THE ECONOMIC OUTLOOK: HALF-SPEED AHEAD

David Wyss Brown University April 27, 2012

The Pace Of The Recovery Has Improved

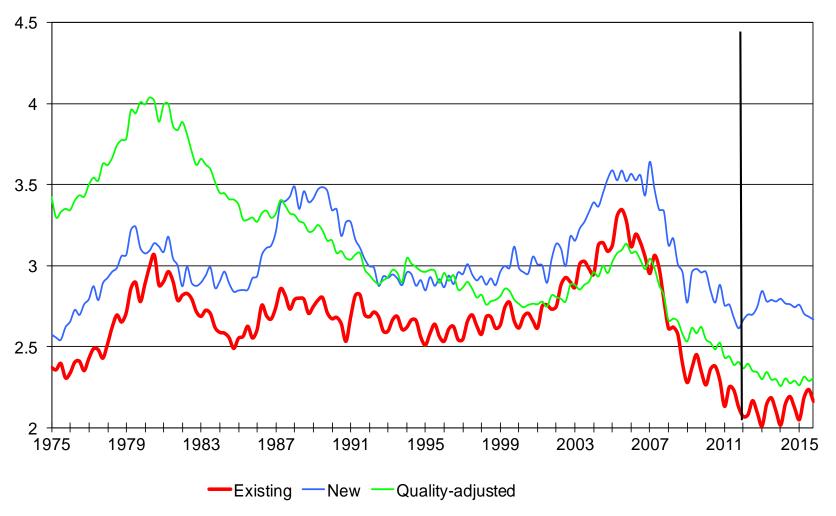
- A recovery has begun, but is likely to remain weak.
- Housing now appears to be stabilizing, although prices are still falling.
 Sales are up, but still very weak by normal standards.
- Overseas partners are recovering, helping exports, but developed economies remain slow. The financial problems in Europe add to risks from overseas.
- Signs of a slowdown in China add to fears of weaker exports.
- The fiscal stimulus helped boost the economy, but is being withdrawn.
 The 2013 budget is very uncertain, as is any extension of the Bush tax cuts.
- Private nonresidential construction is still weak
- Consumers aren't bouncing back as quickly as usual, because of stillhigh debt levels.
- Another recession is possible if the European debt crisis spreads to the U.S., there's sharp near-term austerity at home, if financial markets lock up again, or oil prices spike on Middle East turmoil.
- The risk of another recession is now 20%, down from 25% in February

The Housing Bubble

- Housing was too affordable, thanks to low mortgage rates
- Ratio of home price to income hit a record high in 2007.
- We built too many houses at too high prices
- Starts and sales dropped sharply
- Defaults have soared, cutting back on willingness to lend
- Prices are down 34.5% from their peak, a new record low. The price/income ratio remains below its historical average
- Starts and sales are recovering
- But prices are likely to drop back through spring.

Home Prices Were Too High

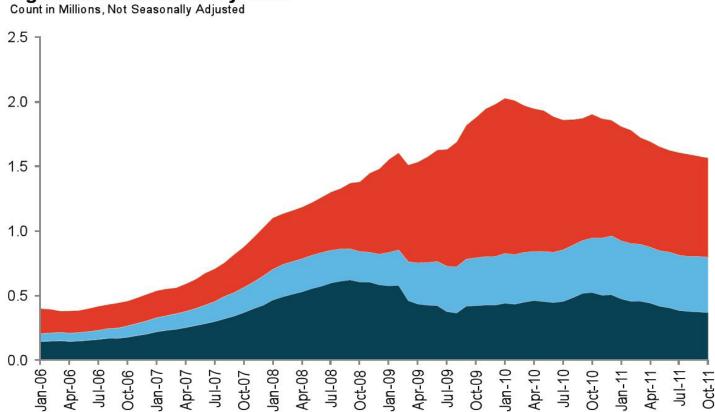
(Ratio of average home price to average household disposable income)



Source: Bureau of Economic Analysis and Census Bureau

And Shadow Inventory Is High

Figure 1:Shadow Inventory Detail



■ Pending Serious Delinquency Inventory

■ Pending FC Inventory

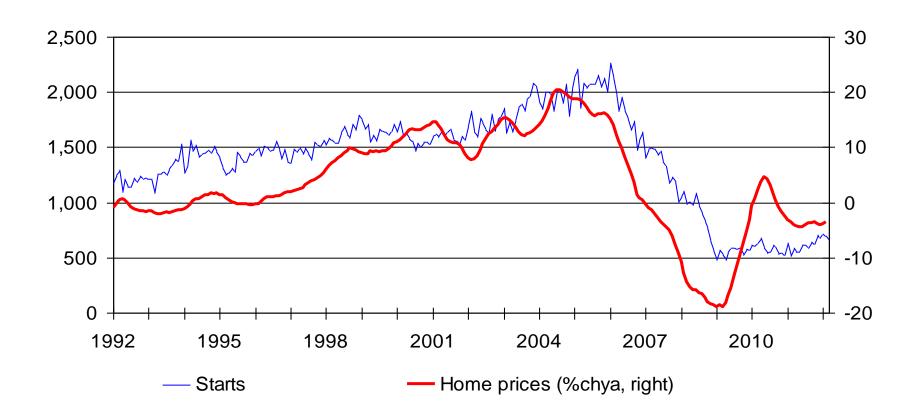
Source: CoreLogic October 2011

■ Pending REO Inventory

RealtyTrac

The Housing Market Cycle

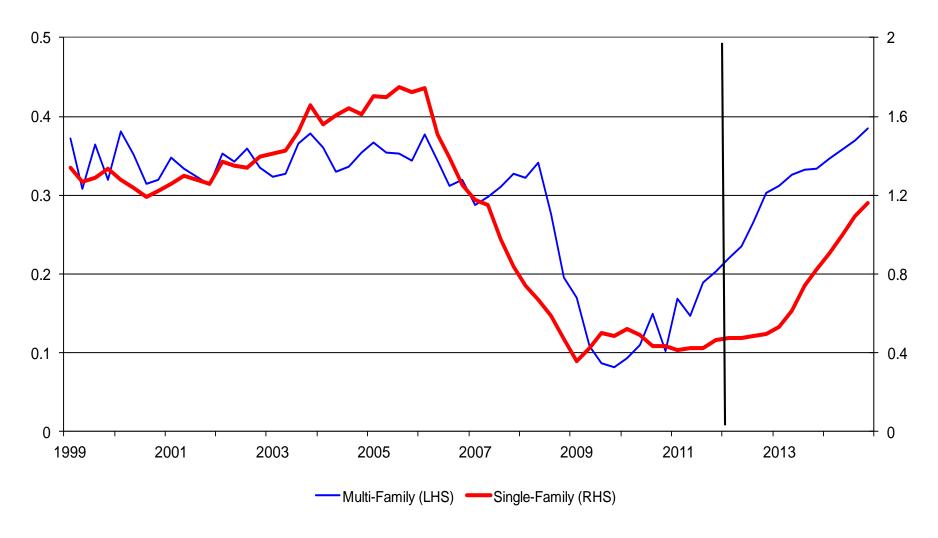
(Housing starts (1000) and 12-month % change in home prices (S&P/Case-Shiller, Fed 2012)



