

# US Financial Crisis 2008: Origins, Instruments and Players

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## What lies behind the crisis?

- Short-term:
  - Severe loss of faith in financial firms/system
  - Credit freeze (unwillingness and/or inability to lend)
- Medium-term:
  - Speculation on house prices
  - Instruments: subprime mortgages and **asset backed securities** on those mortgages
  - Players: now-vanished Investment Banks at the center
  - Problem of capital (asset *less* liabilities) of financial firms
- Long-term:
  - Neoliberal policy shift starting in the early 1970's
  - Stagnant income of working class  $\Rightarrow$  **demand** for debt finance to maintain consumption growth
  - Shredding of all regulation on finance  $\Rightarrow$  **supply** of debt finance (often speculative)

I will adopt a “zoom out” approach to talk about the 2008 financial crisis in the US

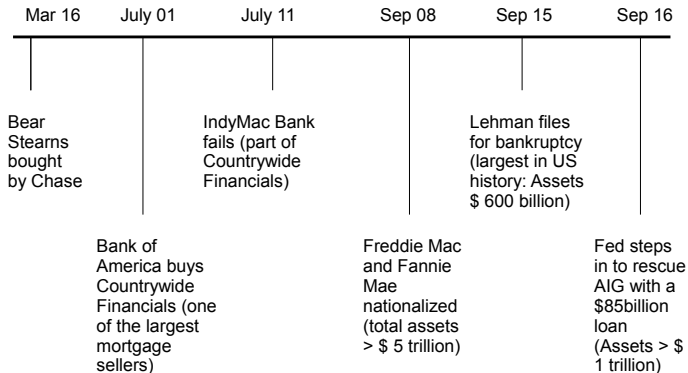
- The current crisis: two weeks and 36 hours
- **Zoom Out:** 7 years that created the crisis
- **Zoom Out:** 30 years that created the preconditions of the crisis

## Is this episode all that surprising?

- Unregulated finance under capitalism always leads to speculative bubbles
- Some of the more prominent ones: Tulip Mania (1637); South Sea Company Bubble (1720); Railway Mania (1840s); Japanese Housing Bubble (1980s); Dotcom bubble (1990s)
- Ends in a crash  $\Rightarrow$  often leads to recession or depression

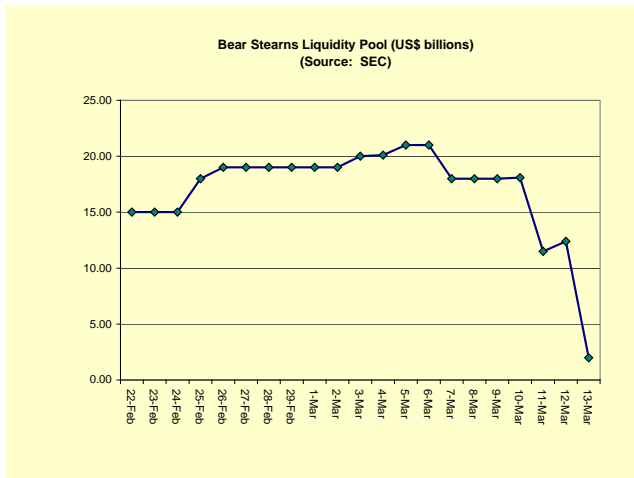
# The Credit Crisis

## TIME LINE OF CREDIT CRISIS



=> Reason: inability to secure financing

# Run on Bear Stearns



Source: <http://www.econ.princeton.edu/news/crisis-panel.html>

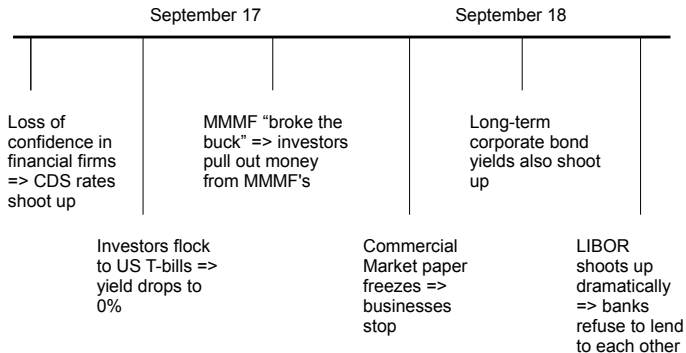
# Why Financing Dried Up?

