

Cars and Working Families: A Changing (and Challenging) Economic Landscape

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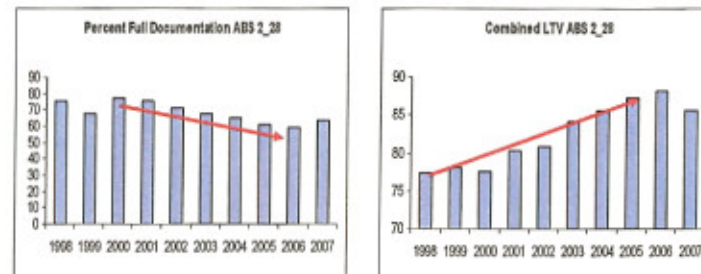


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Suspects in the subprime crisis

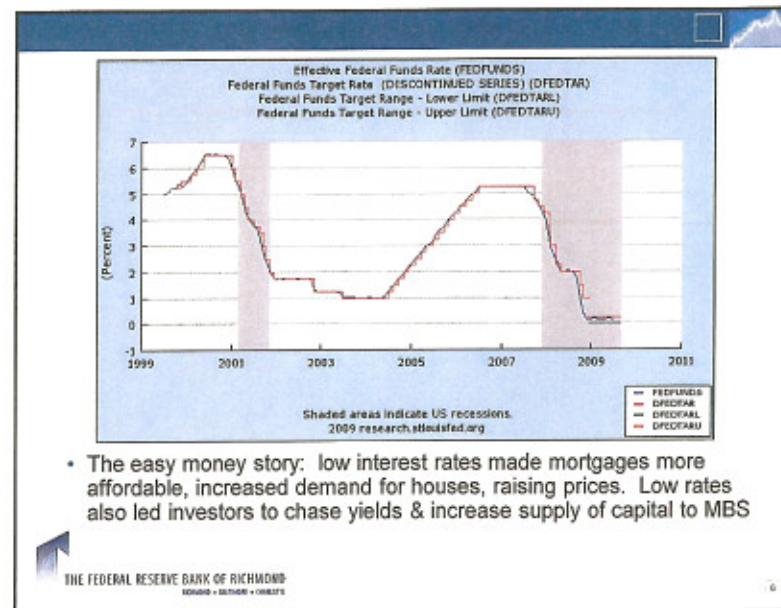
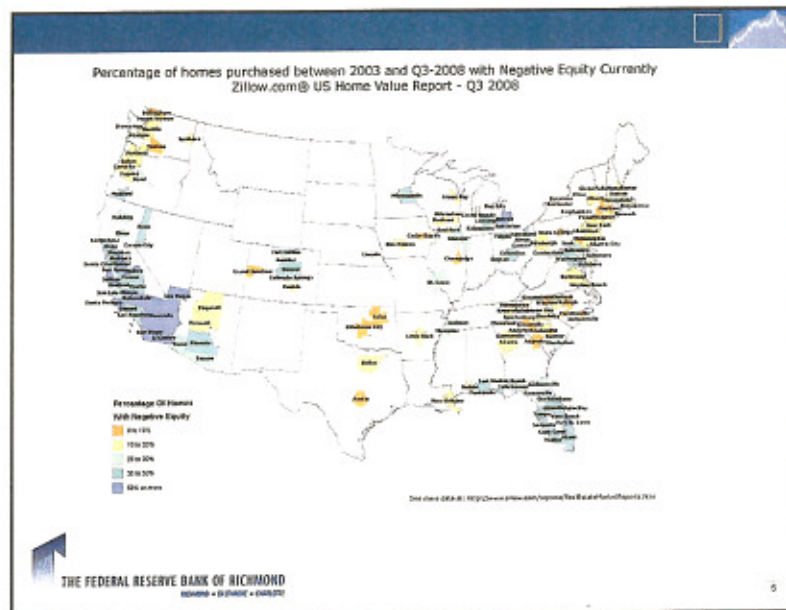
- Technological innovation in the delivery of credit
 - Did lenders overshoot?
 - Many homeowners now "underwater." What will they do? What makes mitigation policies so tough?
- Some observers pointed to a regulatory and supervisory framework "insufficiently prepared" for a big shock
 - Appetite for risk in the HH sector affected by the GSEs?
- Incentive problems with off balance sheet lending?
- Some observers have also pointed to monetary policy that kept interest rates low after the 2001 recession
- Increased willingness of household sector to lever up?

