

US Money Matters

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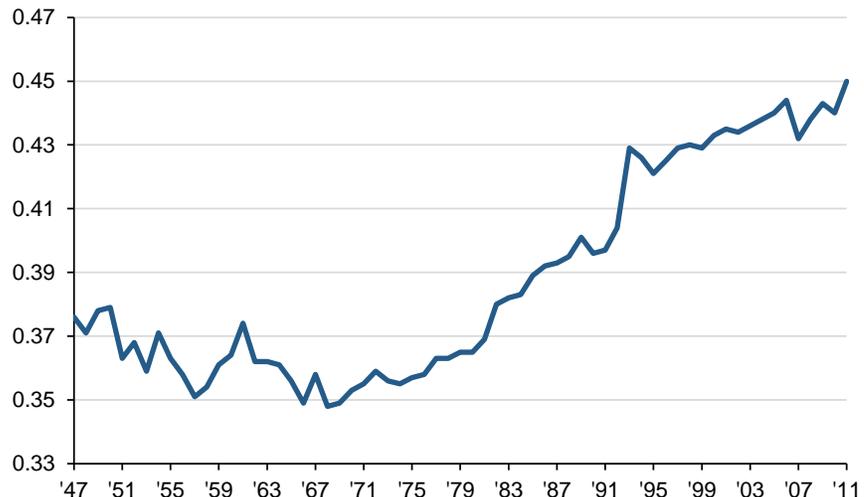
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Income Inequality – The Next Macro Variable?

- While not a new phenomenon, the issue of growing income and wealth disparity in the US is gaining stature among Federal Reserve officials and may become the next important macroeconomic variable for monetary policy.
- Some on the FOMC assert that increasing inequality undermines the ability of the economy to grow sustainably and efficiently. Put another way, it has the capacity to lower the economy’s long-term potential growth rate.
- With their blunt interest rate and balance sheet tools, Fed policymakers have limited means to address this problem. Even their most focused approaches to promote a more equitable economy would be – at best – indirect.

Exhibit 1: Financial Inequality on the Rise in the US

Gini ratio for families: 0 = perfect equality, 1 = perfect inequality



Source: Census Bureau, Haver Analytics®, Credit Suisse

Monetary Policy Review/Preview

- FOMC meeting (March 19-20).

Fed Balance Sheet Update

- Swaps with the ECB fell for a second week after a \$4bn jump in early March.

Money Supply Update

- Savings accounts at commercial banks rebounded by \$60bn in the latest week.

Bank Balance Sheet Update

- Commercial bank loans outstanding fell \$6bn in the first ten weeks of 2013.

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Income Inequality – The Next Macro Variable?

Equal Opportunity.

The American Dream.

Pulling Yourself Up By Your Bootstraps.

Ideals and images such as these are ingrained in the American psyche and speak to the enduring perception – domestically and abroad – of the US as a place where one can get ahead through hard work and determination, if only given the chance. However, growing economic inequality in the US would appear to be at odds with this national ethos.

In many ways, technological advances and evolving societal attitudes toward race, gender, and way of life have broadened opportunities for most Americans. Yet, the gap between rich and poor in the US has been widening for decades and, by some measures, is the largest it has ever been in the post World War II period (Exhibit 2).

Exhibit 2: Growing Economic Inequality is Not a New Phenomenon

Gini ratio for families: 0 = perfect equality, 1 = perfect inequality



Source: Census Bureau, Haver Analytics®, Credit Suisse

Increasing inequality, it has been argued, is destabilizing. It undermines the ability of the economy to grow sustainably and efficiently.¹ Put another way, it has the capacity to lower the economy's long-term potential growth rate.

While not a new phenomenon, the issue of growing income and wealth disparity is finding its way more and more often into the rhetoric of monetary policymakers. Fed speakers increasingly are drawing distinctions in their public remarks between 1) the aggregate household experience since the Great Recession and 2) evidence that the household sector recovery has been particularly uneven.

This trend suggests that financial inequality is gaining stature among Fed officials and may become the next important macroeconomic variable for monetary policy.

However, with their blunt interest rate and balance sheet tools, Fed policymakers have limited means to address this problem. Even their most focused approaches to promote a more equitable economy would be – at best – indirect.

¹ [Federal Reserve Governor Sarah Bloom Raskin](#), June 29, 2011, "Economic and Financial Inclusion in 2011: What it Means for Americans and our Economic Recovery"

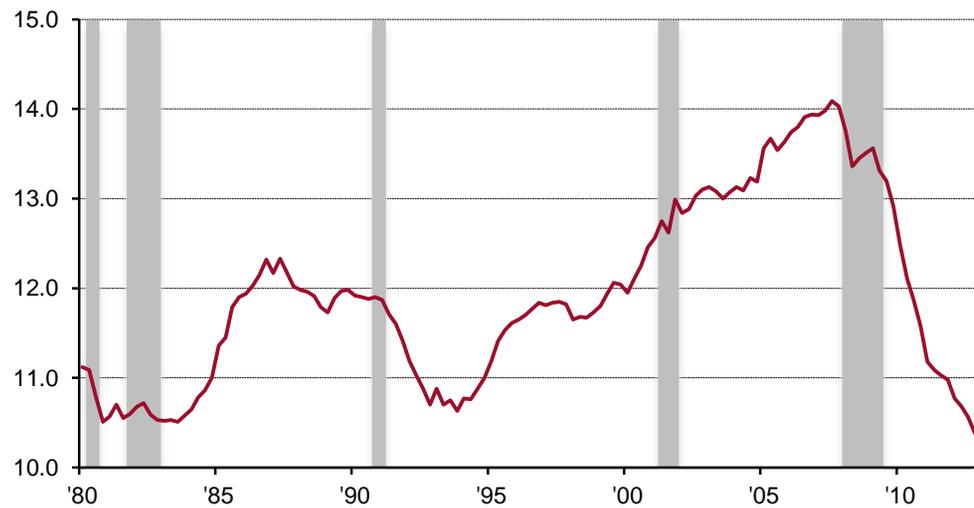
A building sensitivity to widening disparities

Considered as a whole, the collective finances of American households appear to have improved significantly since the Great Recession. Debt service burdens, for example, are lower than they've been in over 30 years (Exhibit 3).