Source: Standard & Poor's and Census Bureau

Multi-Family Starts Outpace Single-Family Starts

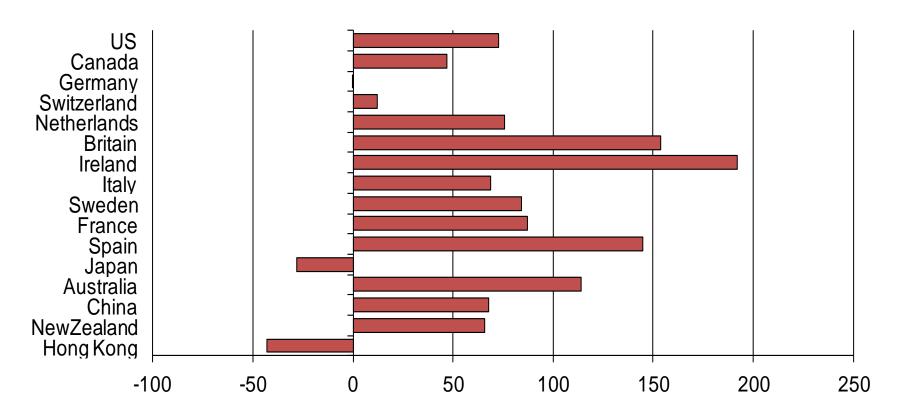
(Housing starts (millions))



Source: Standard & Poor's and Census Bureau

Bubbles Were Almost Everywhere

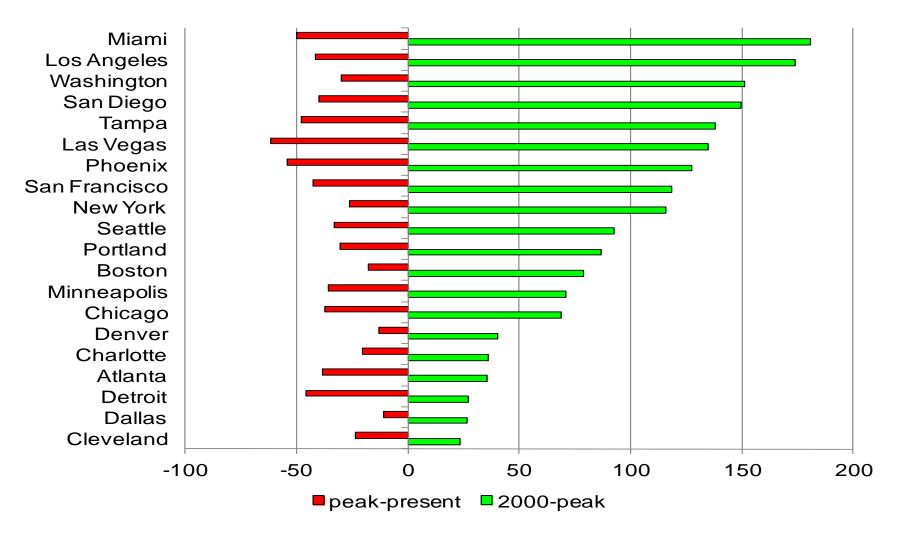
(Percent increase in home prices, 1997-2005)



Source: Mortgage Bankers' Association and Standard & Poor's

Those Who Bubbled Highest Burst Loudest

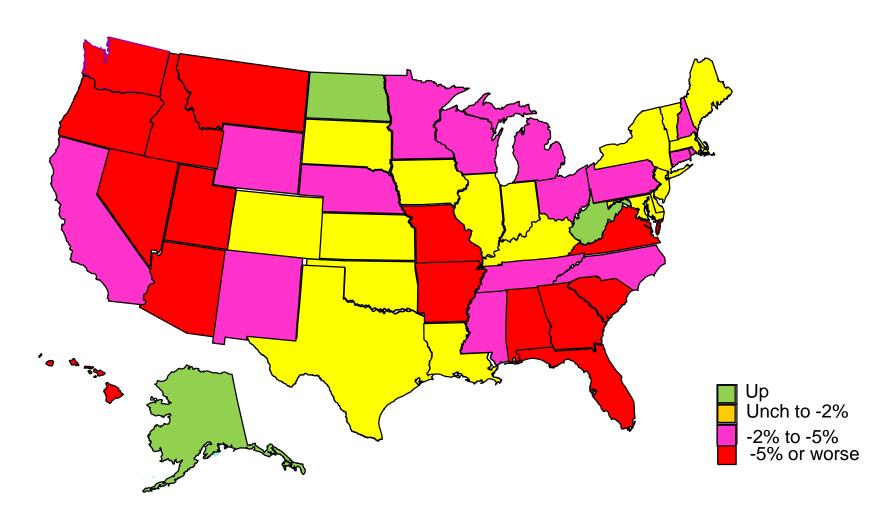
(Percent increase in S&P/Case-Shiller home price index, Feb. 2012)



Source: Standard & Poor's

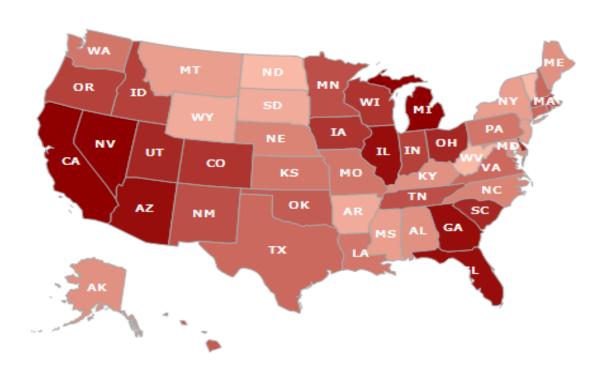
Home Price Declines

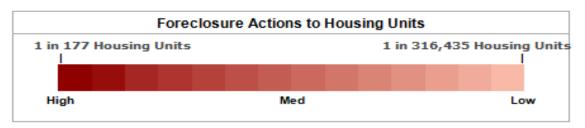
(4-quarter change in home prices, fourth quarter 2010)



Source: Federal Housing Finance Agency

December 2011 Foreclosure Rate Heat Map

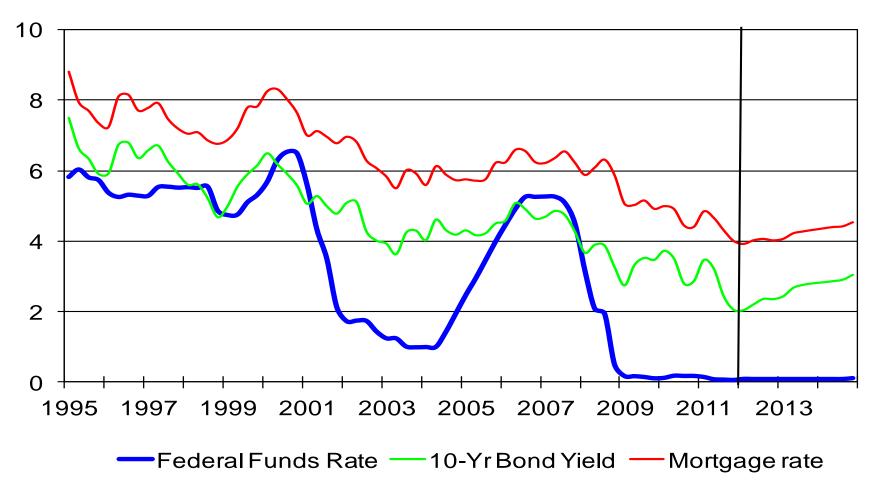




RealtyTrac

The Fed Didn't Stop At Nothing

(Percent)