Underwriting standards slipped steadily



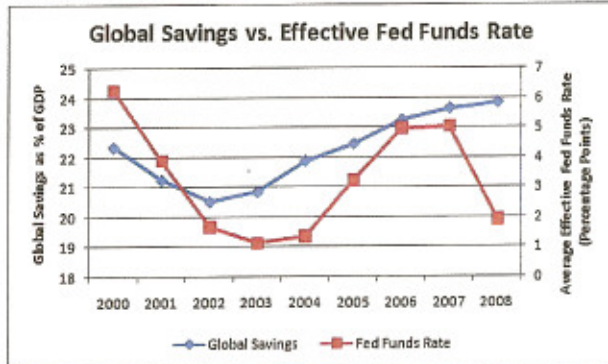
Source: Federal Reserve Board calculations using Loan Performance data

Increasingly riskier loans. In 2006, 40% of loans had CLTV > 95%



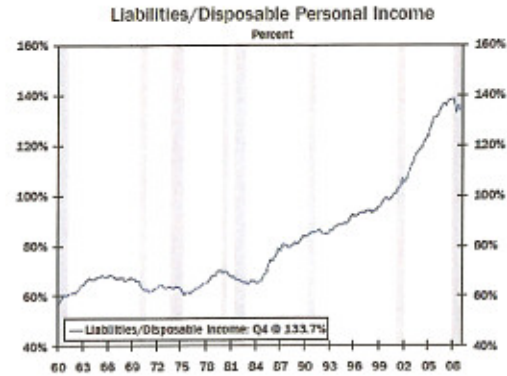
- The easy money story: low interest rates made mortgages more affordable, increased demand for houses, raising prices. Low rates also led investors to chase yields & increase supply of capital to MBS

But there was also a “global savings glut”

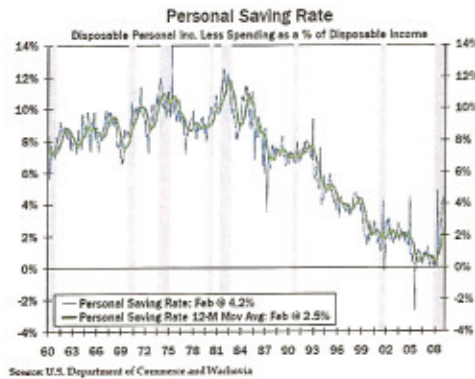


Global savings increasing the same time the fed funds rate was falling. Which, or both, were drivers will take much research.