Near record low mortgage rates and more favorable interest rates on other consumer loans are helping many households that overextended financially. But the news isn't all positive, as some "improvements" in this debt ratio have been facilitated by the home foreclosure crisis and the related tightening of credit conditions more generally.

Exhibit 3: Aggregate Household Financial Ratios Mask Underlying Divergence

Household Debt Service Ratio: Mortgage & consumer debt payments/disposable personal income, %



Source: Federal Reserve, Credit Suisse

In the current environment, we have to be careful when interpreting aggregate US household financial data, because they mask a significant underlying divergence. There are two distinct household populations – those who contributed to lower debt burdens by default/foreclosure/charge-offs and those who contributed to the same statistical result by continuing to service their debts.

A series of recent speeches suggest that several Fed policymakers are becoming more sensitive to this bifurcation of the household sector. They are drawing attention to those who have been cut off from the residential and consumer credit markets, the long-term unemployed, and discouraged workers that have dropped out of the labor force (and too often have joined the disability rolls).

Coincidentally (or not), three speeches that exemplify a renewed focus on inequality have been given in recent weeks by the three women on the Federal Reserve Board – Governor Sarah Bloom Raskin, Governor Elizabeth Duke, and Vice Chair Janet Yellen.

Just last Friday, Governor Raskin delivered an address entitled, "[Focusing on Low- and Moderate-Income Working Americans](#)²." Her remarks highlighted the importance of looking past the employment headlines to see the types of jobs being generated in the current recovery. Acknowledging "the pace of recovery in employment has improved," Raskin pointed to "the absence of a substantial number of new high-paying jobs [which], when combined with changes in the landscape for financial services, affects access generally to affordable, sustainable credit."

² Credit Suisse has not reviewed the linked sites in this report and takes no responsibility for the content contained therein. The links are provided solely for your convenience and information. Following this link or any other link on the Credit Suisse Web site shall be at your own risk.

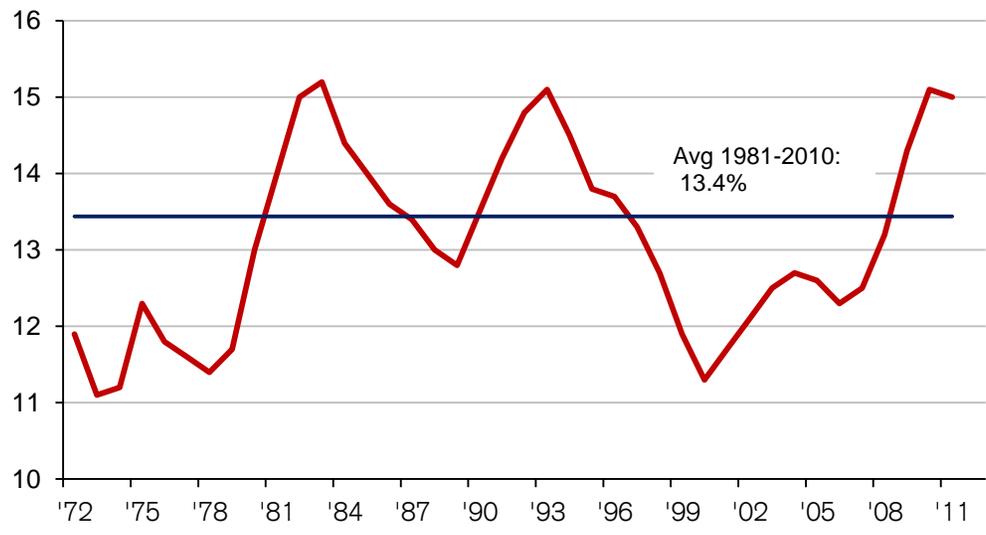
(This is a topic on which we have commented several times in recent months. See, for example, our February 1, 2013, [“US Economics Digest: More Jobs! Good Jobs?”](#))

It is not hard to see how the slow growth of high-paying jobs is exacerbating the trend toward greater income disparity. Raskin cited studies finding that “while average wages have continued to increase steadily for persons who have remained employed all along, the average wage for new hires have actually declined since 2010.”

Elevated unemployment, and the inadequate pace of “good job” creation, manifest themselves in deteriorating poverty statistics. As Raskin noted, “The poverty rate has risen sharply since the onset of the recession, after a decade of relative stability, and it now stands at 15 percent—significantly higher than the average over the past three decades.”

Exhibit 4: Poverty Rate Significantly Higher Than Average Over Past 30 Years

Percent of total population below poverty level (%)



Source: Census Bureau, Haver Analytics®, Credit Suisse

About two weeks earlier, on March 8, Fed Governor Duke also weaved the theme of inadequate incomes for new hires in her public [Comments on Housing and Mortgage Markets](#). Duke believes “that recent gains in the housing market will continue and perhaps even strengthen,” but her “main hesitation with this forecast” centered on the mortgage conditions for many would-be borrowers:

“In particular, I expect demand to come from a pickup in new household formation, but I also recognize that these households may be the very population that faces especially tight credit conditions.”

Duke blamed “the weak labor market, especially among younger adults,” for estimates that “household formation from 2006 to 2011 appears to have been far lower than in any other five-year period since at least the mid-1960s.” While she expects household formation and housing demand to increase, Duke warned that “it seems likely...many of these new households [will] rent rather than buy their homes...and applications for mortgages to purchase homes might recover only slowly.”

