Twelfth Federal Reserve District

FedViews

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Glenn Rudebusch, senior vice president and associate director of research at the Federal Reserve Bank of San Francisco, states his views on the current economy and the outlook:

- It is interesting to examine the recession and recovery of the economy through the prism of the stock market—particularly the broad Standard & Poor's (S&P) 500-stock index, and the narrower S&P Homebuilders Industry and Dow Jones financial institution indexes. The first stage in the economic downturn was a housing bust, which was evident in steep declines in homebuilder stock prices in 2006 and 2007. Next, financial institutions suffered severe losses, and financial institution stocks posted steady price declines throughout 2007 and 2008. Finally, fallout from the housing bust and financial meltdown led to a deep recession, which was accompanied by a sharp decline in the overall stock market in 2008. More recently, as the financial crisis receded, the S&P 500 and financial institution indexes rebounded significantly. In contrast, the housing market and homebuilder stock valuations have not yet started to recover. Another measure of equity market investor sentiment is the VIX volatility index, which is based on the expected volatility over the next 30 days in the S&P 500 stock index. According to the VIX index, the market has returned from an expected level of volatility we can characterize as "terrified" at the height of the crisis to more normal levels.

- The gains in stock market wealth have put household balance sheets on a firmer footing, and recent growth in consumption has been solid. Consumer sentiment may also improve if the labor market recovers. The latest labor market readings have been encouraging. Nonfarm payrolls increased by 162,000 jobs in March, and most of that increase came from the private sector. Still, there is a long way to go to make up the more than 8 million jobs lost since the start of the recession. Furthermore, the unemployment rate remained unchanged at 9.7 percent in March, and a greater share of the jobless were classified as long-term unemployed. This enormous pool of unemployed workers represents a substantial shortfall from full employment.

- Federal Open Market Committee (FOMC) members appear to disagree about the extent of resource slack, which is subject to considerable measurement uncertainty. The output gap—which is the deviation of real output from its potential—is usually measured using gross domestic product (GDP) data. But an alternative measure uses data on gross domestic income (GDI). In theory, GDI should equal GDP. GDP measures total output by adding up all the spending in the economy, including consumption and investment. GDI measures total output by adding up all the income generated in the economy, including wages and profits. In practice, given imperfect data collection, GDP and GDI don't quite match. Some economists argue that GDI provides the more reliable measure of U.S. output. By that measure, the recession was even deeper—and the current output gap even larger—than indicated by GDP.

- FOMC participants also disagree about the best way to measure the underlying trend in inflation. (See *FRBSF Economic Letter* 2010-11, "The Housing Drag on Core Inflation.") An inflation measure that excludes volatile food and energy prices is often used to eliminate transitory movements in prices. Researchers have also constructed trimmed mean and median measures of underlying inflation, which exclude the most extreme price movements in each period rather than singling out specific spending categories for permanent exclusion. All these measures are showing a steep downtrend in rates of inflation over the past two years below levels reached in 2002 and 2003, when deflation fears were widespread.

- Even more unsettling are the recent very low rates of increase in wages and compensation. In particular, the rate of compensation increases has been falling steadily since the start of the recession, and is now running two to three percentage points below levels posted in 2002 and 2003. This suggests that the probability of deflation is even higher now than during that earlier period.

- Going forward, we expect the economy to grow fairly rapidly—almost 3½ percent this year and over 4 percent in 2011 and 2012. However, the level of economic activity is so depressed that, even with solid growth, it will take years to eliminate slack and return to full employment.

- There are risks to this forecast. On the upside, the last deep recession ending in 1982 was followed by very rapid growth as pent-up consumer and business demand was unleashed. However, it seems likely that the financial crisis will leave lasting scars, thereby slowing the growth rate of the economy. Furthermore, monetary policy has been constrained by the zero bound on nominal interest rates, that is, the inability to set a federal funds rate target below zero. In addition, fiscal policy stimulus, which has propped up recent economic growth, is waning. Therefore, few forecasters foresee a V-shaped recovery. Indeed, the average private-sector forecast is even more pessimistic than our forecast.

- Measures of the unemployment and output gaps indicate the presence of a lot of slack in the economy, which is pushing the inflation rate down. We anticipate that much of that pressure will be offset by well-anchored inflation expectations, which should keep inflation from falling much further. The early recovery period of 1983–84 provides a cautionary alternative. Even with fast economic growth, the high unemployment of the early 1980s caused steep disinflation.