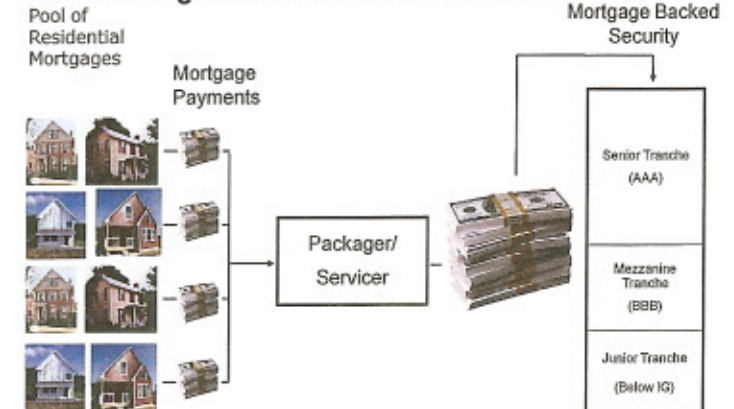
Consumers were leveraging up



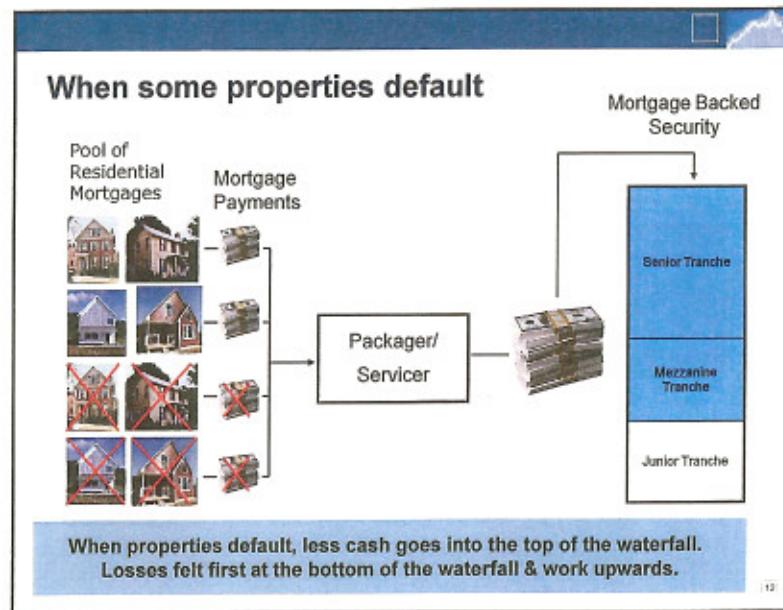
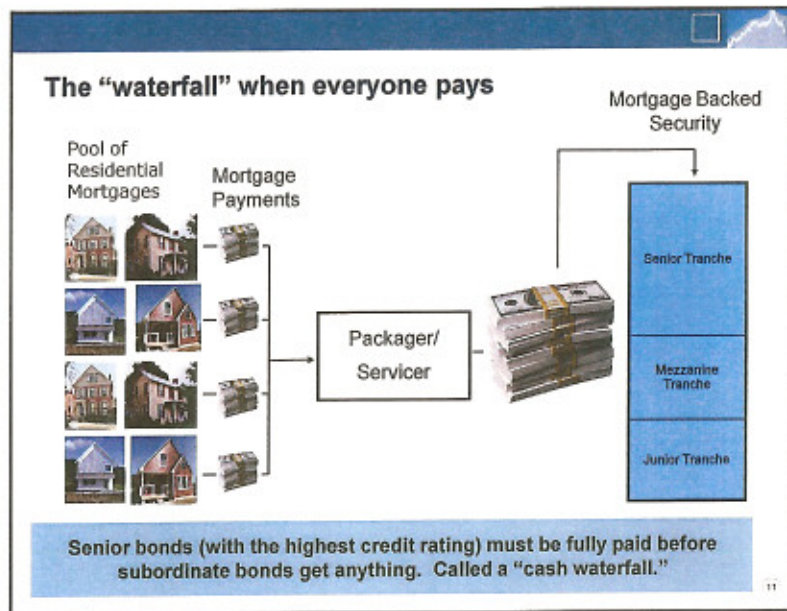
And saving less



From housing to finance: securitization in a nutshell



Mortgages are pooled & create a set of mortgage backed securities (MBS). MBS are bonds. Mortgage payments become interest payments to bondholders

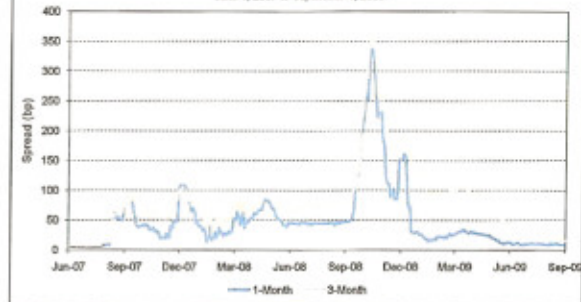


Investors in collateralized debt obligations (CDO) & mortgage-backed securities (MBS) were pressured

