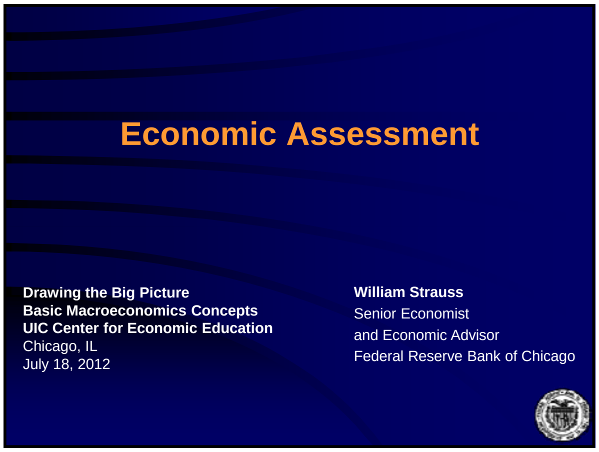
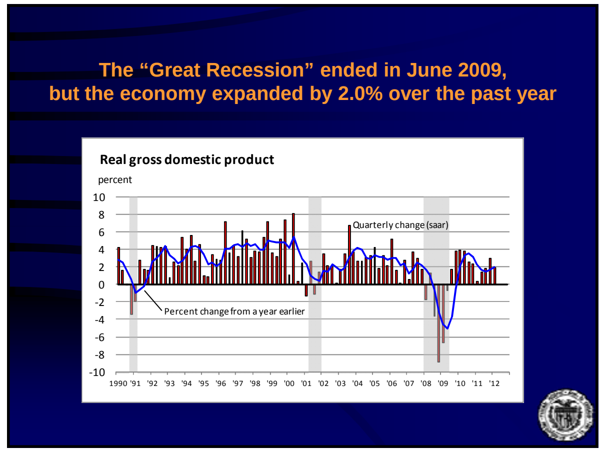
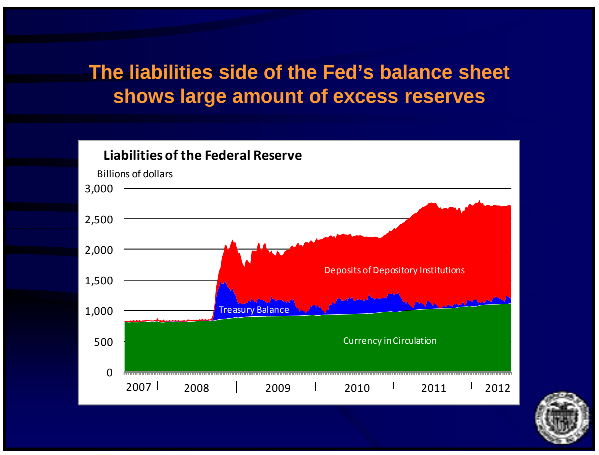
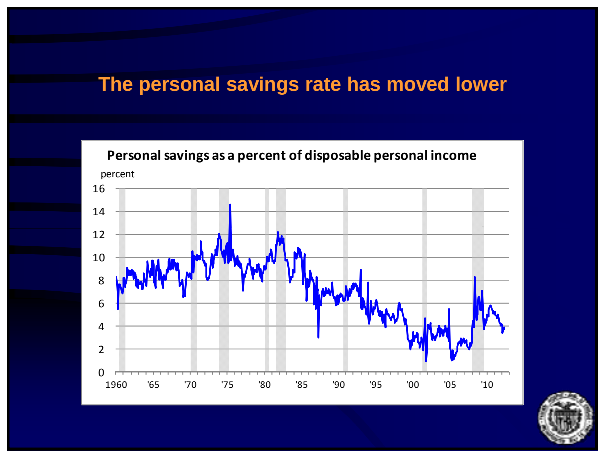
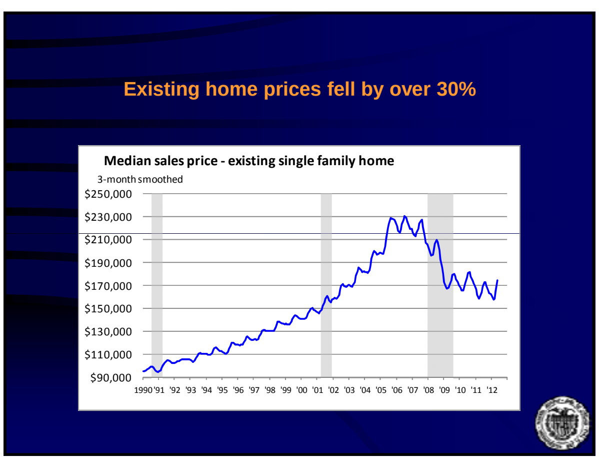
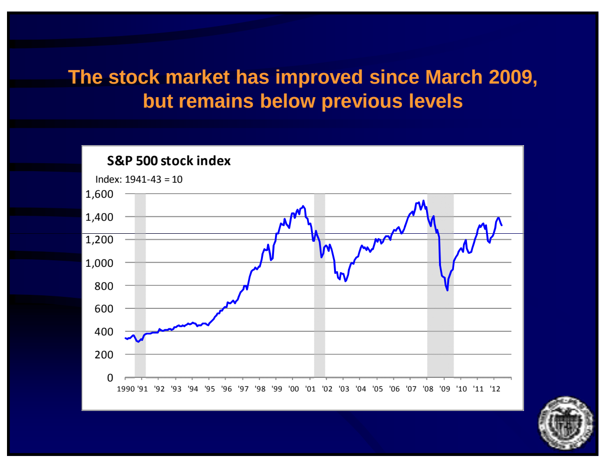

Economic Assessment
Drawing the Big Picture
Basic Macroeconomics Concepts
UIC Center for Economic Education
Chicago, IL
July 18, 2012
William Strauss
Senior Economist
and Economic Advisor
Federal Reserve Bank of Chicago

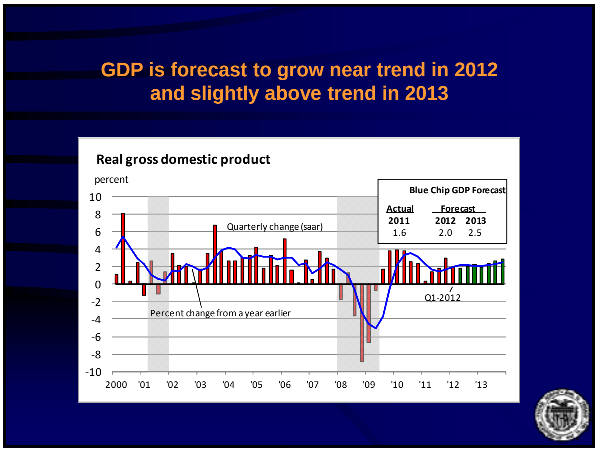

The "Great Recession" ended in June 2009,
but the economy expanded by 2.0% over the past year
Real gross domestic product
percent
Quarterly change (saar)
Percent change from a year earlier