- Surprisingly, many private-sector forecasters foresee a quick pickup in price inflation. This average forecast may be boosted by a few forecasters who put more emphasis on the size of the Federal Reserve's balance sheet than on the extent of economic slack. However, although the Fed has enlarged its balance sheet and boosted the level of bank reserves and the monetary base, banks are not lending out those reserves. Broad measures of money in the economy are also growing very slowly.

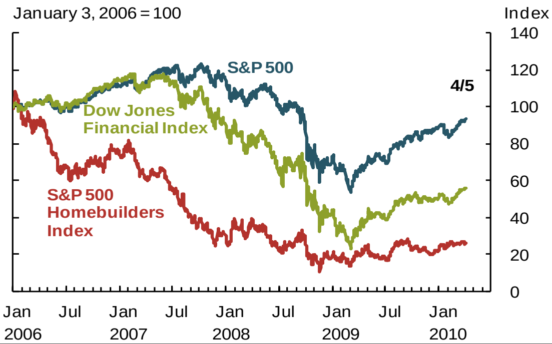
- To combat the global financial crisis and the deep economic recession, the Fed took two extraordinary actions. First, when money markets were disrupted, the Fed supplied emergency short-term liquidity against good collateral to improve financial market functioning. Second, as the recession deepened, the Fed provided a lot of monetary policy stimulus to lower the cost of short- and long-term borrowing.

- The exit strategy for the first action is easy to describe because it is already completed. As financial conditions improved, demand for credit from the Fed fell and usage of the Fed's lending facilities declined. Accordingly, the facilities were closed. The alphabet soup of Fed liquidity facilities did their job—helping to avoid an even worse financial collapse—and then closed up shop. No credit losses whatsoever were experienced. In contrast, a simple estimated monetary policy rule suggests that macroeconomic conditions still seem likely to warrant very accommodative monetary policy for a long time.

Recession and recovery in the stock market

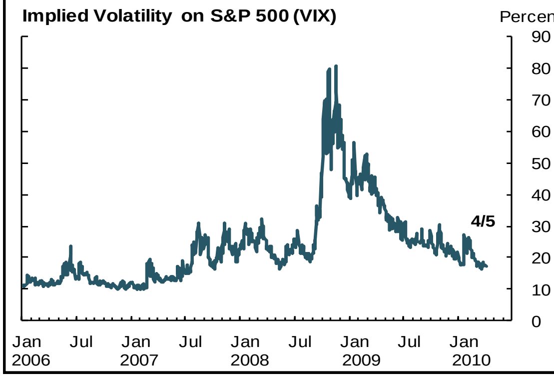
Stock Prices

January 3, 2006 = 100



Financial "Fear index" back to normal levels

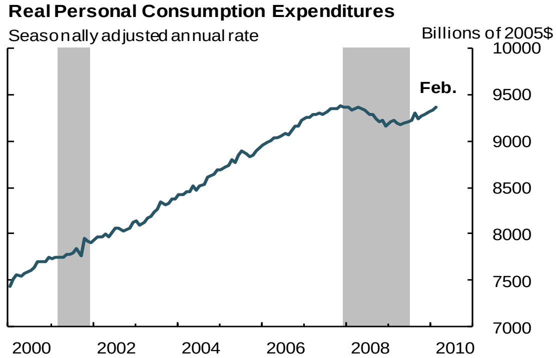
Implied Volatility on S&P 500 (VIX)



Consumer spending moving up

Real Personal Consumption Expenditures

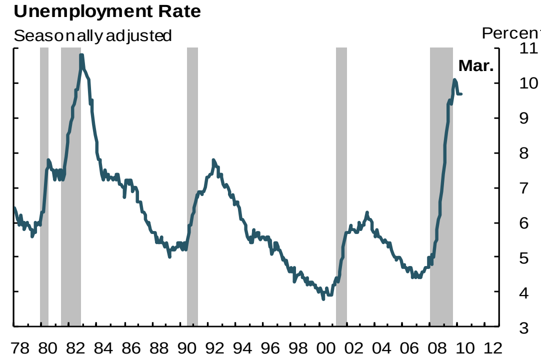
Seasonally adjusted annual rate



Enormous pool of unemployed workers

Unemployment Rate

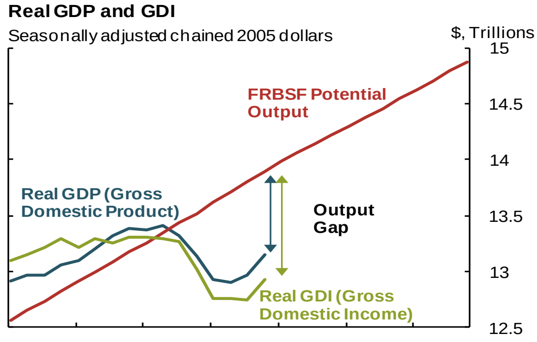
Seasonally adjusted



Large output gap (may be even larger)