- As the value of their underlying mortgage collateral deteriorated, owners of securitized products suffered losses.
- Who were (some of) the buyers?
 - Banks, both domestic and foreign (in excess of a half trillion dollars in reported losses)
- Some of the assets also came back onto bank balance sheets in a variety of forms... "boomerang assets..." which strained balance sheets, led to liquidity problems
- Spreads indicating a lack of liquidity were highly elevated. remain elevated. Very popular to show the LIBOR-OIS spread as a measure of tightness in credit markets

Dollar LIBOR-OIS Spread

June 1, 2007 to September 1, 2009

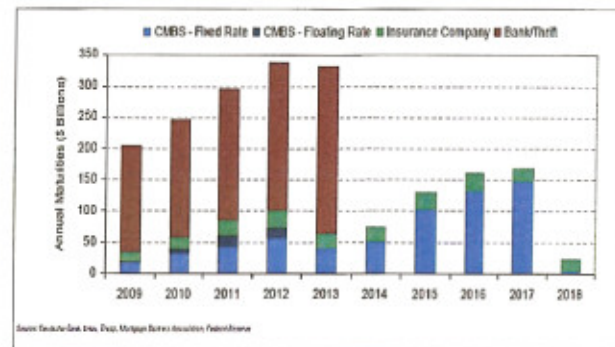


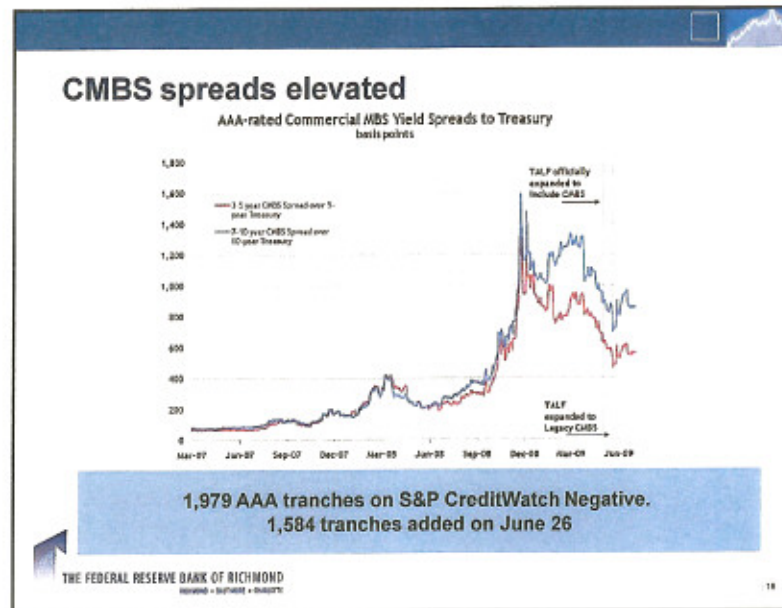
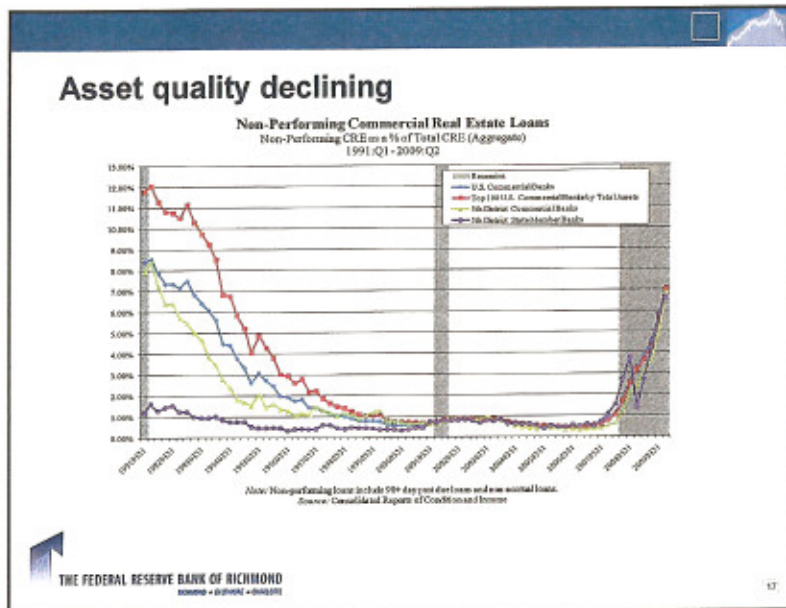
Elevated spreads mean that money markets are under pressure. You care because much of the US adjustable rate debt is tied to LIBOR. Spreads are now at pre-Lehman levels, and steadily narrowing.