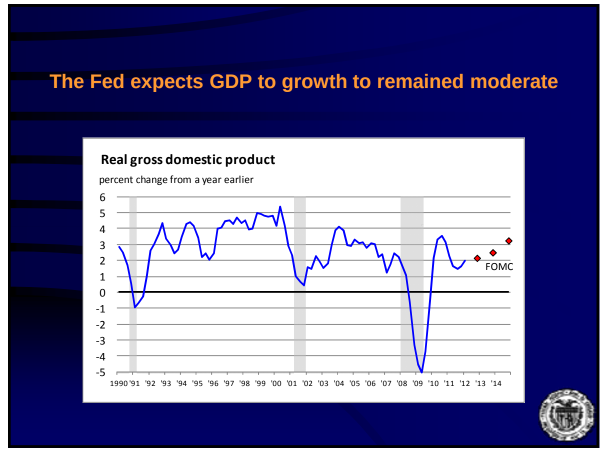

The liabilities side of the Fed's balance sheet
shows large amount of excess reserves
Liabilities of the Federal Reserve
Billions of dollars
Deposits of Depository Institutions
Treasury Balance
Currency in Circulation

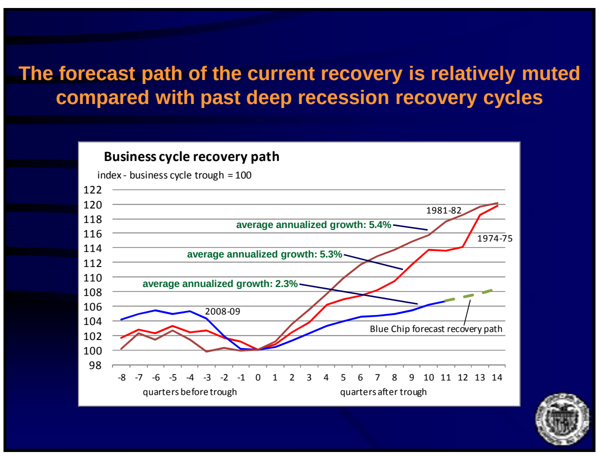

The personal savings rate has moved lower
Personal savings as a percent of disposable personal income
percent

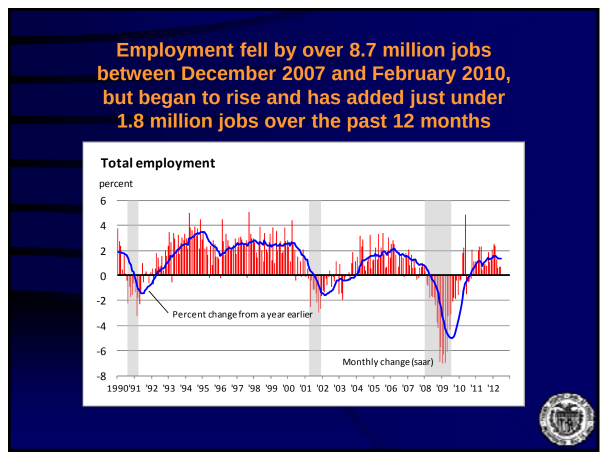

Existing home prices fell by over 30%
Median sales price - existing single family home
3-month smoothed

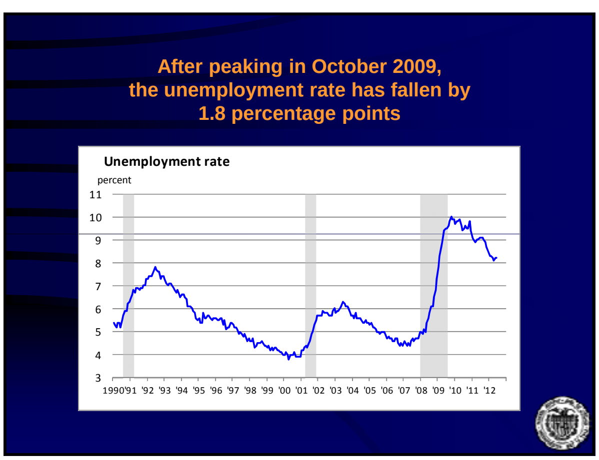

The stock market has improved since March 2009,
but remains below previous levels
S&P 500 stock index
Index: 1941-43 = 10

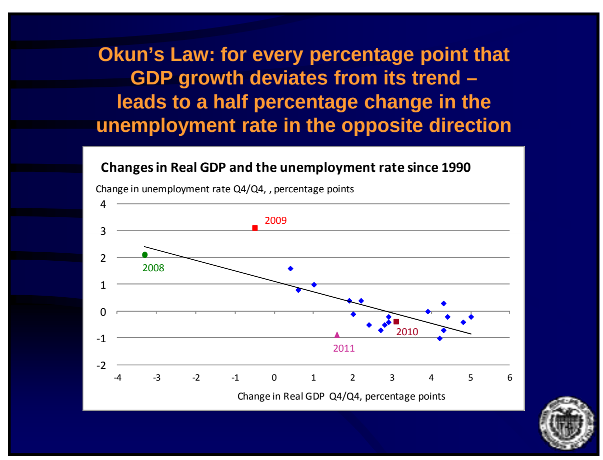

GDP is forecast to grow near trend in 2012 and slightly above trend in 2013
Real gross domestic product
percent
Blue Chip GDP Forecast
Actual 2011 1.6
Forecast 2012 2.0 2013 2.5
Quarterly change (saar)
Percent change from a year earlier
Q1-2012


The Fed expects GDP to growth to remained moderate
Real gross domestic product
percent change from a year earlier
FOMC

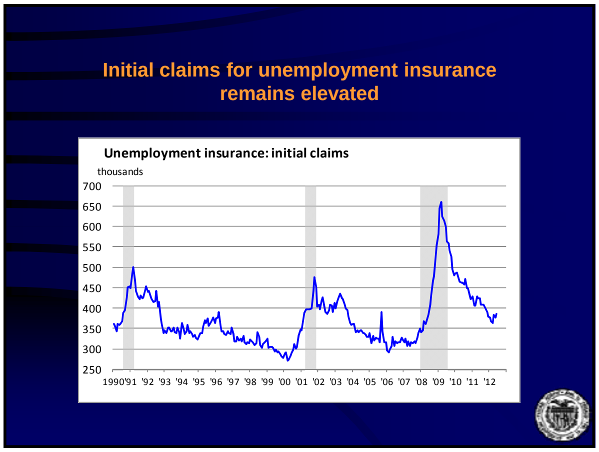

The forecast path of the current recovery is relatively muted compared with past deep recession recovery cycles
Business cycle recovery path
index - business cycle trough = 100
average annualized growth: 5.4%
average annualized growth: 5.3%
average annualized growth: 2.3%
1981-82
1974-75
2008-09
Blue Chip forecast recovery path
quarters before trough
quarters after trough