Real GDP and GDI

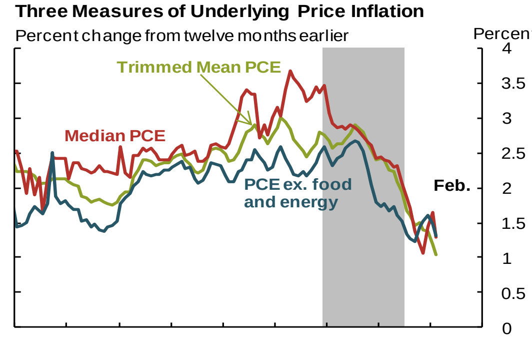
Seasonally adjusted chained 2005 dollars

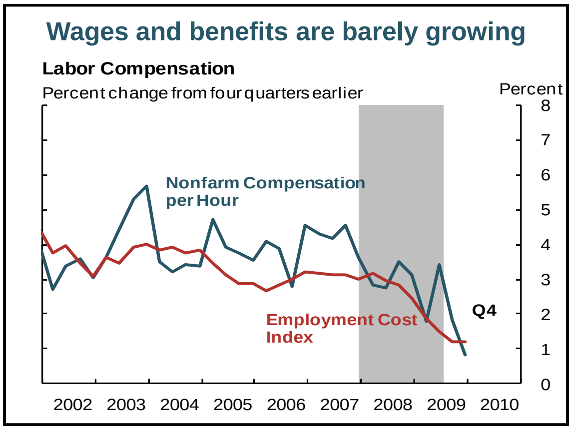


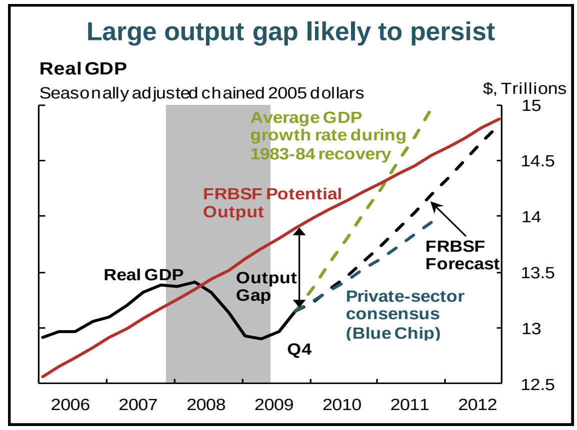
The recession has lowered inflation

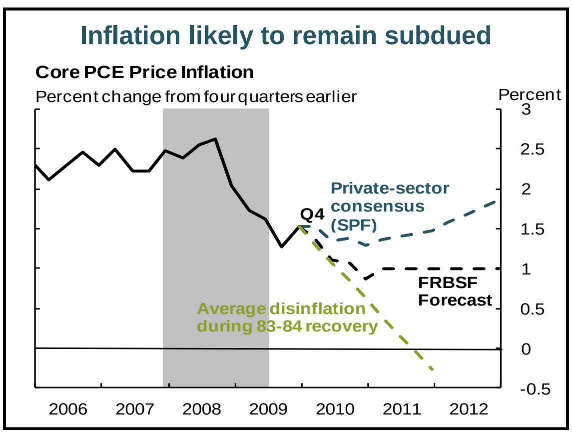
Three Measures of Underlying Price Inflation

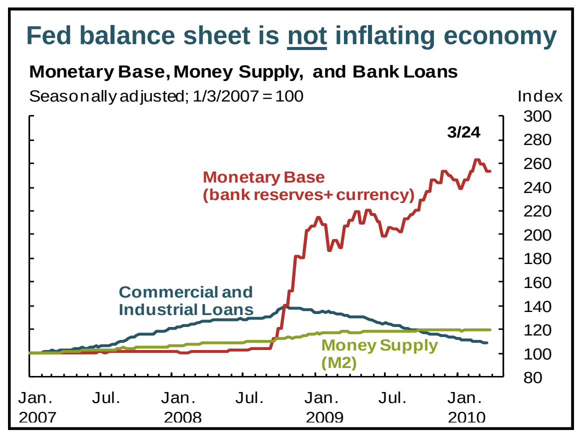
Percent change from twelve months earlier