Where are we headed next?

- A commercial real estate cycle?
 - Smaller community and regional banks are big commercial real estate lenders (it's where they believe their comparative advantage is & can compete with larger banks)
 - Would expect CRE loans to deteriorate with local housing markets & declining macroeconomic conditions.
 - Some observers have noted CRE markets exhibited some features that mimic residential real estate
 - Looser debt service (DSCR fell from about 1.7 to about 1.3)
 - Higher LTVs (80% conduits v. ~70% banks)
 - Easier pricing (spreads over treasuries only)
 - Exotic product structures (over 80% of loans IO or partial IO at peak, up from 15% in 2001)

Who holds maturing CRE loans?



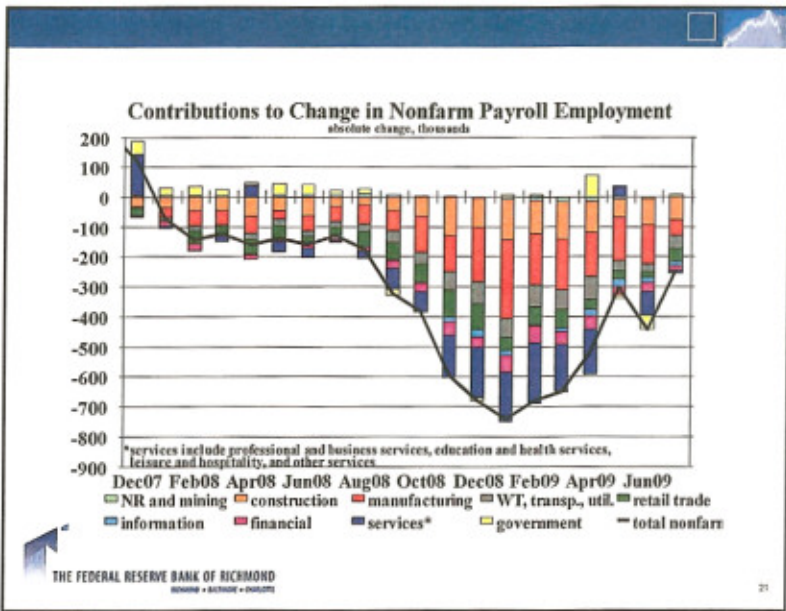


Signs of stabilization in the macroeconomy?

- This recession is long (21 months so far...average postwar is about 12 months) and deep relative to recent history
 - But the economy is contracting at a lower rate
- Job losses are widespread across industries and the unemployment rate is high (peaked at 9.5%)
 - But the rate of job losses seems to be slowing

