**Historical Context**

- Prior to Great Depression mortgages were short term – 5 years
  - Households rolled them over
  - Worked well if financial markets were calm, Leads to rollover crisis and mass evictions if not
  - Banks were unwilling to lend long because they had short-term liabilities – deposits
- So Government created a buyer of last resort – FMNA or Fannie Mae
  - Created a well functioning secondary market for mortgages.
  - Banks would like to dump their bad mortgages, so FMNA would only accept prime mortgages
    - Prime = high credit score (FICO) + good loan-value-ratio (<.80)
- Privatized in the 1960s
  - Created a competitor in FHLMC or Freddie Mac
    - No one believed they would be allowed to default, so could borrow very cheaply
• Securitization in the 1970s
  o To allow other institutions to hold prime mortgages, created mortgage backed securities
  o MBS were sold with a guarantee by Freddie and Fannie.

• Sub-Prime market developed
  o There were good borrowers who were just below Prime
  o Hedge funds and Investment banks began to sell Sub-Prime MBS securities of their own
  o Initially worked well – had low loan-to-value ratios and pretty good borrowers
  o This lead to good ratings by the ratings agencies and huge increase in size in 2000s.

• During the 1990s and 2000s Fannie and Freddie directed to increase lending to below median income households.

• Low Interest Rates and large foreign inflows fuel increasing in homeownership and prices.

• 2004 SEC relaxes leverage limitations on largest 5 investment banks leading to a sharp rise in their leverage ratios. Paulson was then the CEO of Goldman Sachs.
Figure 1: Real Home Prices, Interest Rates and Home Mortgage Delinquency Rates
Timeline of the Last 17 months

8/9/07  Liquidity crisis – Fed and European Central bank begin injecting capital

3/08  Fed rescues Bear Stearns

9/8/08  Treasury nationalizes Fannie and Freddie

9/15/08  Lehman Brothers files for bankruptcy – largest in U.S. history ($600 billion in assets)

9/16/08  Fed makes bridge loan to A.I.G., the largest insurance company in the world.

10/3/08  Government passes bailout – authorizes Treasury to spend up to $700 billion

1/30/08  S&P 500 is down 46% since its peak last October

Real housing prices are down 28% from their 2006 peak.
Current Thinking

- Over-leveraging and over-valued assets lead to a financial meltdown.

- Cross-over impact on the real economy is bad but not yet very bad.
  - Employment down a lot (down 2.6%, in ’81 went down 3.1% at min)
    - Unemployment is 7.6% in 1/09. Above 10% in 9/82 – 6/83.
  - But output is barely down (down 0.2%, in ’81 went down 2.9% at min)
  - January retail sales rose 1% after December’s fall (SA), sales of existing homes went up in Dec.
  - Blue chip forecasters (February survey) predicting economy to turn around in 2009.

- On the real side, households are now poorer and want less housing
  - Double whammy since both stocks and housing prices have fallen – very bad for retired or near-retired
  - Leads to a shift from consumption to savings, change in composition of cons.

- Unclear how much of real side fall out is coming from this rather than lack of access to finance.
  - Commercial Bank lending is up relative to a year ago (1/09 vs. 1/08):
Figure 2: Employment in Postwar Recessions

-6.0 -5.0 -4.0 -3.0 -2.0 -1.0 0.0 1.0
0 2 4 6 8 10 12 14 16 18

Percent deviation

Months from Peak

Recession 2008  Median Postwar  Harshest Postwar
Figure 3: Real GDP in Postwar Recessions