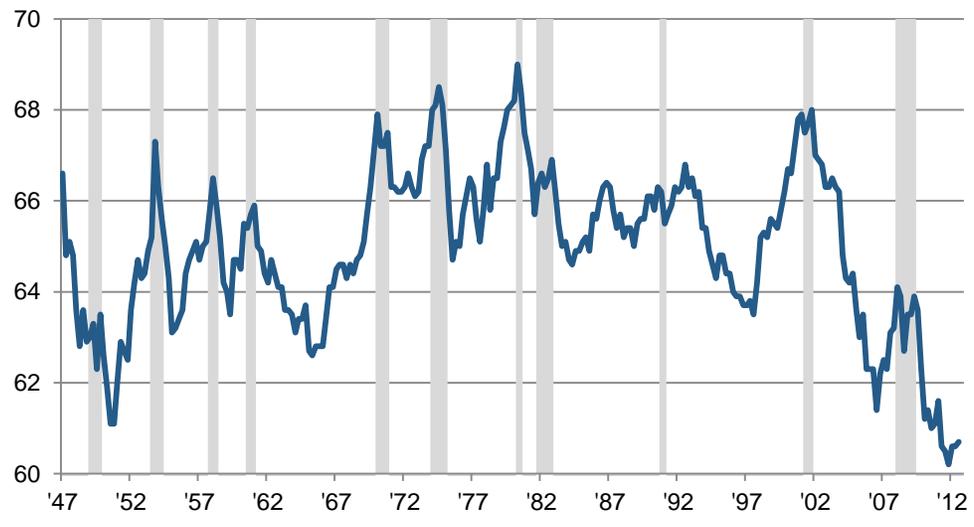
On February 11, 2013, Fed Vice Chair Yellen delivered an address entitled, [“A Painfully Slow Recovery for America’s Workers: Causes, Implications, and the Federal Reserve’s Response.”](#) As Raskin would do a few weeks later, Yellen highlighted the unevenness of the current recovery:

“The effects of the recession and the subsequent slow recovery have been harshest on some of the most vulnerable Americans. The poverty rate has risen sharply since the onset of the recession, after a decade in which it had been relatively stable...Even those today who are fortunate enough to hold jobs have seen their hourly compensation barely keep pace with the cost of living over the past three years, while labor's share of income--as measured by the percent of production by nonfinancial corporations accruing to workers as compensation--remains near the postwar low reached in 2011.”

(We have drawn similar parallels between the falling labor share of income and rising inequality in past research notes. See, for example, our March 11, 2011, [“Global Economics Comment: All Assets Are Someone's Liability: Whose Are in Your Wallet?”](#))

Exhibit 5: Labor's Share of Income Remains Near the 2011 Postwar Low

Nonfinancial corporate sector, percent



Source: Bureau of Economic Analysis, Federal Reserve, Credit Suisse

The role of income distribution in macroeconomic performance

[Fed Governor Raskin in mid-2011](#) described the drawbacks of growing inequality succinctly. She asserted, “This inequality is destabilizing and undermines the ability of the economy to grow sustainably and efficiently. It is associated with increases in crime, profound strains on households, lower savings rates, poorer health outcomes, and diminished levels of trust in people and institutions. All of these forces drag down maximum economic growth and are anathema to the social progress that is part and parcel of such growth.”

We are seeing related concerns appear with greater frequency in more recent Fed speeches. In her February 11 address, Vice Chair Yellen made similar observations about the risk to potential GDP in the US from elevated joblessness, especially high long-term unemployment:

“The large shortfall of employment relative to its maximum level has imposed huge burdens on all too many American households and represents a substantial social cost. In addition, prolonged economic weakness could harm the economy's productive potential for years to come.”

“These are not just statistics to me. We know that long-term unemployment is devastating to workers and their families. Longer spells of unemployment raise the risk of homelessness and have been a factor contributing to the foreclosure crisis...The toll is simply terrible on the mental and physical health of workers, on their marriages, and on their children.”

And Governor Duke warned that widening gaps in credit access may temper the pace of the housing recovery:

"I think the ability of newly formed households, which are more likely to have lower incomes or weaker credit scores, to access the mortgage market will make a big difference in the shape of the recovery. Economic improvement will cause household formation to increase, but if credit is hard to get, these will be rental rather than owner-occupied households. And without first-time homebuyers, the move-up market will be sluggish, new and existing home sales will be more subdued, and purchase mortgage volumes will return only slowly."

How can the Fed help?

A new paper released this month by the Brookings Institute describes an investigation into whether rising income inequality in the US is permanent or transitory.³ Using a 1987-2009 panel of tax returns, the researchers found that for male labor earnings, "the entire increase in the cross-sectional inequality over our sample period was permanent..." For total household income, "the large increase in inequality over our sample period was predominantly, though not entirely, permanent." Such results are clearly troubling.

Fed officials concede that their power to influence the distribution of wealth is limited. They have neither the authority nor the tools to directly address such inequality. But they insist that boosting overall economic activity can help.

During the heat of the "Occupy Wall Street" movement in November 2011, Chairman Bernanke was asked if the Fed could do anything to promote a more equitable economy. He responded as follows:

"With respect to inequality, I think the best way to address inequality is to create jobs. It gives people opportunities. It gives people a chance to earn income, gain experience, and to ultimately earn more. But that's an indirect approach; that's really the only way the Fed can address inequality per se."

Similarly, as former [Fed Governor Laurence Meyer](#) put it over 15 years ago:

"Monetary policy, in particular cannot remedy increases in income inequality, raise the trend rate of increase in living standards, or combat inadequate opportunities for upward mobility out of poverty. It is, as always, important that we carry out our traditional responsibilities well, accommodating the maximum sustainable growth and achieving the maximum sustainable level of employment. But we cannot do more."

* * *

Monetary policymakers were never blind to rising inequality, and its seeming intractability. But the problem appears to be getting more attention at the Fed of late. Given its potential ramifications for the long-term productive capacity of the economy – not to mention its social costs – inequality seems poised to take an increasingly important place among the macroeconomic variables used to justify continued expansionary monetary policy.

³ DeBacker, Jason, Bradley Heim, Vasia Panousi, Shanthy, Ramnath, Ivan Vidangos, "[Rising Inequality: Transitory or Permanent? New Evidence from a Panel of U.S. Tax Returns.](#)" [Brookings Institute](#), March 17, 2013.