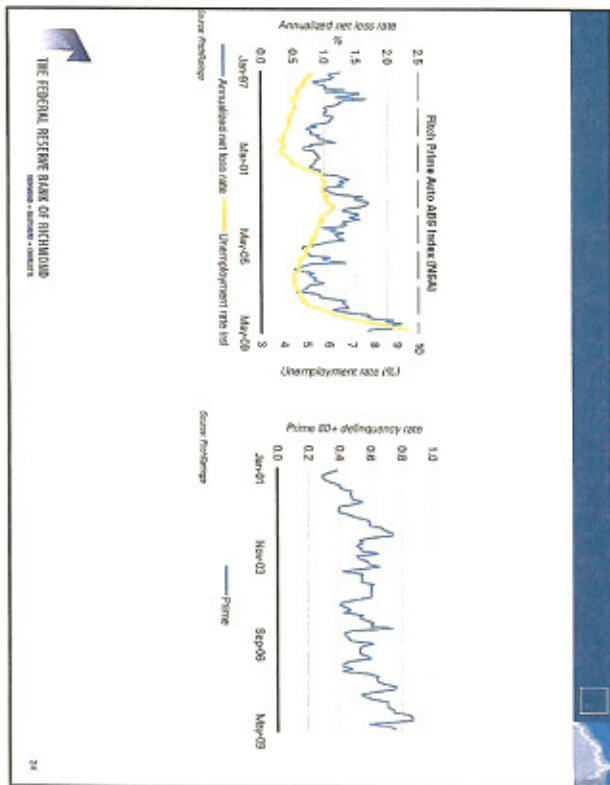
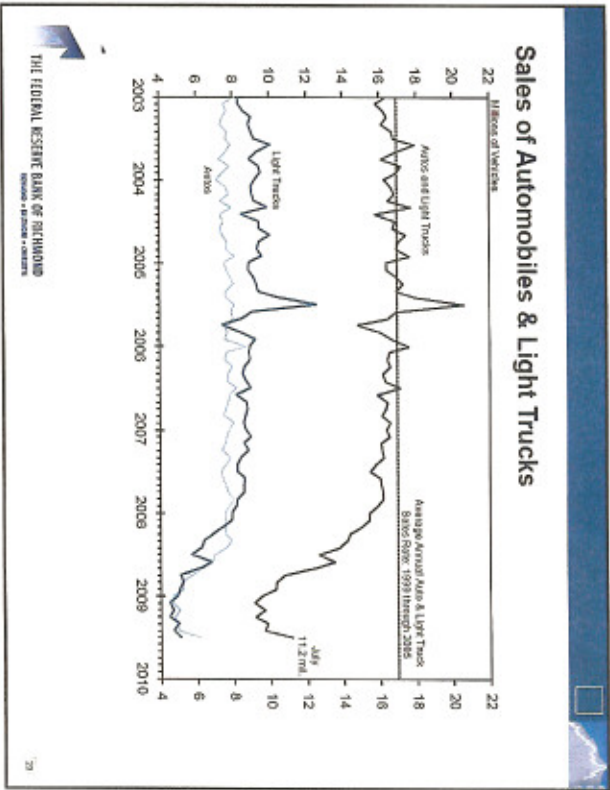
Past contractions in historical perspective

"Peak" GDP	Total Decline in GDP	Arbitrary class.
2001:2	-0.4%	Mild
1969:3	-0.6%	
1990:3	-1.3%	
1960:1	-1.6%	Moderate
1948:4	-1.8%	
1980:1	-2.2%	
1981:3	-2.7%	Larger
1973:4	-3.1%	
1957:3	-3.7%	
2008:2	-3.8%	
Great Depression	-26.5%	No comparison



- Some potentially better news for you
 - Auto and light truck sales rates have stabilized over the past few months
 - New participants in auto ABS markets had successful offerings. Market participants view this as "a return to normalcy"
 - Annualized net loss rates on prime auto ABS down, but that may be because of seasonal factors and better recovery values
 - 60 day delinquencies still high (tends to run with high unemployment)
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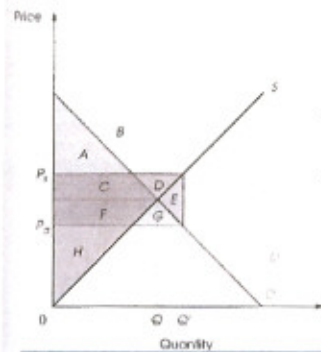
Cash for clunkers statistics