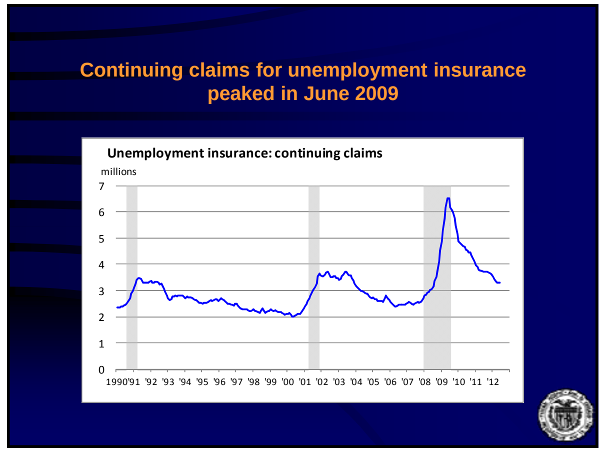

Employment fell by over 8.7 million jobs between December 2007 and February 2010, but began to rise and has added just under 1.8 million jobs over the past 12 months
Total employment
percent
Percent change from a year earlier
Monthly change (saar)

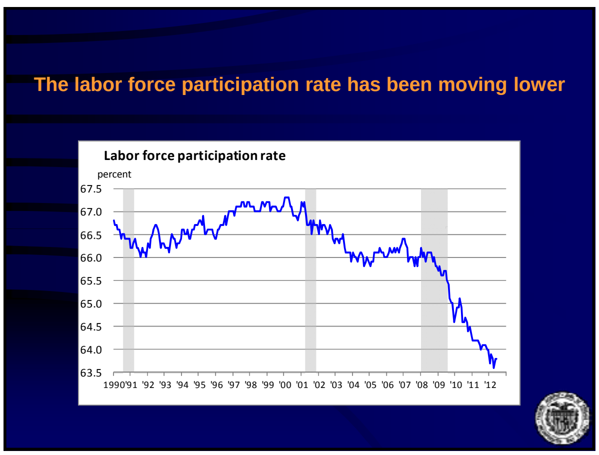

After peaking in October 2009, the unemployment rate has fallen by 1.8 percentage points
Unemployment rate
percent

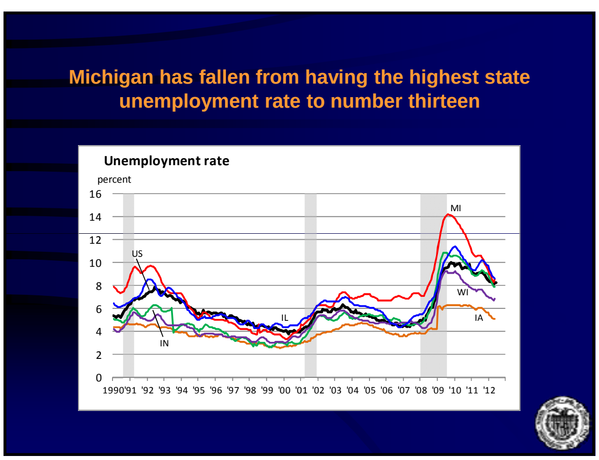

Okun's Law: for every percentage point that GDP growth deviates from its trend – leads to a half percentage change in the unemployment rate in the opposite direction
Changes in Real GDP and the unemployment rate since 1990
Change in unemployment rate Q4/Q4, , percentage points
2009
2008
2010
2011
Change in Real GDP Q4/Q4, percentage points

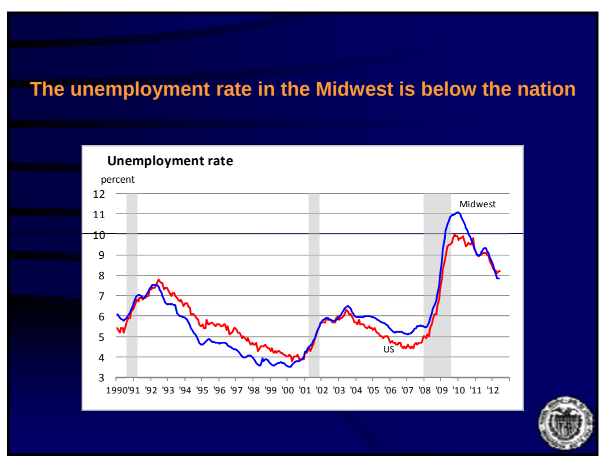
William Strauss, Senior Economist and Economic Advisor
Federal Reserve Bank of Chicago