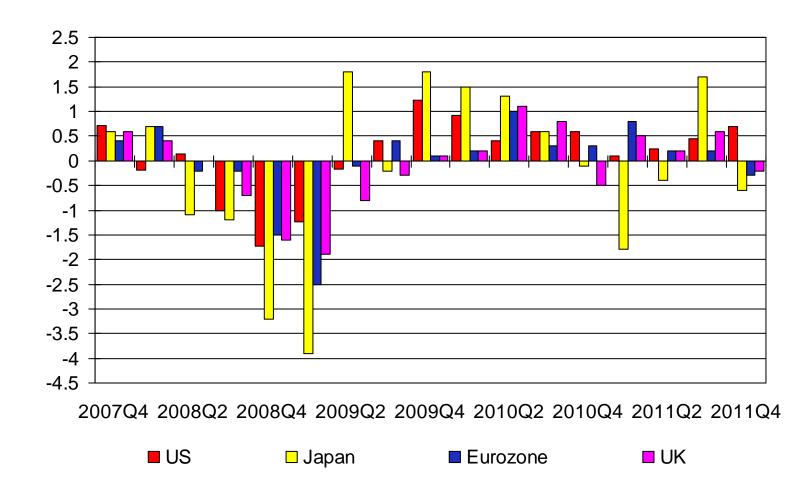
Source: Federal Reserve

Synchronized Sinking

- Industrial countries went into recession in 2008, and into a plunge in the fourth quarter of 2008
- Real GDP fell in the U.S., Japan, and Europe
- Developing countries looked like they might escape
- Until commodity prices plunged in Q4 2008
- World GDP slowed, likely up 3.25% in 2012 from 3.8% in 2011.
- The most synchronized world recession in history is being followed by a slow, less synchronized recovery
- Problems in Europe and Japan will further cut developed country growth, with Japan likely to fall back into recession.
- But Asia continues to grow strongly

All Fall Down

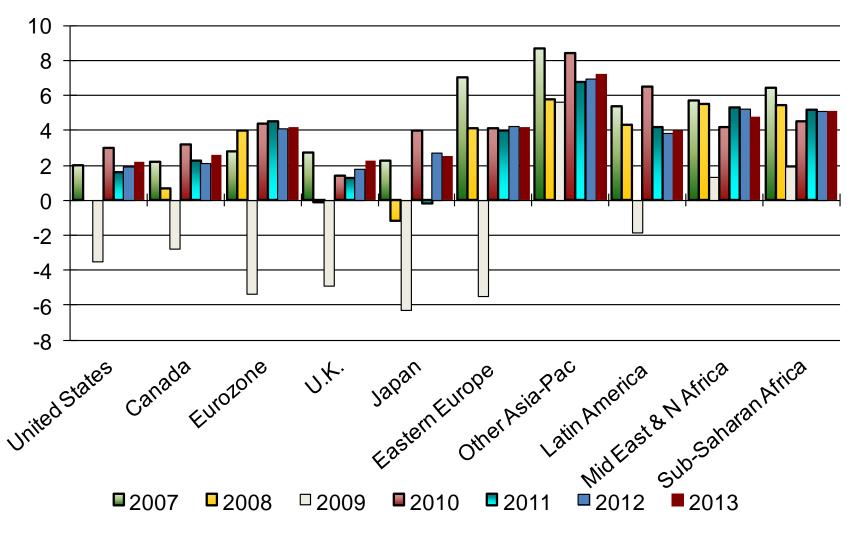
(Percent change in real GDP, quarterly rate)



Source: Global Insight

Synchronized Sinking

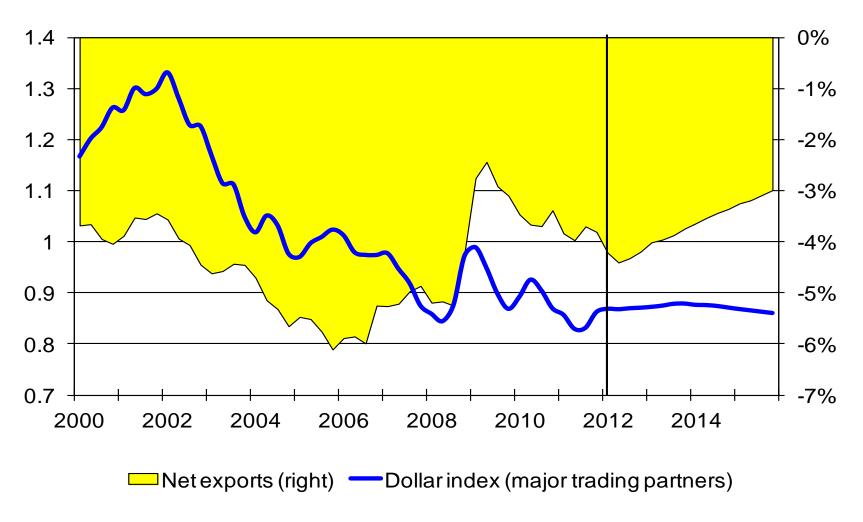
(Real GDP, % change)



Source: Global Insight and Standard & Poor's

Trade Gap And Reserve Diversification Will Send Dollar Lower

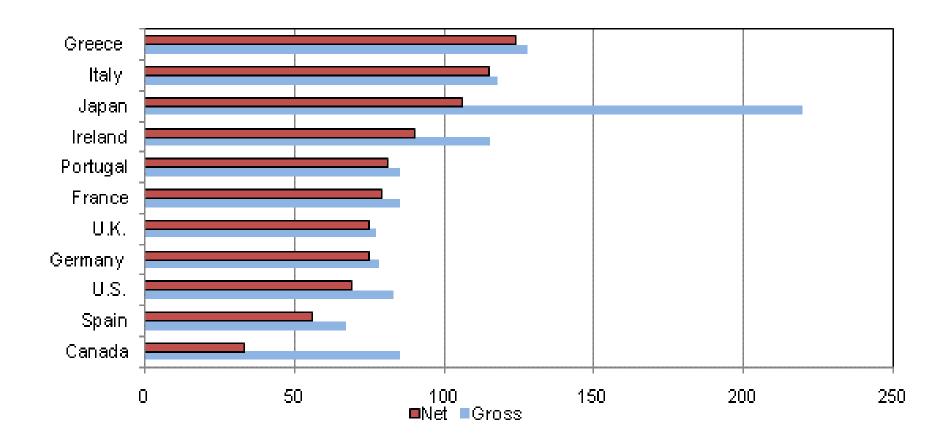




Source: Bureau of Economic Analysis and Federal Reserve, S&P Economics projections