- 690,114 clunkers traded
- Top 5 new vehicles purchased
 - 1) Toyota Corolla 2) Honda Civic 3) Toyota Camry 4) Ford Focus FWD 5) Hyundai Elantra
- 84% of vehicles traded in were trucks, 59% of vehicles purchased were cars
- Avg. new vehicles mileage: 24.9 MPG, avg. trade in mileage: 15.8 MPG. 58% Improvement

Cash for clunkers economics (just a bit of theory...sorry)

- It's a demand side subsidy, increases purchases when
 - Consumers and dealers split the subsidy (a price effect) and also because
 - Some consumers probably delayed purchasing new cars on program announcement
 - Some consumers probably purchased cars earlier than they otherwise would have to take advantage of the program
 - Economists think about various "normative criterion" to frame discussion of alternative social policies (majority rule, efficiency, Pareto improving)
- How much are we paying for better environmental outcomes?
Limited evidence. Interesting research question
 - How to approach it? Find out how much carbon emissions sell for on world's cap and trade markets,
 - Estimate fuel savings gained (in carbon equivalents) from CARS, divide by cost of program, and compare to the market price of carbon

Textbook welfare effects of a subsidy



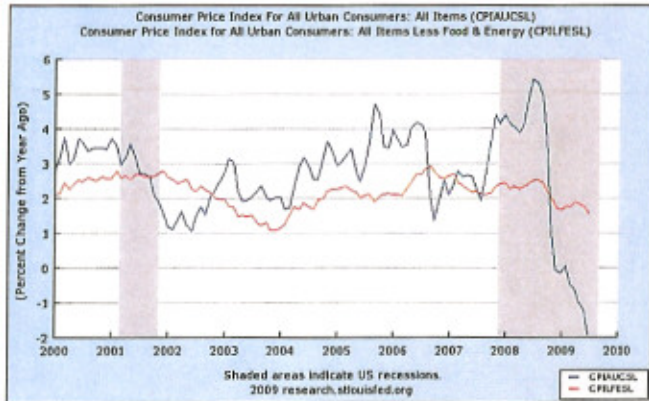
	Before Subsidy	After Subsidy
Consumer Surplus	$A + C$	$A + C + E + G$
Producer Surplus	$F + H$	$F + D + E + H$
Cost to Government	—	$-A - D - E + F + G$
Total Gain	$A + C + F + H$	$A + C + F + H + E$
Deadweight Loss	—	F

There are a variety of "general equilibrium" effects (sorry) of Cash for Clunkers (e.g., used car markets, parts)

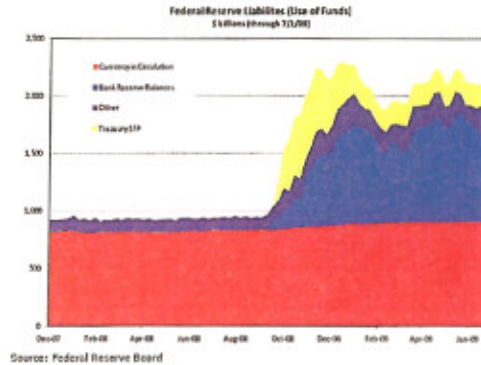
Let's talk about price levels

- Some have expressed a fear of deflation. Can be bad. Factor in the great depression.
 - Deflation: Sustained fall in the general price level
 - Effects: Real burden of debt rises (as do real interest rates). Demand may fall sharply as purchases are postponed
- Data indicates the fall in the CPI is the result of sharp declines in food and energy prices

CPI diving, core CPI dipping



Challenges for the Fed going forward



Increase in the monetary base can have impact on price levels.
 Slow economy is a mitigant. Plans in place to "exit" gracefully.

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