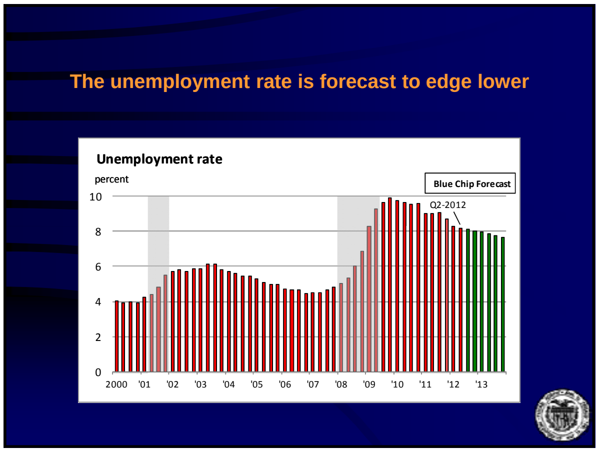


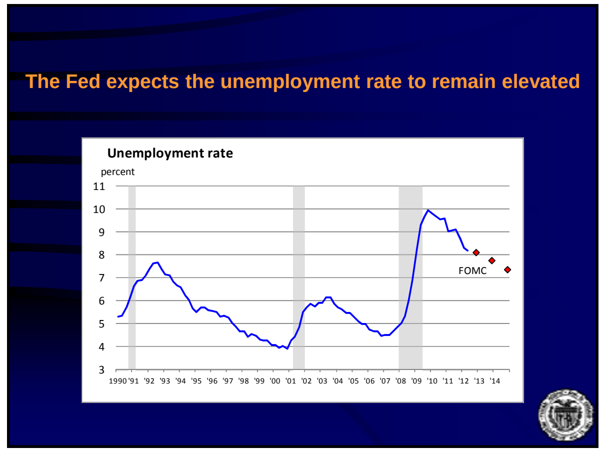


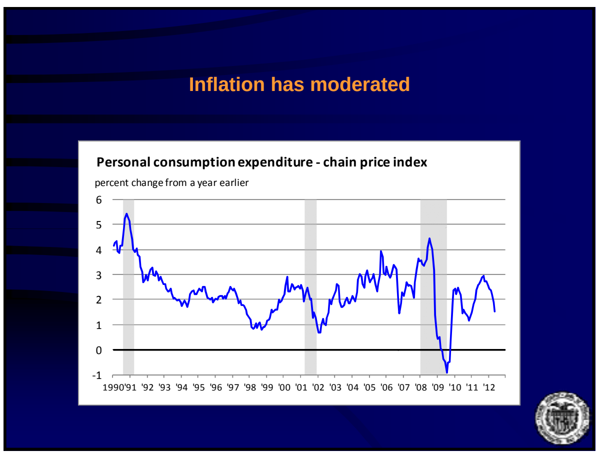


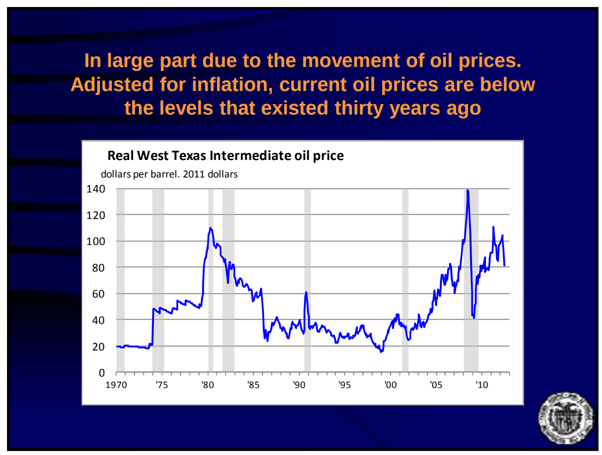


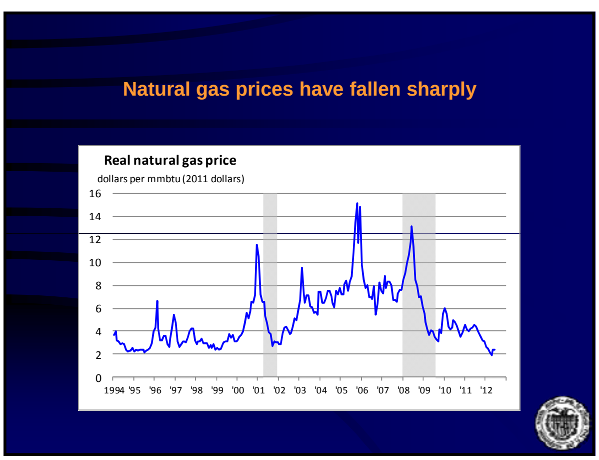


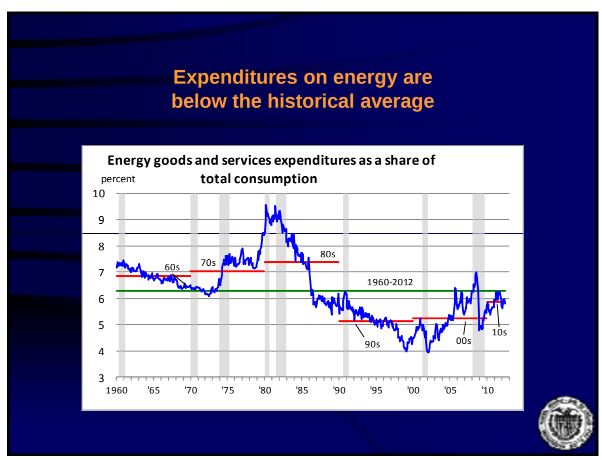

The unemployment rate is forecast to edge lower
Unemployment rate
percent
Blue Chip Forecast
Q2-2012
2000 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12 '13

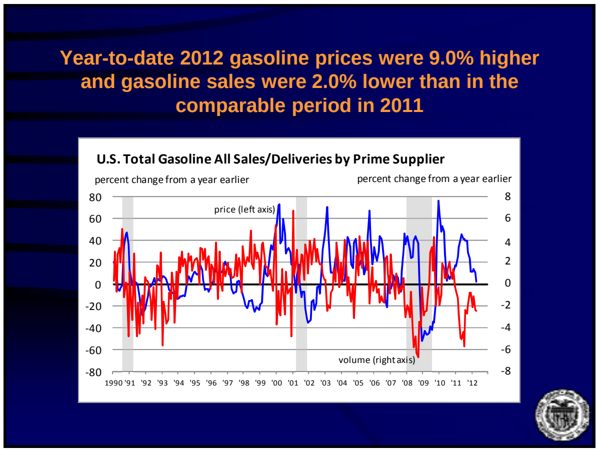

The Fed expects the unemployment rate to remain elevated
Unemployment rate
percent
FOMC

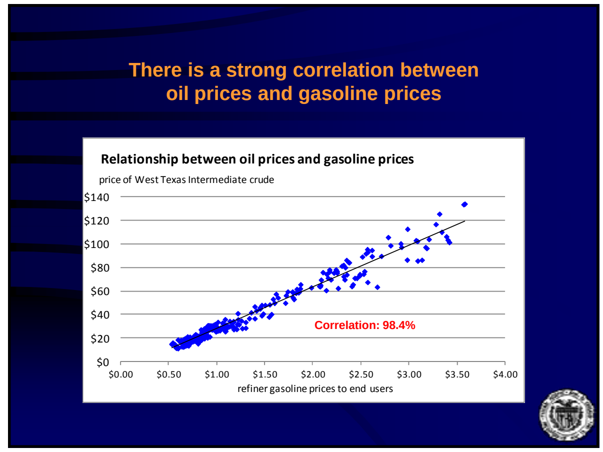

Inflation has moderated
Personal consumption expenditure - chain price index
percent change from a year earlier

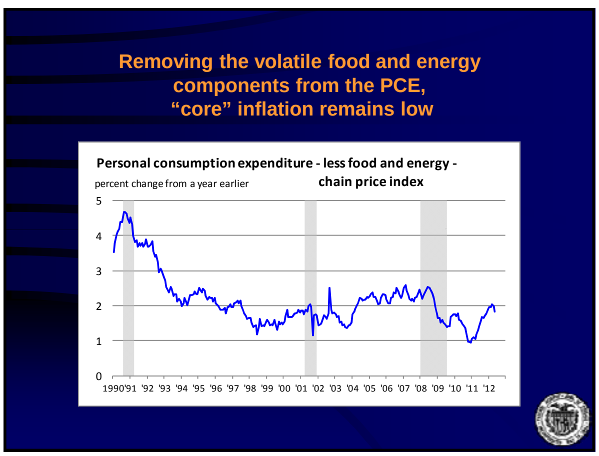

In large part due to the movement of oil prices.
Adjusted for inflation, current oil prices are below
the levels that existed thirty years ago
Real West Texas Intermediate oil price
dollars per barrel. 2011 dollars
1970 '75 '80 '85 '90 '95 '00 '05 '10