Timeo Danaos Et Debitum Ferentes

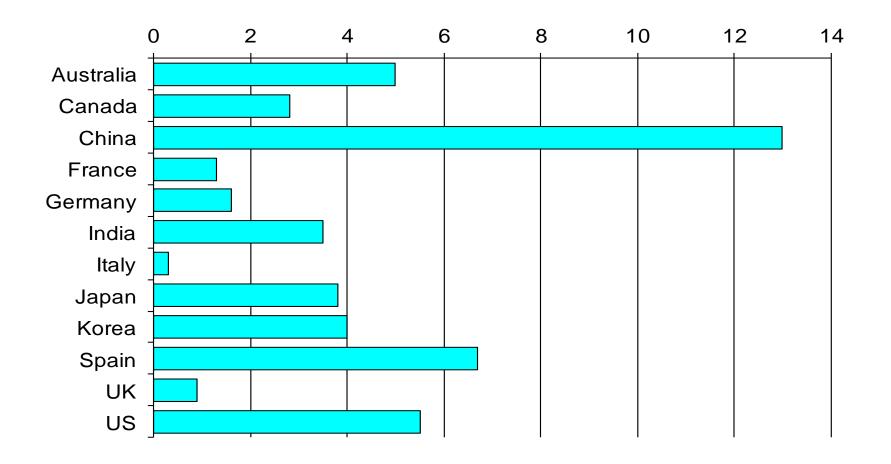
(Central government debt as percent of GDP, 2010)



Source: Standard & Poor's Economics from national sources

Fiscal Stimulus Packages Varied Widely

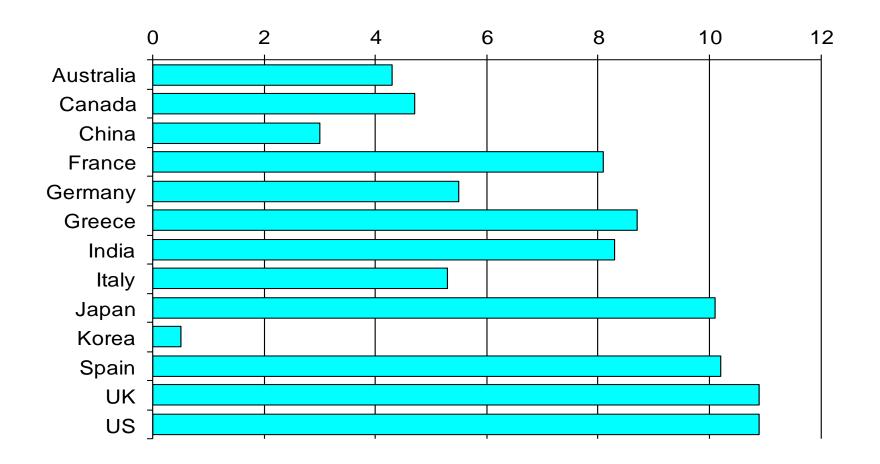
(Packages passed in Q4 2008- Q1 2009, percent of GDP)



Source: Standard & Poor's CRISIL

Budget Deficits Depend On Economy

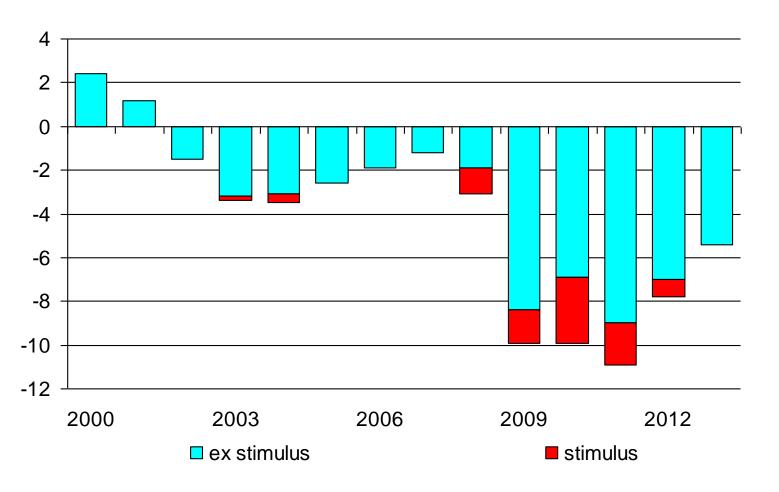
(Budget gap as percent of GDP, 2010)



Source: Standard & Poor's CRISIL

Deficits Are Mostly Cyclical

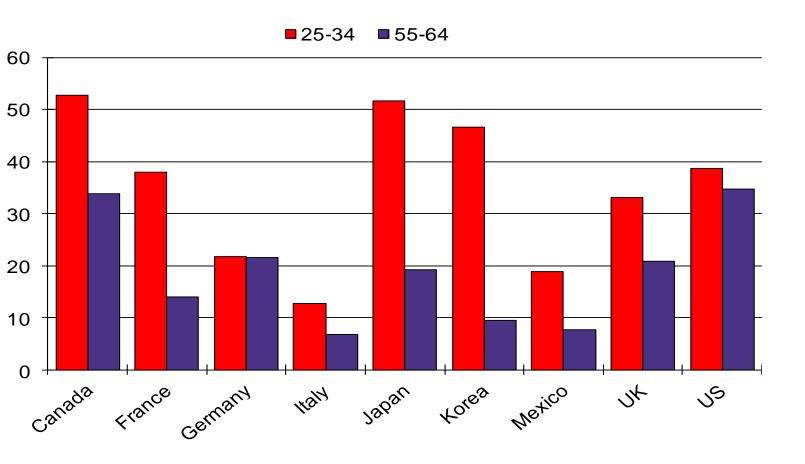
(Government deficit as % of GDP, fiscal years)



Source: Standard & Poor's

Other Countries Are Catching Up

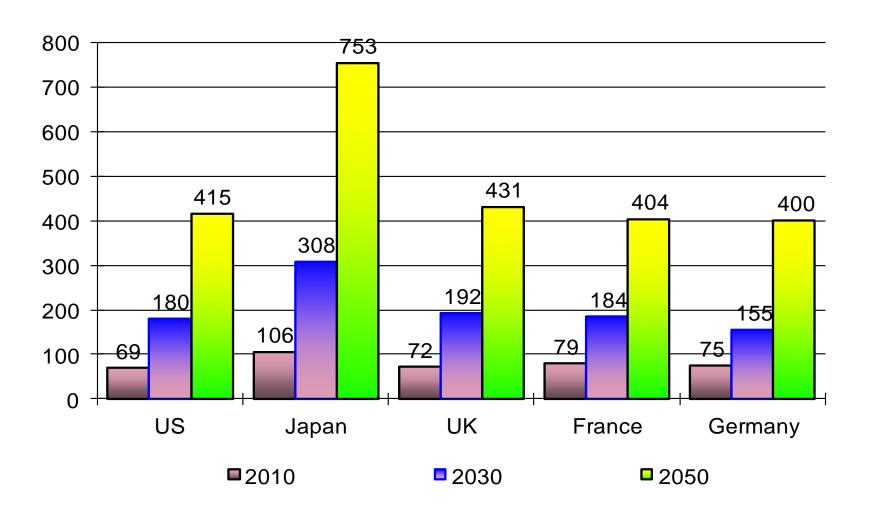
(Percentage of tertiary degrees by age group, 2003)