Monetary Policy Review/Preview

Review: March 19-20 FOMC meeting

The following is an excerpt from our March 20, 2013 research note, [“US Economics Digest: FOMC Meeting Review – Making Progress”](#).

The Federal Open Market Committee reaffirmed its intention to buy \$85 billion in assets each month and remained vague as to when it might consider altering the size of its monthly purchases. This was in line with our expectations.

But the FOMC did explicitly note that the extent of progress towards its economic objectives will be one factor in determining the size, pace and composition of its purchases. This was a subtle change from earlier statements and, in our view, **underscores the FOMC’s willingness to pare the size of its asset purchases later this year, should the recent improvement in labor market data prove to be more than temporary.**

The Committee surprised no one by restating the economic conditions it deems consistent with exceptionally low rates – a 6.5% or higher unemployment rate, 2.5% or lower one- to two-year ahead inflation projections, and well-anchored longer-term inflation expectations.

The FOMC’s economic projections through 2015 were revised modestly lower for GDP growth and, curiously, were also lowered for the unemployment rate. Opinions on the appropriate path of the fed funds rate targets were similar to those expressed in December.

Paving the way for eventual QE3 changes— Federal Reserve Chairman Bernanke noted several times in his post-meeting press briefing that the FOMC may at some point alter the size of its monthly asset purchases depending on the behavior of the economic data. He said the Committee decided that no changes in the asset purchase program (known popularly as QE3) were warranted at the present time.

In its [policy statement](#) the FOMC upgraded its description of domestic economic conditions, while simultaneously noting the “somewhat more restrictive” stance of fiscal policy. The language regarding asset purchases and policy thresholds in today’s statement varied little from the wording in the previous two statements, with the exception of one final phrase:

March 20— “The Committee will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until the outlook for the labor market has improved substantially in a context of price stability. In determining the size, pace, and composition of its asset purchases, the Committee will continue to take appropriate account of the likely efficacy and costs of such purchases as well **as the extent of progress toward its economic objectives.**”

December 12 and January 30— “If the outlook for the labor market does not improve substantially, the Committee will continue its purchases of Treasury and agency mortgage-backed securities, and employ its other policy tools as appropriate, until such improvement is achieved in a context of price stability. In determining the size, pace, and composition of its asset purchases, the Committee will, as always, take appropriate account of the likely efficacy and costs of such purchases.”

The added emphasis on the “extent of progress” as a determinant of QE3 suggests that the FOMC would be prepared to pare the size of its asset purchases later this year, should the recent improvement in US jobs data prove to be more than temporary.

We still anticipate the Fed’s open-ended purchase program will persist through 2013 and into early 2014, though probably not in its current form. It may be that the Fed will choose to decrease the size of its monthly purchases around September, depending on the pace of job growth. Market functioning (particularly the MBS market) may also become a factor in the decision to slow the pace of buying. Our base case is for QE3 to boost the Fed’s balance sheet by just under \$1.2 trillion by March 2014.

FOMC to Continue Purchasing \$85bn/month, At Least for Now

Credit Suisse forecasts, \$bn

| Quarter | MBS purchases | Treasury purchases | Total |
|--------------|---------------------|---------------------|-------------|
| Q3 2012 | 23 | 0 | 23 |
| Q4 2012 | 40/mo | 0 | 120 |
| Q1 2013 | 40/mo | 45/mo | 255 |
| Q2 2013 | 40/mo | 45/mo | 255 |
| Q3 2013* | 40/mo thru mid-Sep. | 45/mo thru mid Sep. | 248 |
| Q4 2013 | 30/mo | 30/mo | 180 |
| Q1 2014 | 0 | 30/mo | 90 |
| TOTAL | 588 | 583 | 1171 |

Source: Federal Reserve, Credit Suisse

* Forecasted cut in asset purchase size at the September 17-18, 2013 FOMC meeting.

The FOMC downgraded its 2013 growth forecast, but not by as much as we expected given that participants needed to factor in the headwinds created by the budget sequester. The 2.3%-3.0% range submitted in December for 2013 real GDP growth was shaved only slightly to 2.3%-2.8%. Similarly small downward adjustments were made to 2014 and 2015 growth projections:

FOMC Economic Projections as of March 20

GDP and PCE price indexes (Q4/Q4%), unemployment rate (Q4 average)

| Variable | FOMC's central tendency | | | | |
|---------------------------|-------------------------|-------------------|-------------------|-------------------|-------------------|
| | 2012 | 2013 | 2014 | 2015 | Longer run |
| Change in real GDP | 1.6* | 2.3 to 2.8 | 2.9 to 3.4 | 2.9 to 3.7 | 2.3 to 2.5 |
| Dec'12 projection | 1.7 to 1.8 | 2.3 to 3.0 | 3.0 to 3.5 | 3.0 to 3.7 | 2.3 to 2.5 |
| Sep'12 projection | 1.7 to 2.0 | 2.5 to 3.0 | 3.0 to 3.8 | 3.0 to 3.8 | 2.3 to 2.5 |
| Jun'12 projection | 1.9 to 2.4 | 2.2 to 2.8 | 3.0 to 3.5 | -- | 2.3 to 2.5 |
| Unemployment rate | 7.8* | 7.3 to 7.5 | 6.7 to 7.0 | 6.0 to 6.5 | 5.2 to 6.0 |
| Dec'12 projection | 7.8 to 7.9 | 7.4 to 7.7 | 6.8 to 7.3 | 6.0 to 6.6 | 5.2 to 6.0 |
| Sep'12 projection | 8.0 to 8.2 | 7.6 to 7.9 | 6.7 to 7.3 | 6.0 to 6.8 | 5.2 to 6.0 |
| Jun'12 projection | 8.0 to 8.2 | 7.5 to 8.0 | 7.0 to 7.7 | -- | 5.2 to 6.0 |
| PCE inflation | 1.6* | 1.3 to 1.7 | 1.5 to 2.0 | 1.7 to 2.0 | 2.0 |
| Dec'12 projection | 1.6 to 1.7 | 1.3 to 2.0 | 1.5 to 2.0 | 1.7 to 2.0 | 2.0 |
| Sep'12 projection | 1.7 to 1.8 | 1.6 to 2.0 | 1.6 to 2.0 | 1.8 to 2.0 | 2.0 |
| Jun'12 projection | 1.2 to 1.7 | 1.5 to 2.0 | 1.5 to 2.0 | -- | 2.0 |
| Core PCE inflation | 1.5* | 1.5 to 1.6 | 1.7 to 2.0 | 1.8 to 2.1 | -- |
| Dec'12 projection | 1.6 to 1.7 | 1.6 to 1.9 | 1.6 to 2.0 | 1.8 to 2.0 | -- |
| Sep'12 projection | 1.7 to 1.9 | 1.7 to 2.0 | 1.8 to 2.0 | 1.9 to 2.0 | -- |
| Jun'12 projection | 1.7 to 2.0 | 1.6 to 2.0 | 1.6 to 2.0 | -- | -- |