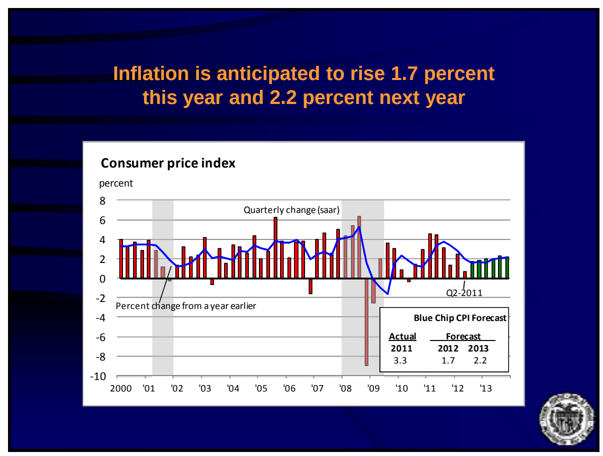

Natural gas prices have fallen sharply
Real natural gas price
dollars per mmbtu (2011 dollars)

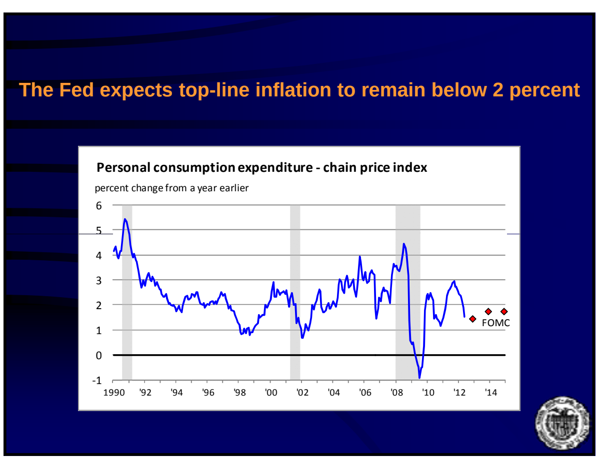

Expenditures on energy are
below the historical average
Energy goods and services expenditures as a share of
total consumption
percent
60s
70s
80s
1960-2012
90s
00s
10s
1960 '65 '70 '75 '80 '85 '90 '95 '00 '05 '10

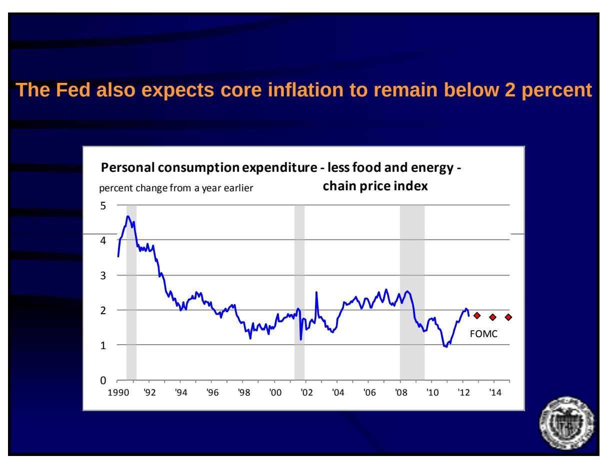

Year-to-date 2012 gasoline prices were 9.0% higher and gasoline sales were 2.0% lower than in the comparable period in 2011
U.S. Total Gasoline All Sales/Deliveries by Prime Supplier
percent change from a year earlier
percent change from a year earlier
price (left axis)
volume (right axis)


There is a strong correlation between oil prices and gasoline prices
Relationship between oil prices and gasoline prices
price of West Texas Intermediate crude
Correlation: 98.4%
refiner gasoline prices to end users

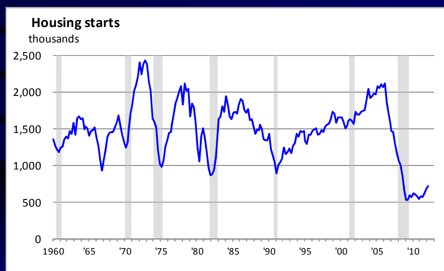

Removing the volatile food and energy components from the PCE, "core" inflation remains low
Personal consumption expenditure - less food and energy - chain price index
percent change from a year earlier


Inflation is anticipated to rise 1.7 percent this year and 2.2 percent next year
Consumer price index
percent
Quarterly change (saar)
Percent change from a year earlier
Q2-2011
Blue Chip CPI Forecast
Actual 2011 3.3
Forecast 2012 1.7 2013 2.2

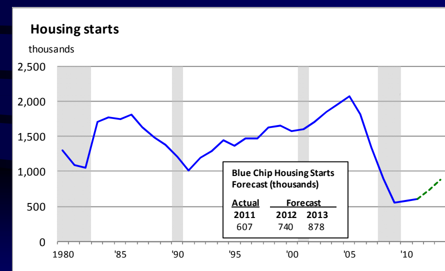

The Fed expects top-line inflation to remain below 2 percent
Personal consumption expenditure - chain price index
percent change from a year earlier
FOMC


The Fed also expects core inflation to remain below 2 percent
Personal consumption expenditure - less food and energy - chain price index
percent change from a year earlier
FOMC

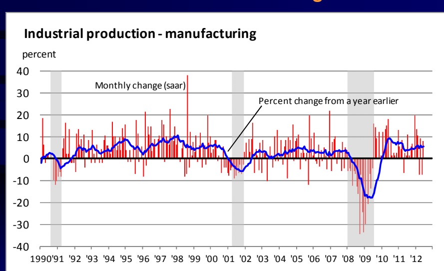
Housing starts are improving



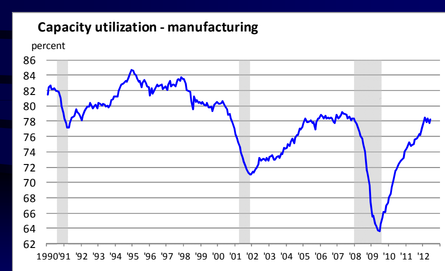
The forecast calls for a very gradual recovery in housing