Source: Organization for Economic Cooperation and Development

The Future Looks Bleak

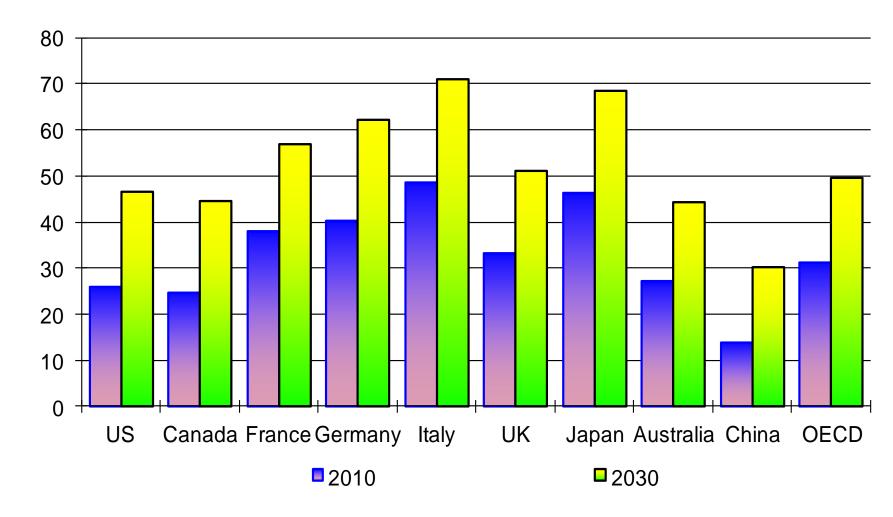
(Government debt as % of GDP)



Source: Standard & Poor's, 2010

Aging Populations Will Boost Government Spending

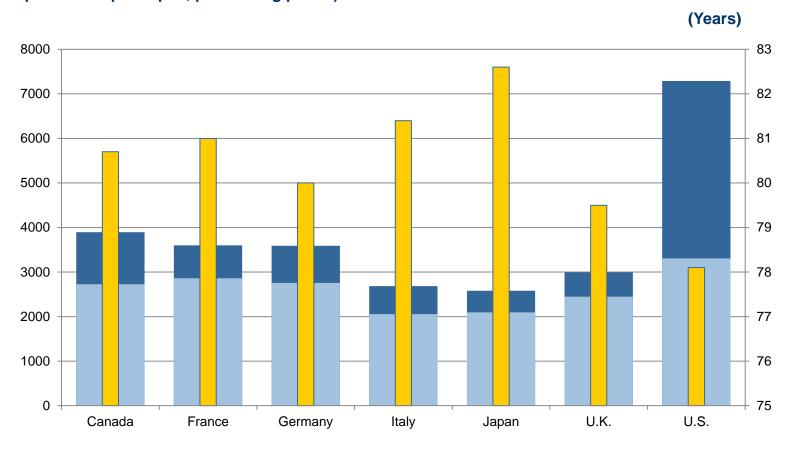
(Retirees as percentage of labor force)



Source: Organization for Economic Cooperation and Development

U.S. Has Highest Health Costs And Lowest Life Expectancy

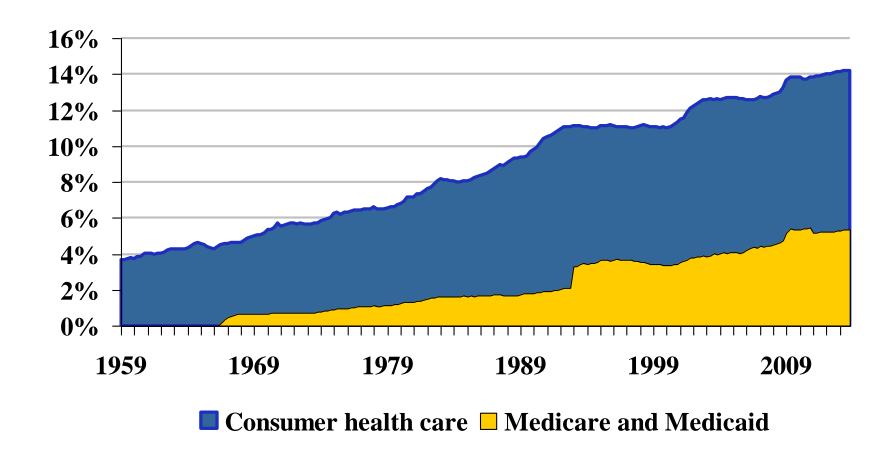
(Health care expenditures per capita, purchasing power)



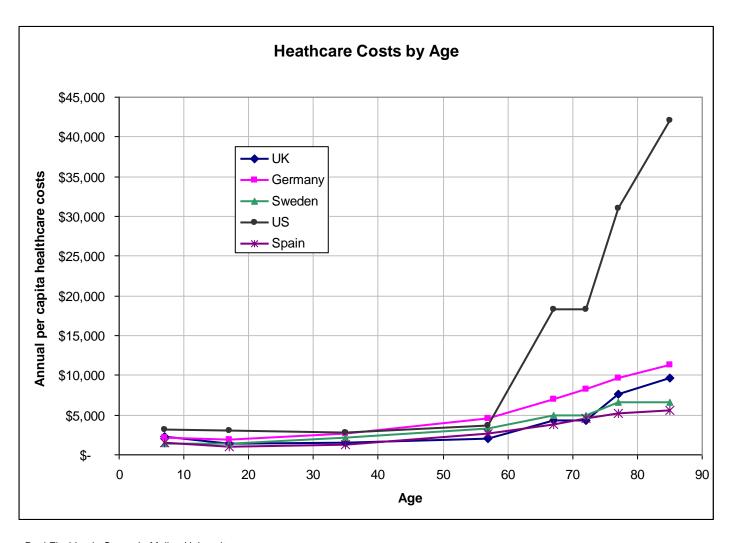
■ Expenditures ■ Public expenditures ■ Life expectancy (right)

Health Care Expenditures Climb Rapidly

(Percent of GDP)



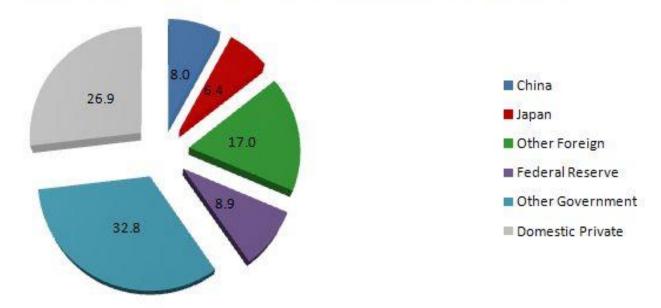
Costs by Age By Country



Sources: Paul Fischbeck, Carnegie Mellon University

Who's Picked Up the Bill? {chk source)

Proportion of US Public Debt Holdings (%) - March 2011



2 major holders:

- U.S. Federal Reserve
- China

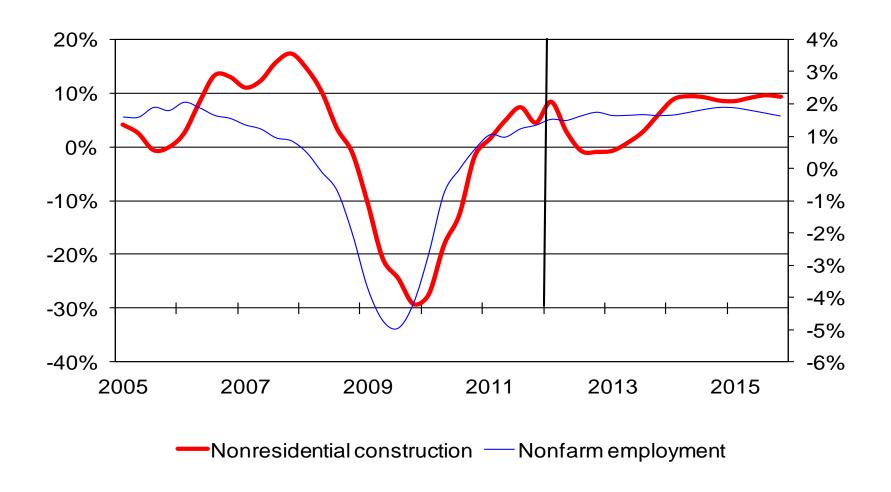
Source: http://bilbo.economicoutlook.net/blog/?p=15591

The US Treasury - Foreign breakdown.

The US Federal Reserve - Consolidated Balance Sheet data.

Weaker Employment Is Hurting Construction

(4-quarter percent change)



Source: Bureau of Labor Statistics, Bureau of Economic Analysis, S&P Economics projections

Commercial Real Estate Price Declines Are Bottoming

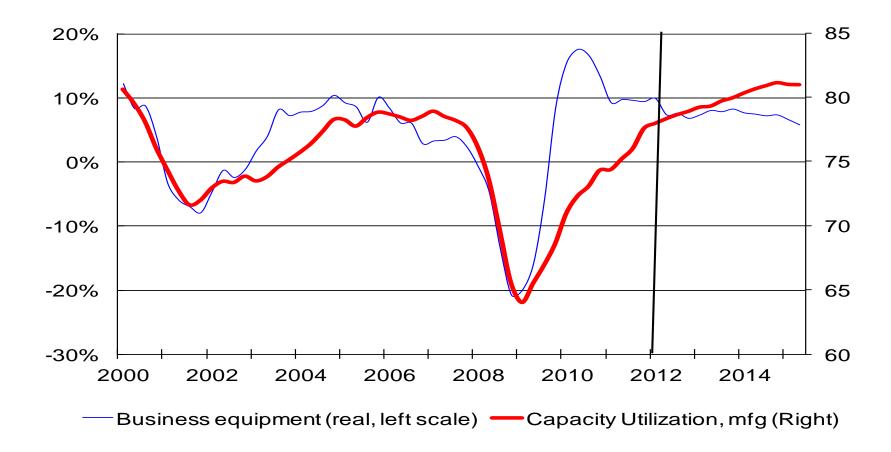


Source: M.I.T. Center for Real Estate.

Equipment Spending Follows Capacity Needs

(4-quarter percent change, and production as % of capacity)

(Percent)



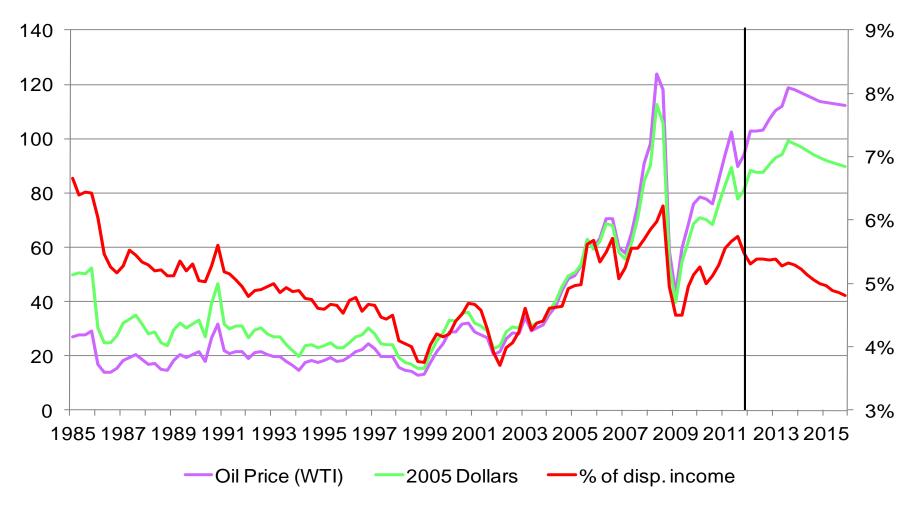
Source: Federal Reserve, Bureau of Economic Analysis, S&P Economics

Can the Consumer Keep Spending?

- Consumer spending led recent expansions
- But wealth is down because home prices have dropped and
- Stocks are still below their 2007 peak
- Borrowing is more difficult, and home equity loans much less available
- Confidence has dropped and unemployment risen
- Consumers are likely to continue to save more and borrow less
- High oil prices hurt purchasing power and confidence
- Stimulus package provided some income boost

Oil Prices Remain Down From Peak

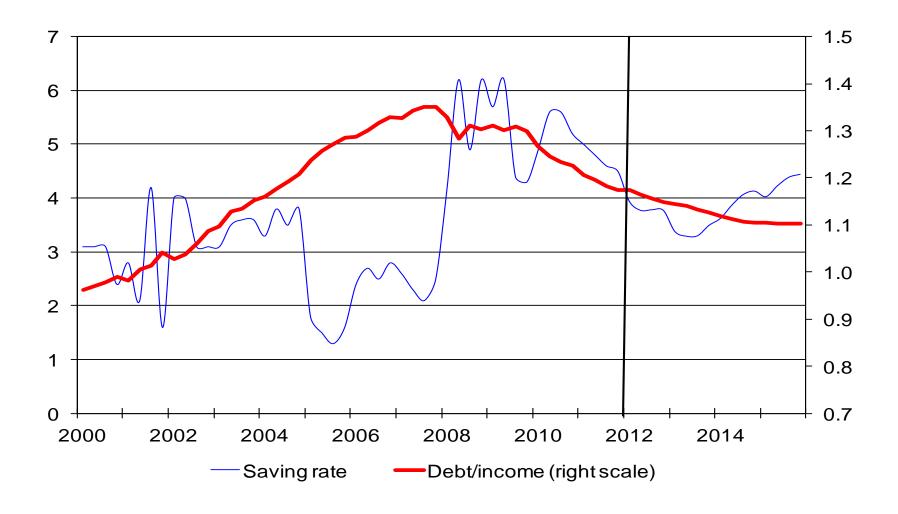
(\$/barrel, WTI and deflated by CPI; household energy purchases as percent of disposable income)