Source: Federal Reserve, Credit Suisse

* = Actual

A slower growth forecast ordinarily would be associated with raised unemployment rate projections. But the central tendency ranges for unemployment were lowered for the entire 2013-2015 forecast period. This may mean that Fed officials forecast the labor force participation rate will keep declining. Alternatively, this odd juxtaposition could point to lower estimates of potential GDP (but then we would have expected to see lower, rather than unchanged, long-run GDP projections).

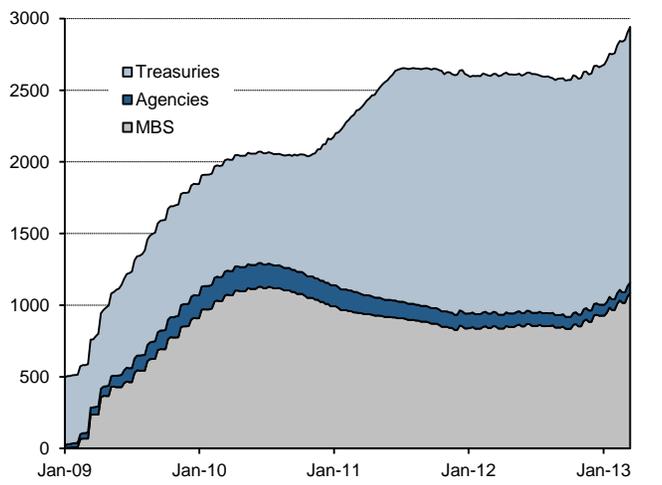
Fed Balance Sheet Update

Total Fed assets rose \$41bn to a record \$3.2tr in the week ended March 20. Fed holdings of US government debt rose \$15bn to \$1.8tr on QE3 purchases. The Fed's MBS portfolio jumped \$25bn in the latest week and is up \$70bn over the past two weeks, even though the Central Bank is buying only \$40bn in MBS per month. The timing mismatch between MBS purchases and their reflection on the Fed's balance sheet are due to the fact that many of the MBS transactions are for forward settlement.

In the week ended March 6, the ECB tapped its swap line with the Fed for a net new \$4.1bn in dollar liquidity. This was the largest weekly pickup in ECB swap activity in 13 months and would have raised many an eyebrow if the increases had persisted. But in the following two weeks, ECB swaps outstanding edged \$378mn lower, diffusing concerns.

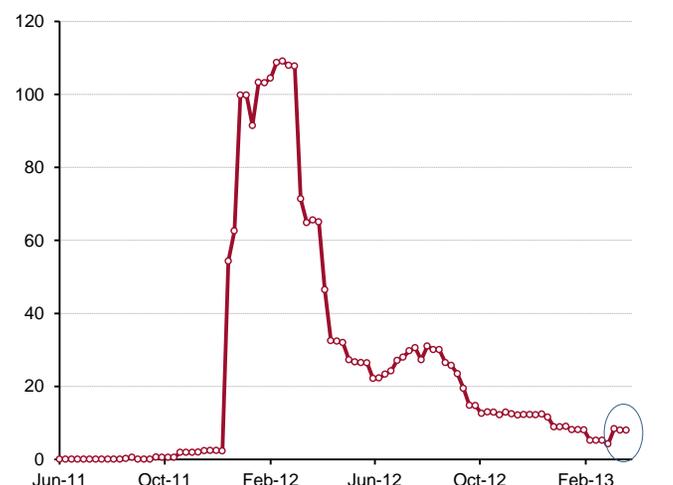
The Fed offered \$3bn in 28-day term deposits on March 11 to promote familiarity with this "exit strategy" tool. The stop-out rate on the auction was 0.255%, just above the record low 0.254%. So, participants earned just 0.5bp above the 0.25% the Fed pays on reserves in exchange for losing access to some of their reserves for four weeks.

Fed Securities Holdings (Wednesdays, \$bn)



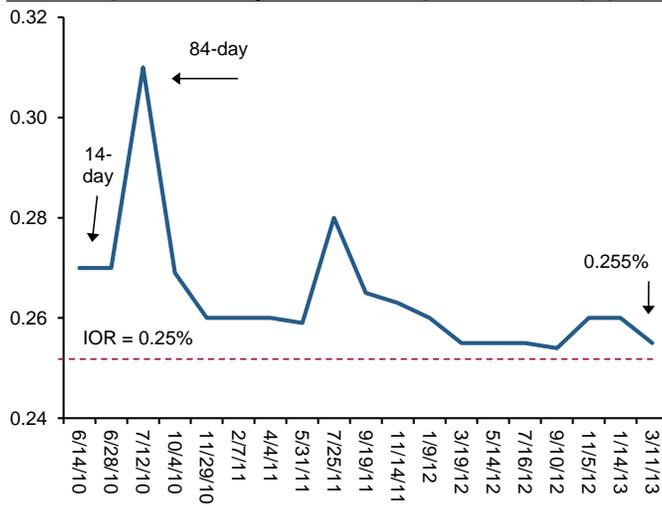
Source: Federal Reserve, Credit Suisse

Central Bank Swaps Outstanding (Wednesdays, \$bn)