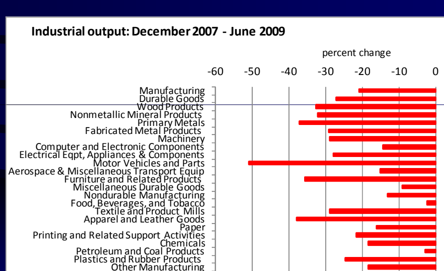
Industrial output in manufacturing fell quite sharply during the recession, but has risen strongly over the past thirty-six months, averaging 6.2% and has recovered 75.2% of the loss during the recession



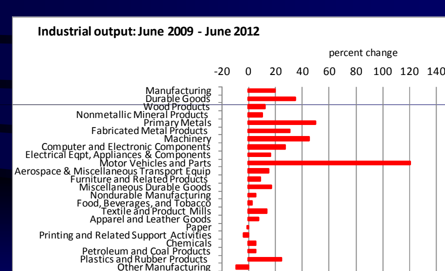
Manufacturing capacity utilization has improved after bottoming in June 2009

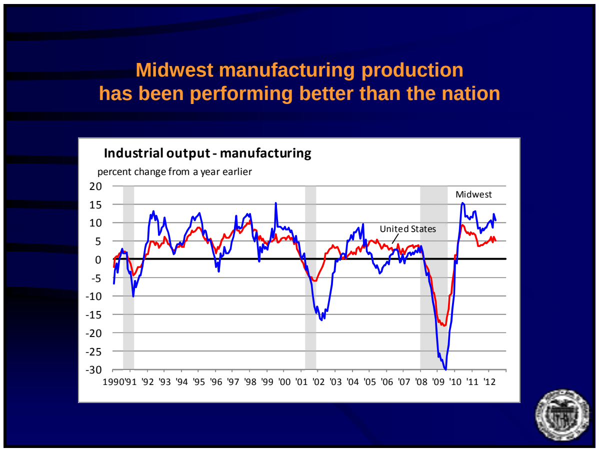


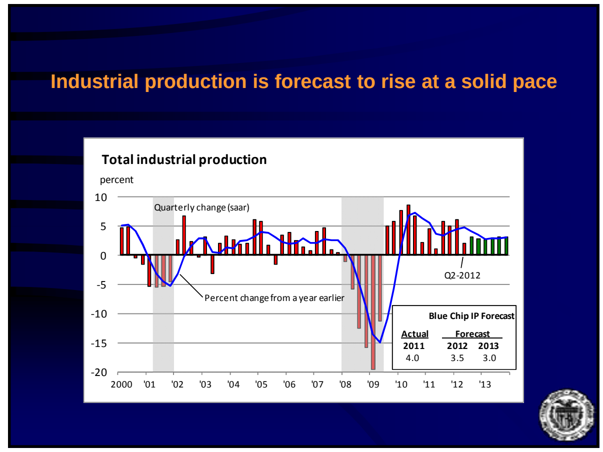
Declines in manufacturing output were broad-based during the Great Recession – especially in vehicle and primary metals manufacturing

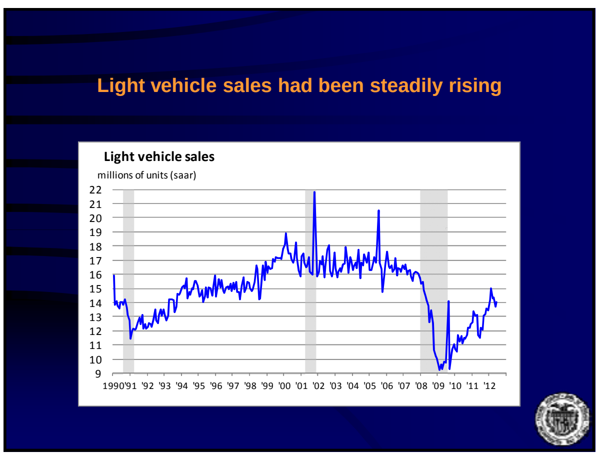


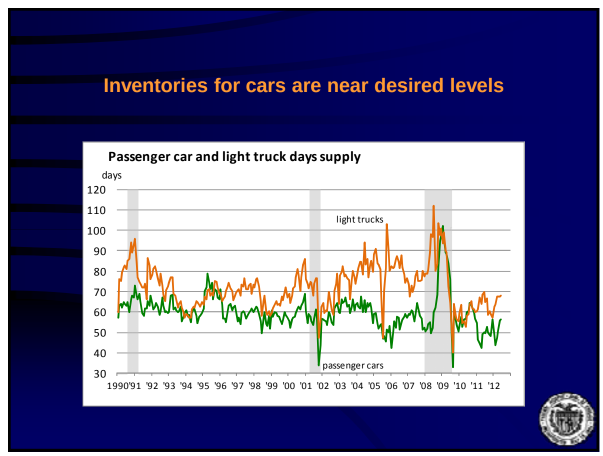
The recovery has also been broad-based with vehicle and primary metals manufacturing leading the way

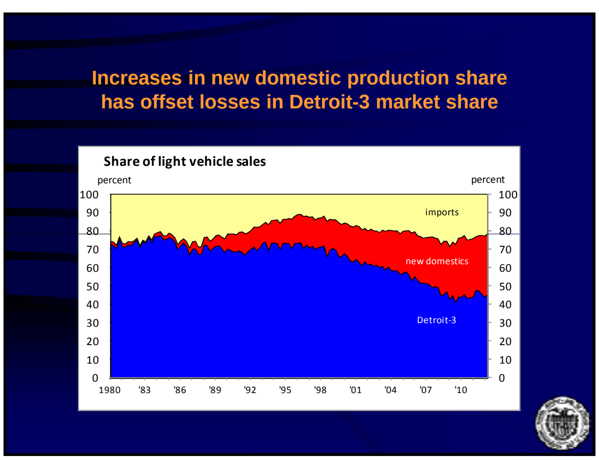



Midwest manufacturing production
has been performing better than the nation
Industrial output - manufacturing
percent change from a year earlier
Midwest
United States


Industrial production is forecast to rise at a solid pace
Total industrial production
percent
Quarterly change (saar)
Percent change from a year earlier
Q2-2012
Blue Chip IP Forecast
Actual 2011 4.0
Forecast 2012 3.5 2013 3.0