Source: Bureau of Economic Analysis

Debt Is Dropping From Record Highs

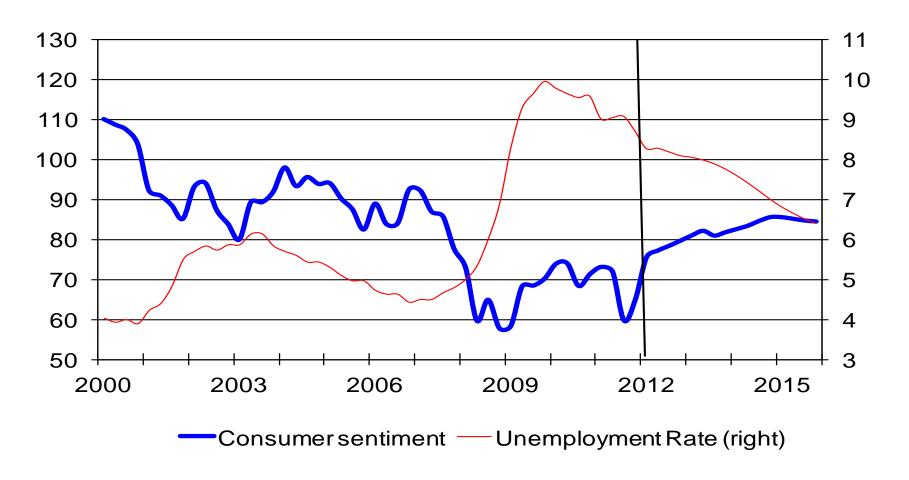
(Percent of after-tax income)



Source: Bureau of Economic Analysis and Federal Reserve

High Unemployment Scares Consumers

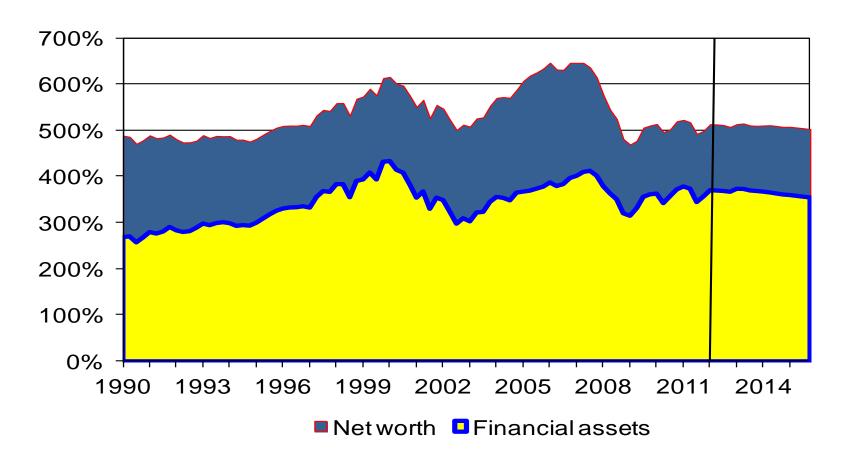
(Percent)



Source: Bureau of Labor Statistics and University of Michigan Survey Research Center

Wealth Slides With Home and Stock Prices

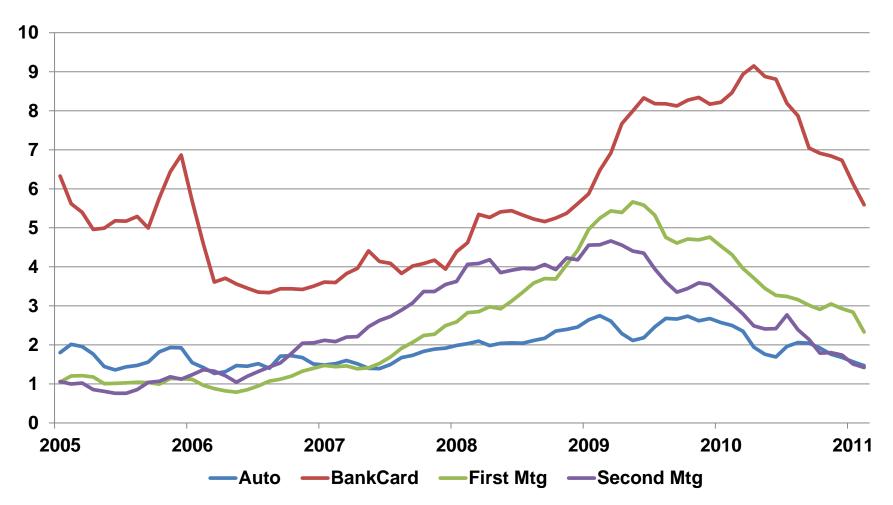
(Percent of after-tax income)



Source: Federal Reserve, S&P Economics projections

Default Rates Begin To Drop

(Percent)



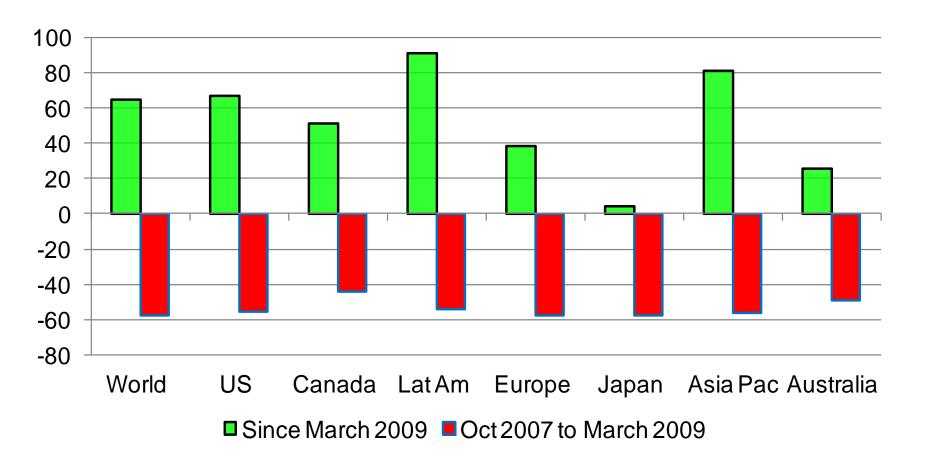
Source: S&P/Experian

Bigger Than The Average Bear

- A great run from 1982 to 2000
- But the secular bear began in 2000
- Two largest bear markets since the depression
- Earnings were negative in 2008 Q4 for first time in history
- We think the rally will continue
- But the long-term cycle probably has another bear in it.
- World stock markets have generally become synchronized
- As money flows between markets in search of yield

Everybody's Down

(Percent change in stock prices, Aug. 18)



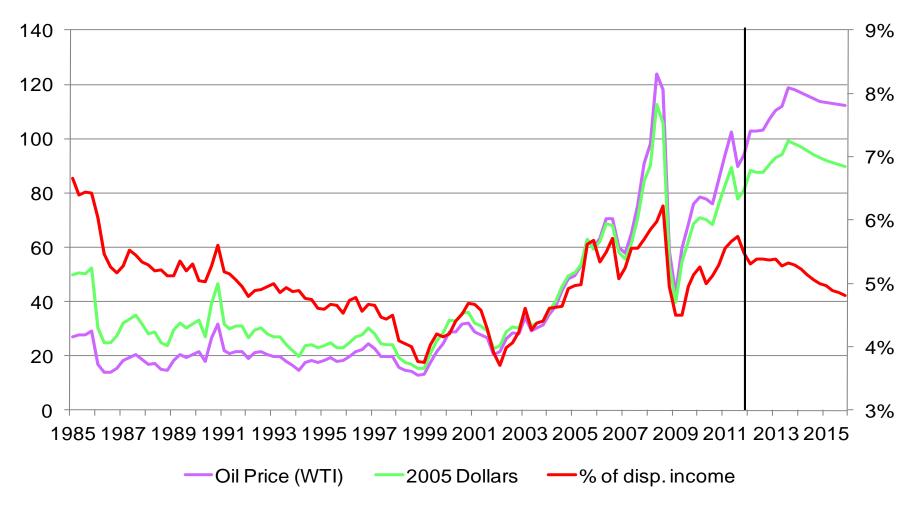
Source: Standard & Poor's

Bottom Line: The Economy Will Recover Slowly

- The recession was the longest and deepest since the 1930s
- Fiscal stimulus has supported the recovery
- But recovery is likely to be slow because of financial markets and switch to higher savings
- If financial markets lock up again
- Fiscal stimulus ends abruptly
- Home prices continue to fall
- And oil prices continue to rise
- The recession could be longer and deeper
- With the risk of a "lost decade" similar to Japan in the 1990s