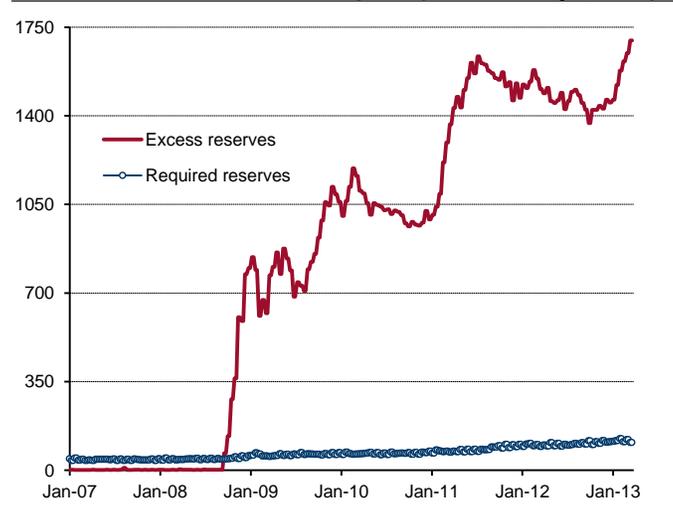
Source: Federal Reserve, Credit Suisse

Term Deposit Facility Auction Stop-Out Rates (%)



Source: Federal Reserve, Credit Suisse

Total Fed Liabilities and Capital (Wednesdays, \$bn)



Source: Federal Reserve, Credit Suisse

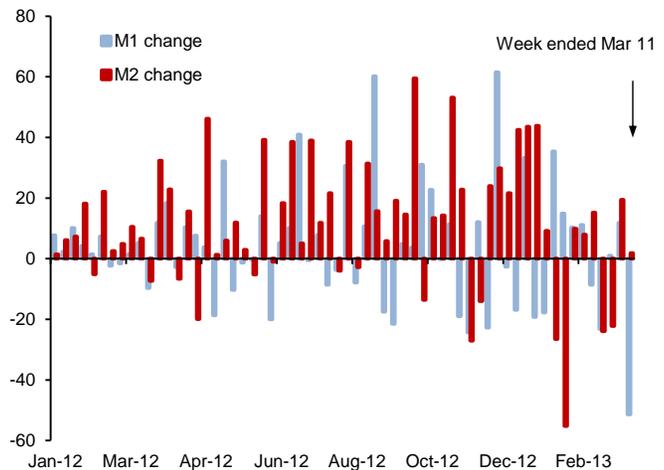
Money Supply Update

The narrow M1 aggregate plunged \$51.4bn in the week ended March 11, the largest weekly decline since late 2010. But M1 has fallen by only \$16bn so far this year despite the [expiration at year-end 2012](#) of the FDIC's transaction account guarantee, or TAG, insurance. Without this unlimited FDIC insurance on non-interest-bearing deposits (adopted in 2010), savings accounts, money market mutual funds and Treasury bills were expected to absorb cash moving out of checking accounts.

M2, which includes all of M1, was up nearly \$2bn in the latest week, thanks to a \$60bn rebound in savings account balances at commercial banks. These savings deposits fell by \$95bn in the first four weeks of the year. We suspect that households drew down their savings at banks in order to finance the strong equity and fixed income mutual fund purchases seen so far in 2013.

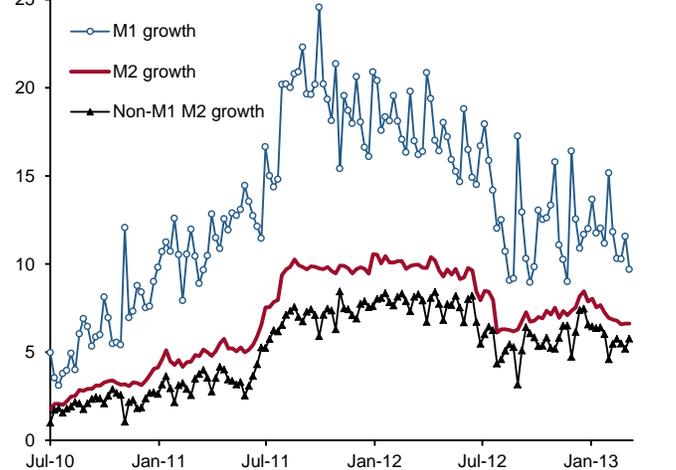
M1's year-over-year growth rate slowed to 9.7% in the week ended March 11 from 13.0% in Q4-2012. M2's yoy growth rate is now 6.6%, matching a 25-week low. Neither aggregate is raising inflation concerns; both M1 and M2 velocity are at multi-decade lows.

Money Supply Changes (\$bn, sa, weekly)



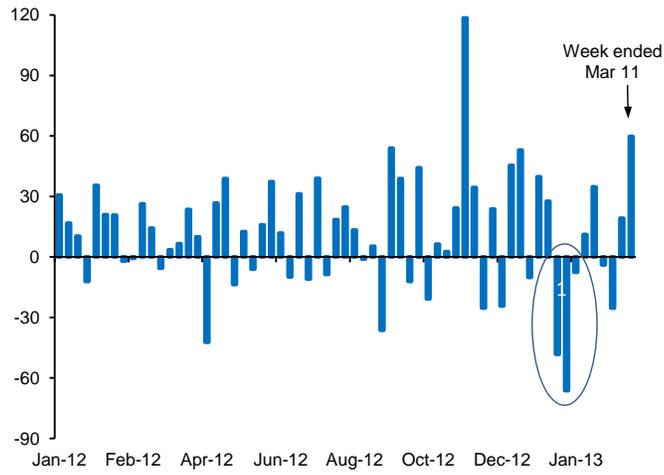
Source: Federal Reserve, Credit Suisse

Money Supply Growth (y/y%, nsa, weekly)



Source: Federal Reserve, Credit Suisse

Commercial Bank Savings Accts (\$bn, wkly chngs)