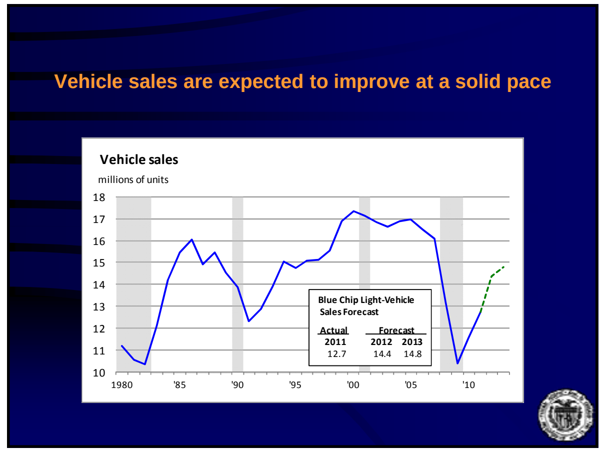

Light vehicle sales had been steadily rising
Light vehicle sales
millions of units (saar)


Inventories for cars are near desired levels
Passenger car and light truck days supply
days
light trucks
passenger cars

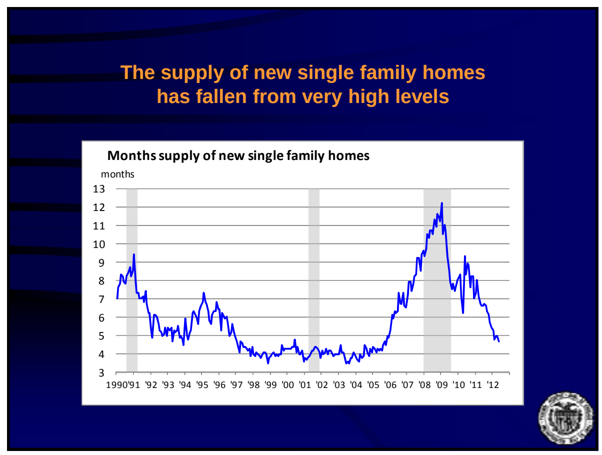

Increases in new domestic production share
has offset losses in Detroit-3 market share
Share of light vehicle sales
percent
percent
imports
new domestics
Detroit-3

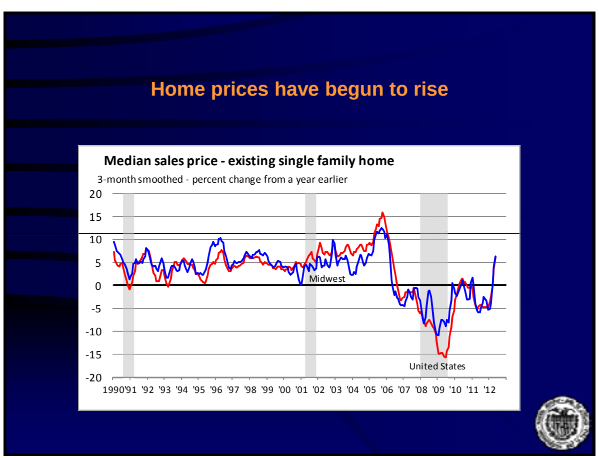

Volkswagen who closed its US plant in New Stanton, PA
in 1988 has built a $1 billion plant in Chattanooga, TN
where they build the new Passat
CHATTANOOGA

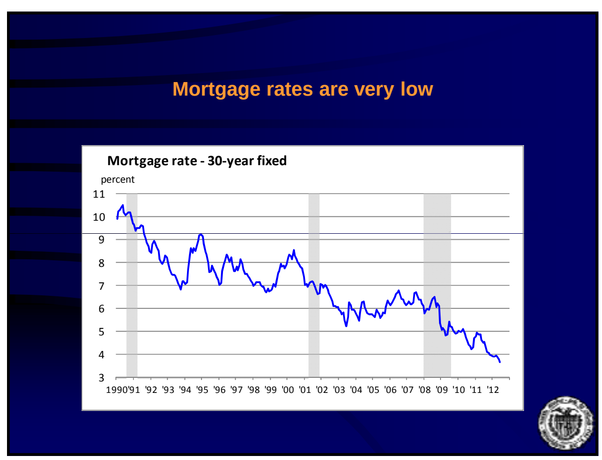

Chrysler is investing $1.6 billion on
three already existing facilities:
Sterling Heights Assembly Plant, GEMA Plant
and the Belvidere Assembly Plant
CHRYSLER

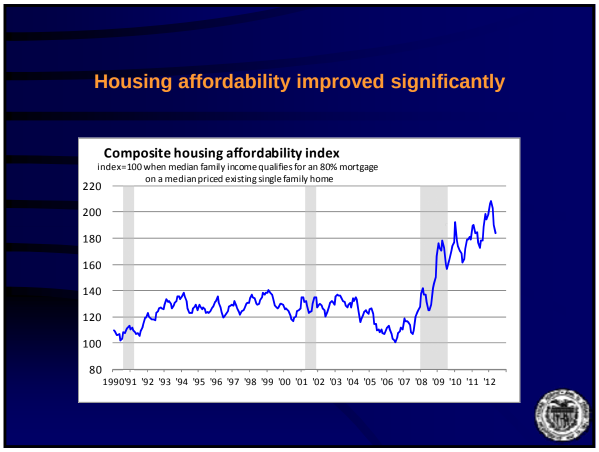

Vehicle sales are expected to improve at a solid pace
Vehicle sales
millions of units
Blue Chip Light-Vehicle
Sales Forecast
Actual 2011 12.7
Forecast 2012 14.4 2013 14.8

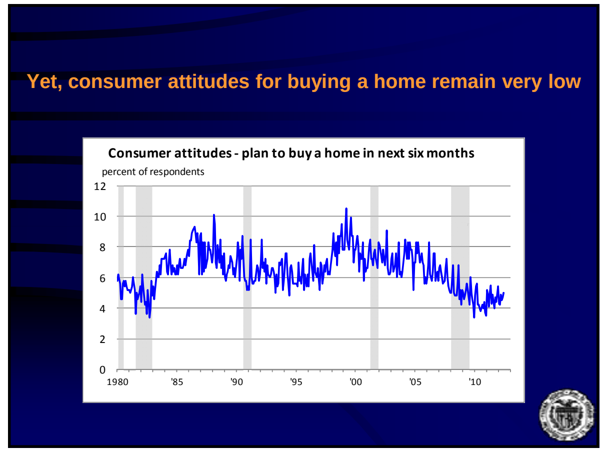

Housing starts fell to a post WWII low
Housing starts
thousands


The supply of new single family homes
has fallen from very high levels
Months supply of new single family homes
months