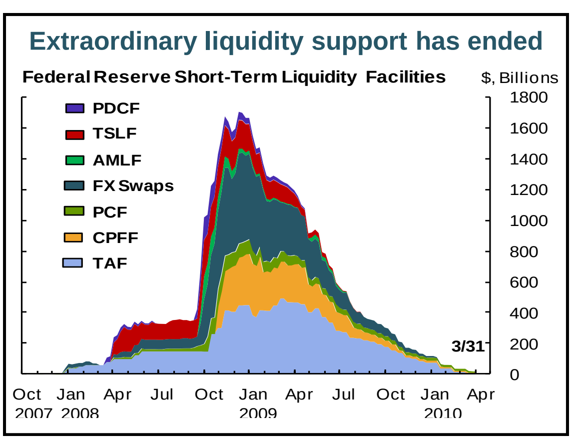


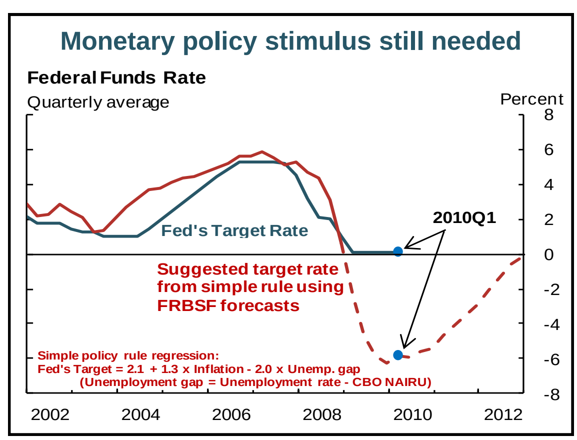

Wages and benefits are barely growing
Labor Compensation
Percent change from four quarters earlier
Percent
Nonfarm Compensation per Hour
Employment Cost Index
Q4
8
7
6
5
4
3
2
1
0
2002
2003
2004
2005
2006
2007
2008
2009
2010


Large output gap likely to persist
Real GDP
Seasonally adjusted chained 2005 dollars
$, Trillions
Average GDP growth rate during 1983-84 recovery
FRBSF Potential Output
FRBSF Forecast
Real GDP
Output Gap
Private-sector consensus (Blue Chip)
Q4
15
14.5
14
13.5
13
12.5
2006
2007
2008
2009
2010
2011
2012


Inflation likely to remain subdued
Core PCE Price Inflation
Percent change from four quarters earlier
Percent
Private-sector consensus (SPF)
Q4
FRBSF Forecast
Average disinflation during 83-84 recovery
3
2.5
2
1.5
1
0.5
0
-0.5
2006
2007
2008
2009
2010
2011
2012


Fed balance sheet is not inflating economy
Monetary Base, Money Supply, and Bank Loans
Seasonally adjusted; 1/3/2007 = 100
Index
3/24
Monetary Base (bank reserves+ currency)
Commercial and Industrial Loans
Money Supply (M2)
300
280
260
240
220
200
180
160
140
120
100
80
Jan. 2007
Jul.
Jan. 2008
Jul.
Jan. 2009
Jul.
Jan. 2010


Extraordinary liquidity support has ended
Federal Reserve Short-Term Liquidity Facilities
$, Billions
PDCF
TSLF
AMLF
FX Swaps
PCF
CPFF
TAF
3/31
1800
1600
1400
1200
1000
800
600
400
200
0
Oct 2007
Jan 2008
Apr
Jul
Oct
Jan 2009
Apr
Jul
Oct
Jan 2010
Apr


Monetary policy stimulus still needed
Federal Funds Rate
Quarterly average
Percent
Fed's Target Rate
2010Q1
Suggested target rate from simple rule using FRBSF forecasts
Simple policy rule regression:
Fed's Target = 2.1 + 1.3 x Inflation - 2.0 x Unemp. gap
(Unemployment gap = Unemployment rate - CBO NAIRU)
8
6
4
2
0
-2
-4
-6
-8
2002
2004
2006
2008
2010
2012