Source: Federal Reserve, Credit Suisse

M2 Velocity Lowest in Decades (Nominal GDP/M2)



Source: Federal Reserve, Credit Suisse

Bank Balance Sheet Update

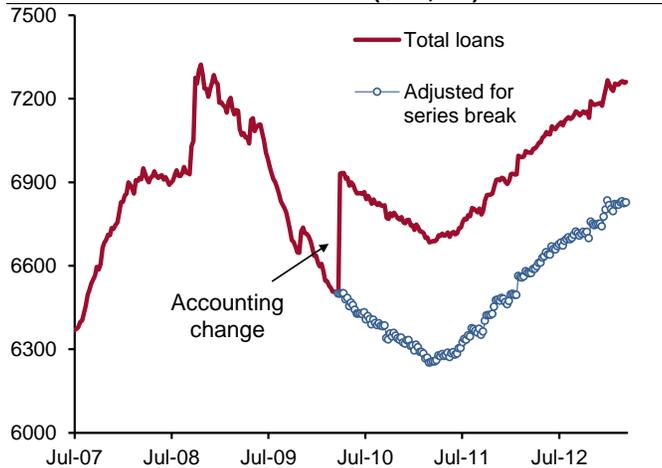
Total commercial bank loans have fallen \$6bn in the first ten weeks of 2013. On March 20 total loans outstanding were \$7.26tr, no higher than they were in the dark days of Q4 2008. And adjusted for an accounting change in 2010, loans outstanding today are some \$428bn (6%) below the Q4 2008 average.

This is not to say that progress hasn't been made. Commercial & industrial loans rose nearly \$15bn this year and are growing at an 11.6% yoy pace. Real estate (-\$19bn ytd, -0.2% yoy) and commercial lending activity (+\$6bn ytd, +2.6% yoy) remains sluggish.

Cash assets held by domestically-chartered banks jumped by \$117bn (to \$988bn) so far this year. Meanwhile, cash at branches of foreign banks in the US surged by \$163bn (to \$970bn). Domestic banks may be trying to limit cash accumulations, however, leaving foreign banks to absorb the bulk of new excess reserves created by the Fed's QE3.

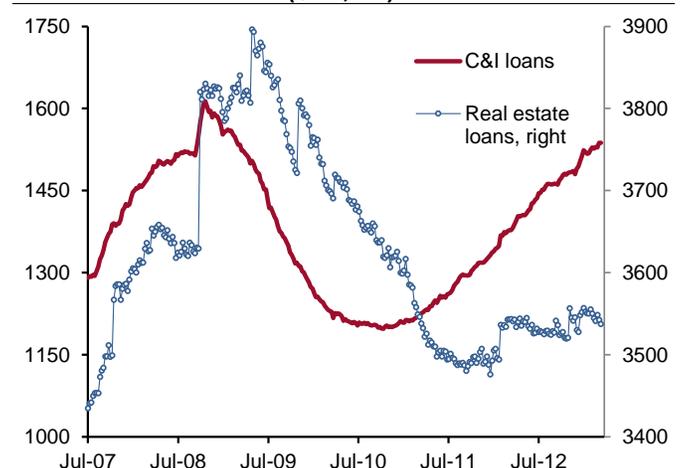
Mirroring changes in their cash assets, funding received by foreign banks from overseas offices rose \$75bn in the past three weeks alone. These liabilities include dollar borrowing by head offices and channeled back to the US to be deposited at the Fed.

Total Bank Loan and Leases (\$bn, sa)



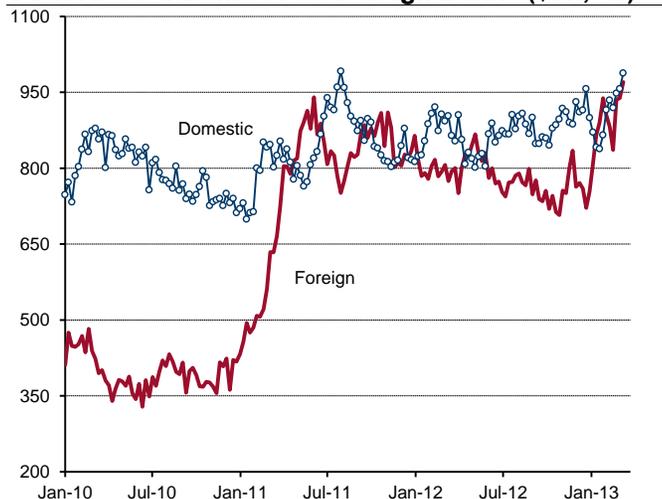
Source: Federal Reserve, Credit Suisse

Selected Bank Loans (\$bn, sa)



Source: Federal Reserve, Credit Suisse

Cash Assets: Domestic & Foreign Banks (\$bn, sa)



Source: Federal Reserve, Credit Suisse

Net Due to Foreign Offices: Foreign Banks (\$bn, sa)

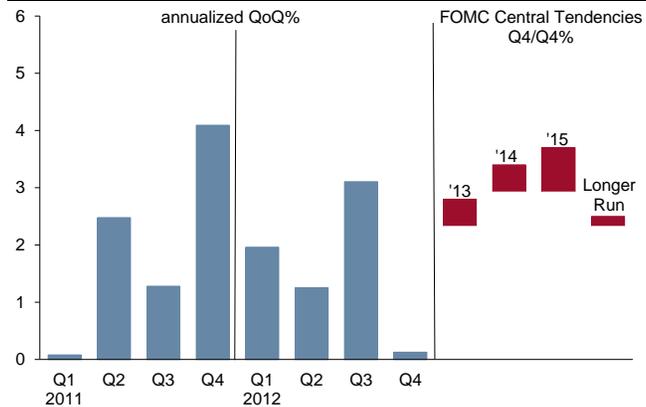


Source: Federal Reserve, Credit Suisse

FOMC Economic Projections

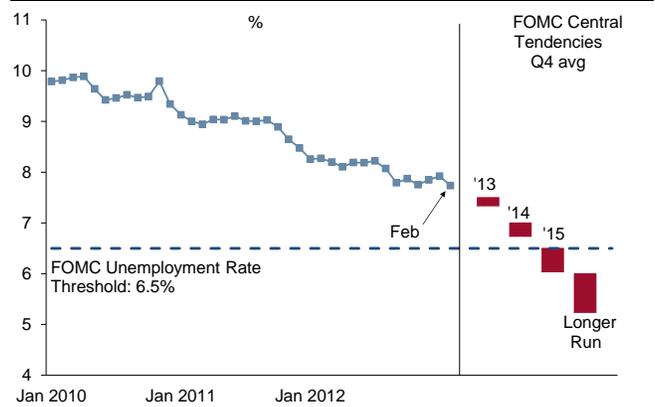
(from the March 19-20 FOMC Meeting)