Quarters from Peak

Percent Deviation from Peak

Median

Harshest

Recession 2008
Figure 4: Real Labor Productivity in Postwar Recessions

Percentage Deviation from Peak

Quarters from Peak

Mildest
Median
Harshest
Recession 2008
- Consumer Lending + 10%, Commercial & Industrial + 8%
- Real Estate lending is up 5%!
- Interbank lending is now down slightly (1%) but was down 21% in Nov.
  - Volume of commercial paper is down 13% from peak, but nonfinancial is up 28% rel to peak
  - Nonfinancial discount rates, were quite high, but now are down sharply and low relative 2001 on
  - AA Financial discount rates are also low.
  - Asset-backed is also down sharply – securitization no longer efficient given default rates?
    - Residential fixed investment share of GDP has dropped sharply, but nonresidential hasn’t. (Q4)
- Not clear stimulus package is warranted – slow to get started and economy could turn around without it.
- International fallout is large
  - Japan is down 3.3% in Q4/Q3, marking 3rd straight quarter of decline. Much worse than US. (not annualized)
  - South Korea is down 5.25% in Q4/Q3, etc.
Financial Recovery Sector Plan

- Key to turn around is resolving the financial crisis.

- Financial Problem is big: Economist argues bigger than Japan’s
  
  o Combination of large price run up and collapse and large run up in private debts – both banks and households. Japan was a creditor nation. Real estate run up bigger here than Japan.

  o Economist claims American banks hold troubled loans = 40% of GDP, Japan had 35% of GDP in their crisis.

  o Economist claims many Alt-A (between prime and sub-prime) securities have been sharply down graded in their ratings. Prime mortgage problems may be coming.

- Number of Banks and other financial institutions are probably insolvent.

  o Generates terrible incentives if allowed to operate.

  o Don’t undertake pos. NPV projects because don’t get enough of returns, don’t want to redesign capital structure since lose value of govt debt guarantees (receiving a subsidy for high prob of bankruptcy)
• Geithner’s plan seems uninspired (so far).
  
  o TARP 700B funds well spent?
    
  o Paulson’s $125b stock purchase in 9 big banks funded $25b in first year (Scharfstein and Stein)

• For Banks all short debt creates a run problem, not just deposits
  
  o Need to insure this short-term debt too as a result, and hence regulate
  
  o Need long-term creditors to take the hit and price the risk

• Comparison to Great Depression
  
  o Detrended GDP/Adult was down 42% in 1933 rel to 1929 (in 1939 still down 26.5%)
  
  o Employment/Adult down 21.4%, Total Hours/Adult down 27.3% (in 1939 still down 21%)
  
  o Detrended Nonresidential Investment/Adult down 75%
  
  o Detrended Government Purchases / Adult down 8% (rises to 1% above in 1934)
  
  o S&P / CPI down 87.4% relative to peak
National Industrial Recovery Act tossed aside the nation’s antitrust acts and permitted industry collusion if wages were raised.

- Lead to artificially high wages and prices, and restricted output and investment
- Cole and Ohanian estimate that it substantially prolonged and worsed the Great Depression.

- So, no comparison on real side – Great Depression much worse – however similar bad numbers on the financial side.

- Cautionary note – Obama’s plan to end secret ballot for unionization and executive order to allow unions only in public works projects has some elements of NIRA.
Figure 4: Output and Employment during the Great Depression

Years

Percent deviation from Peak

-45 -40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15 20 25 30 35 40 45

1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939

Detrended output per adult
Employment per adult
Current Stimulus Plan

• Propose to spend around $787 billion to stimulate the economy
  o 240B in tax breaks, 140B in health care, 100B in education, 48B transportation
  o Temporary tax breaks tend to have no stimulus effect – see Bush tax rebates 168B in 2008.

• How large is this?
  o This is about 5.5% of 2008 GDP and
  o 73% of federal spending on goods and services in 2008
  o Supporters say it will save or create 3.5 million jobs = $224,860 (unfair since multi year)

• In WWII, federal government spending increased from
  o 6.4% of GDP in 1940 to
  o 44% of GDP in 1944
  o GDP rose by roughly .80 times ΔG
• Infrastructure vs. Military spending
  o Japanese experience in the 1990s doesn’t bode well, but may be able to do better.
  o Barro estimates multiplier on peacetime at 0 – very hard to estimate since no natural experiments.
Figure 5: US Data 1929-47

Graph showing the real chain weighted GDP and government spending from 1929 to 1947.