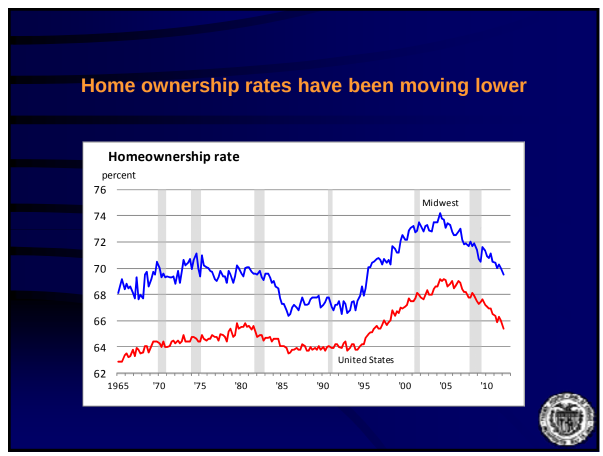

Home prices have begun to rise
Median sales price - existing single family home
3-month smoothed - percent change from a year earlier
Midwest
United States

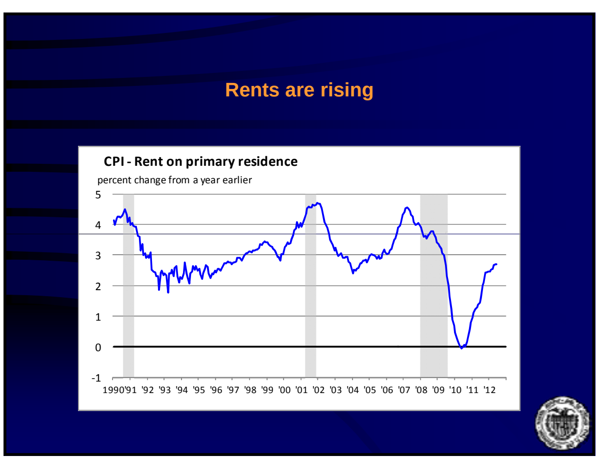

Mortgage rates are very low
Mortgage rate - 30-year fixed
percent

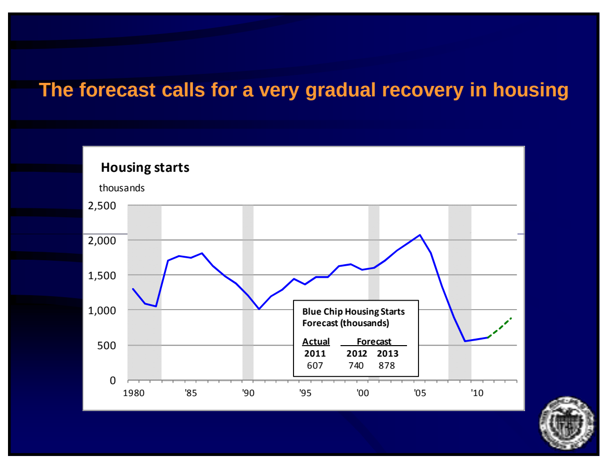

Housing affordability improved significantly
Composite housing affordability index
index=100 when median family income qualifies for an 80% mortgage
on a median priced existing single family home
220
200
180
160
140
120
100
80
1990 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12


Yet, consumer attitudes for buying a home remain very low
Consumer attitudes - plan to buy a home in next six months
percent of respondents
12
10
8
6
4
2
0
1980 '85 '90 '95 '00 '05 '10

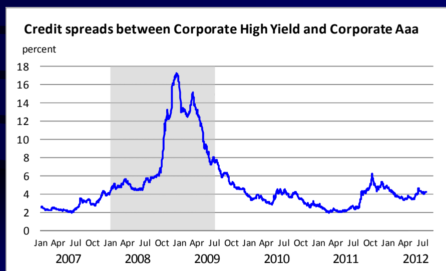

Home sales remain low
New and existing single family home sales
thousands
8,000
7,500
7,000
6,500
6,000
5,500
5,000
4,500
4,000
3,500
3,000
1990 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12


Home ownership rates have been moving lower
Homeownership rate
percent
76
74
72
70
68
66
64
62
Midwest
United States
1965 '70 '75 '80 '85 '90 '95 '00 '05 '10

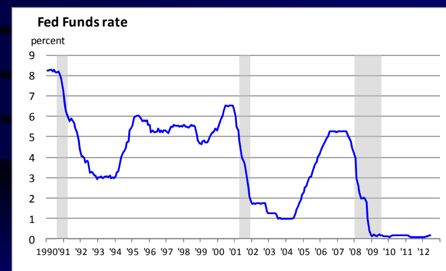

Rents are rising
CPI - Rent on primary residence
percent change from a year earlier
5
4
3
2
1
0
-1
1990 '91 '92 '93 '94 '95 '96 '97 '98 '99 '00 '01 '02 '03 '04 '05 '06 '07 '08 '09 '10 '11 '12


The forecast calls for a very gradual recovery in housing
Housing starts
thousands
2,500
2,000
1,500
1,000
500
0
Blue Chip Housing Starts
Forecast (thousands)
Actual
Forecast
2011 2012 2013
607 740 878
1980 '85 '90 '95 '00 '05 '10

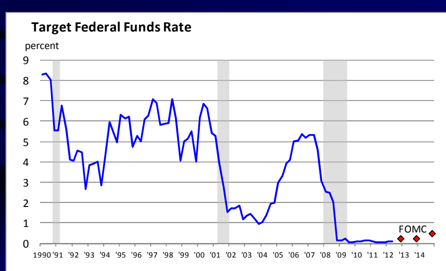
Credit spreads between Corporate High Yield securities and Corporate Aaa securities have been edging lower



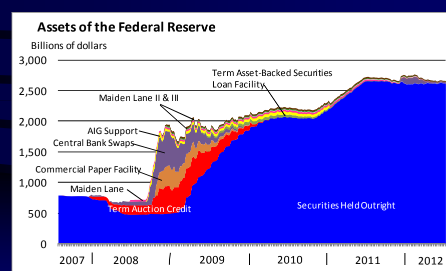
Monetary policy has been very aggressive, keeping the Fed Funds near zero since December 2008



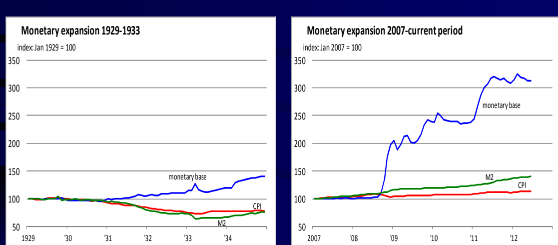
The Federal Funds Rate is anticipated to remain very low over the forecast horizon



The asset side of the Fed's balance sheet has expanded in size and in composition



The Fed's expansion of the monetary base has allowed the money supply to continue rising, compared with what took place during the 1930s



Summary

- The outlook is for the U.S. economy to expand at a pace below trend this year and slightly above trend in 2013
- Employment is expected to rise moderately with the unemployment rate edging lower
- Slackness in the economy will lead to a relatively contained inflation rate
- Growth in manufacturing output should be solid

William Strauss, Senior Economist and Economic Advisor
Federal Reserve Bank of Chicago