Real GDP



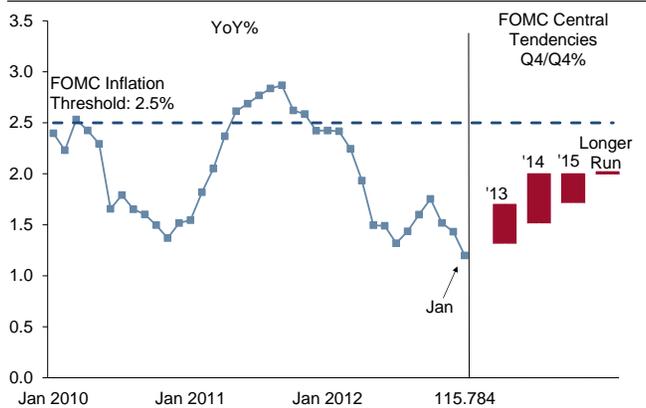
Source: BEA, Federal Reserve, Credit Suisse. 2013 central tendency is 2.3% to 2.8%; 2014 is 2.9% to 3.4%; 2015 is 2.9% to 3.7%; and longer run is 2.3% to 2.5% on a Q4/Q4 basis.

Unemployment Rate



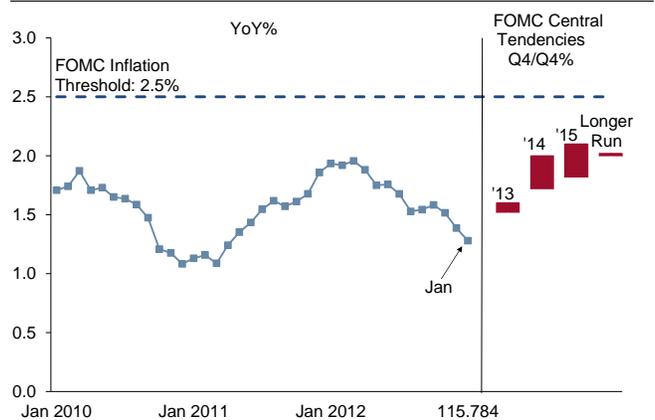
Source: BLS, Federal Reserve, Credit Suisse. 2013 central tendency is 7.3% to 7.5%; 2014 is 6.7% to 7.0%; 2015 is 6.0% to 6.5%; and longer run is 5.2% to 6.0% on a Q4 average basis.

PCE Inflation



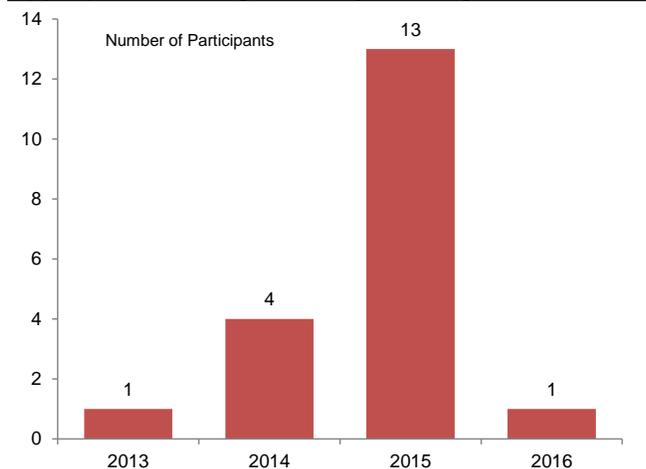
Source: BEA, Federal Reserve, Credit Suisse. 2013 central tendency is 1.3% to 1.7%; 2014 is 1.5% to 2.0%; 2015 is 1.7% to 2.0%; and longer run (target) is 2.0% on a Q4/Q4 basis.

Core PCE Inflation



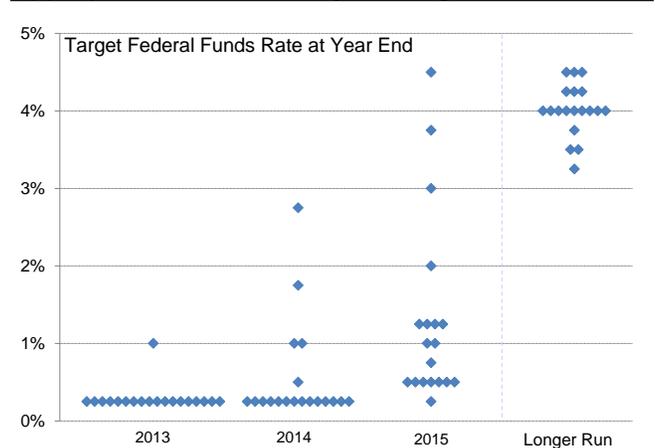
Source: BEA, Federal Reserve, Credit Suisse. 2013 central tendency is 1.5% to 1.6%; 2014 is 1.7% to 2.0%; and 2015 is 1.8% to 2.1% on a Q4/Q4 basis.

Appropriate Timing of Policy Firming



Source: Federal Reserve, Credit Suisse

Appropriate Pace of Policy Firming



Source: Federal Reserve, Credit Suisse

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Disclosure Appendix

Analyst Certification

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