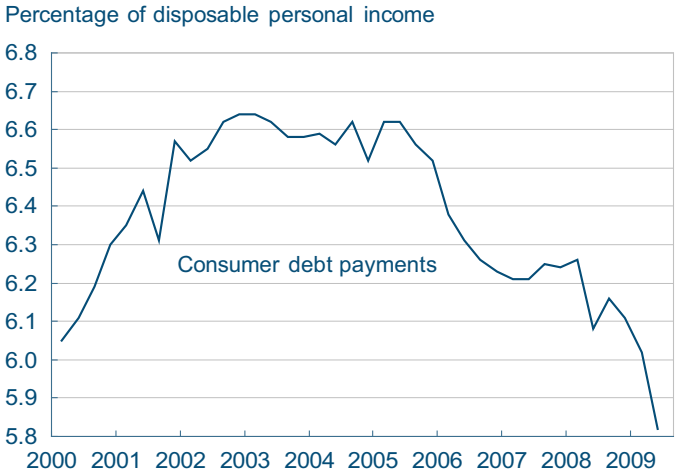
Liquidity in the market for credit card debt—and in the overall bank credit market more generally—also factors into the availability and cost of unsecured credit. Last fall, both the market for short-term bank funds, gauged by the LIBOR rate, and the market for securitized credit card receivables seized up, meaning banks could only fund new credit card debt at high interest rates. In many cases, financial institutions chose to severely restrict the amount of new credit extended in order to con

Credit Card ABS Issuance and Spreads



Sources: Bloomberg, Bear Stearns.

Consumer Indebtedness



Source: Federal Reserve Board

serve capital. For the five months between September 2008 and March 2009, no asset-backed securities (ABS) secured by credit card receivables were issued, and spreads on existing securities spiked from around 1 percent to nearly 8 percent.

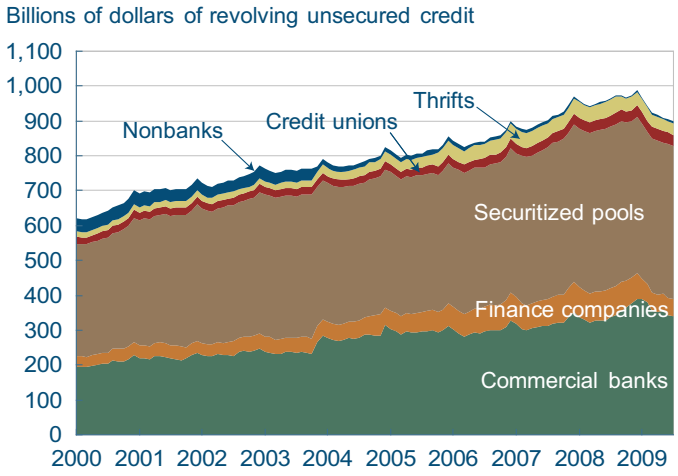
In order to restore the flow of new credit, the Federal Reserve included credit cards in the securities that were eligible for its Term Asset-Backed Securities Loan Facility (TALF). So far this year, $23.8 billion—or 60 percent—of the $40 billion in credit card ABS debt issued has been submitted to the TALF for financing. The liquidity improvements have brought down credit card funding costs for issuers and helped temper the contraction in newly extended credit.

Current demand for credit cards is subject to potentially countervailing forces. On the one hand, individuals are saving more, and may be looking to cut their debt loads by funding purchases with cash rather than credit. One measure of consumer indebtedness, t he consumer financial obligations ratio, which is the ratio of consumer debt payments to disposable personal income , was 5.82 percent last quarter, down from levels around 6.60 percent in 2003-2005. At the same time, unemployment continues to rise, and many people are remaining unemployed longer, which could lead people to draw on their credit card lines (if they haven't been reduced or terminated) to meet monthly expenses.

The total amount of outstanding credit card debt held at commercial banks has fallen 9.1 percent since its peak in December 2008. This contraction may, in part, be a response to demand fluctuations, but it could also be the result of supply-side considerations, namely the funding issues and credit quality degradation previously alluded to. Nearly half of all unsecured revolving credit is held in securitized pools, suggesting that policy efforts to stabilize the ABS market can have significant effects on the overall supply of credit card debt.

One other factor that may be affecting the supply of credit card debt now and in the long run is Congress's recent passage of the Credit Card Accountability Responsibility and Disclosure Act of 2009. Among many other things, the Act places new restrictions on the supply of credit card lines to indi

Credit Card Financing Sources



Source: Federal Reserve Board G.19 release.

viduals under 21 years of age, and prohibits certain interest rate variability practices previously used by issuers. Insofar as these latter changes limit fees or high-frequency risk repricing, extending credit to certain borrowers may become unprofitable, which would cause supply to contract accordingly.

Credit card funding costs are improving after policy intervention into the ABS market, but concerns about credit risk, as well as supply and demand factors, will potentially alter the volume and pricing of credit cards in the near term. Perhaps these market and legislative changes will lead to renewed interest in credit alternatives such as unsecured personal loans, which are often subject to a more rigorous underwriting process than most credit cards.

Economic Trends is published by the Research Department of the Federal Reserve Bank of Cleveland.

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ISSN 0748-2922