Oil Prices Remain Down From Peak

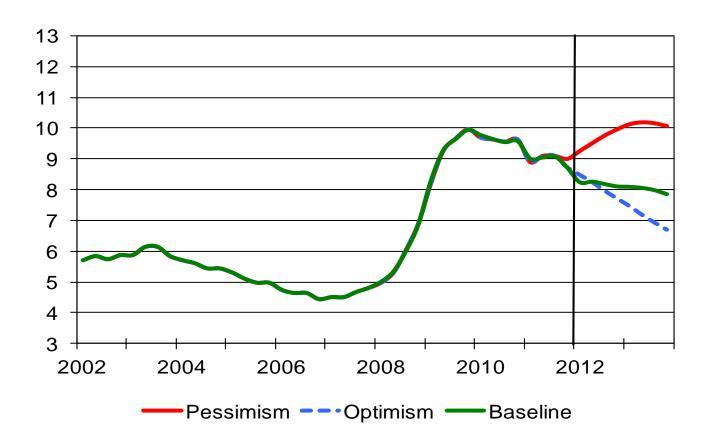
(\$/barrel, WTI and deflated by CPI; household energy purchases as percent of disposable income)



Source: Bureau of Economic Analysis

The Unemployment Rate

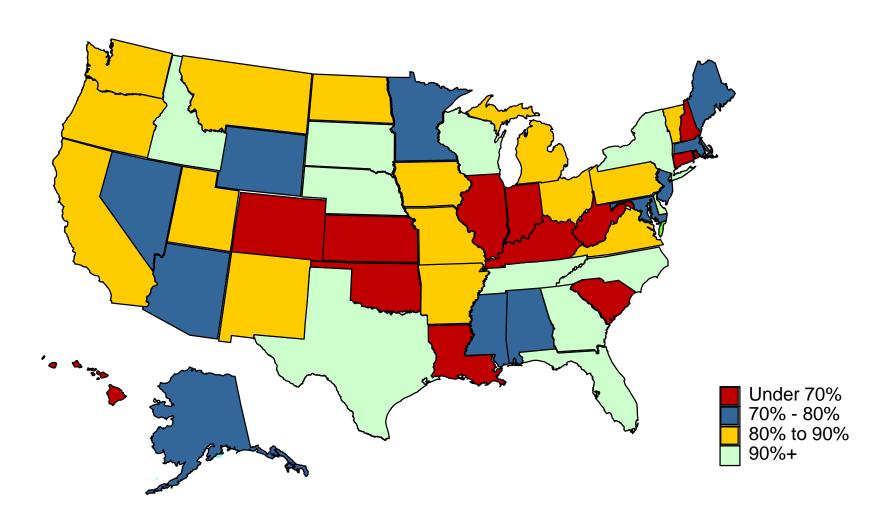
%



Source: U.S. Bureau of Labor Statistics (BLS), Standard & Poor's Economics projections begin 2011Q1

State Pension Systems Are Underfunded

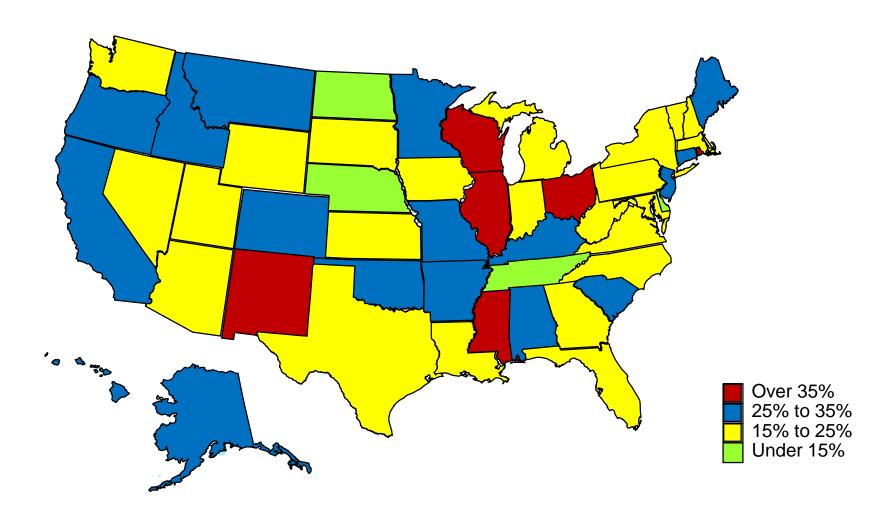
(Percentage funded, 2008)



Source: S&P

State Pension Underfunding

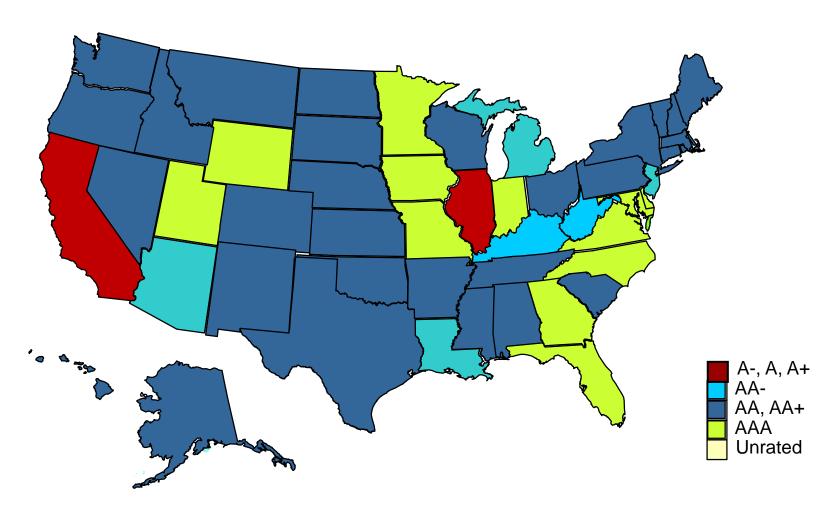
(Percent of gross state product, 2008)



Source: Robert Novy-Marx and Joshua Rauh, Journal of Economic Literature, Fall 2009

State Ratings Remain Strong

(S&P rating, April 2011)



Note: for states that don't have a GO rating from S&P, the chart assumes an equivalent from the short-term ratings