Why did financing dry up?

- all these institutions were exposed to the **subprime mortgage market**:
  - 1 Fannie, Freddie and Lehman: held **mortgage backed securities (MBS)**
  - 2 AIG: had issued **credit default swaps** (default insurance to bondholders who held **mortgage backed securities**)
- required to refinance position as defaults on subprime loans increased
- investors refused to lend more money fearing losses

# 36 Hours that Accelerated the Credit Crisis

## 36 HOURS OF ACCELERATION



**=> Fed decides massive bailout**

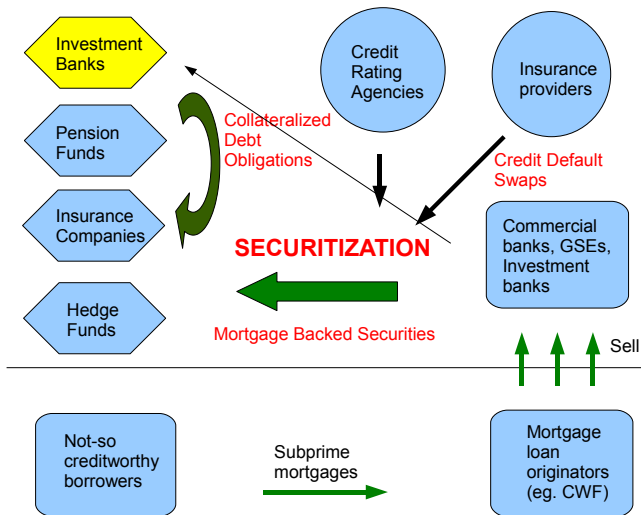
# Seven Years in the Making

- Dotcom bubble bursts in the early 2000  $\Rightarrow$  Fed lowers interest rates to contain damage ▶ Data
- Lower interest rates  $\Rightarrow$  lower mortgages
- Mortgage borrowing picks up  $\Rightarrow$  house prices start rising
- House price bubble  $\Rightarrow$  sub-prime mortgage grows ▶ Data
- Originators sell off mortgages to commercial banks and GSEs (Fannie, Freddie)
- Commercial Bank's pool together many mortgages and sell securities against those bundles
- These are the **mortgage backed securities** bought by Investment Banks (BS, GS, MS, LB, ML)

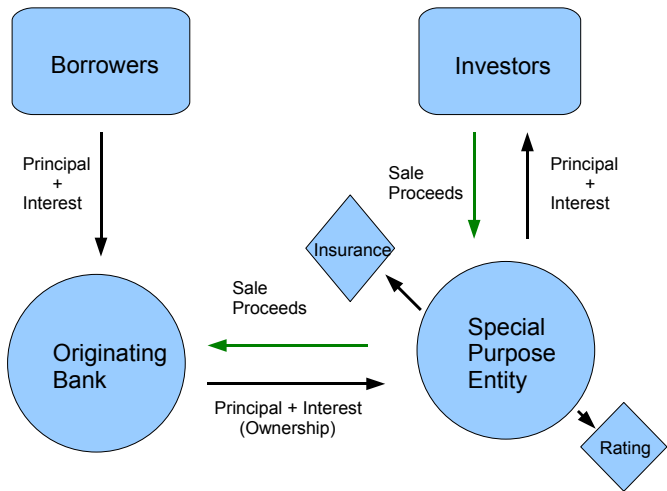
# Seven Years in the Making

- Investment banks “slice and dice” the MBS further to make exotic securities: **collateralized debt obligations (CDOs)** backed by MBS
  - Credit Rating Agencies (Moody’s and Standard and Poor’s) step in to assess risk and certify these securities
  - Commercial Banks and Insurance companies offer insurance against default: **credit default swaps (CDS)**
- There is a huge amount of footlose finance capital looking for investment opportunities (Asian Crisis, Russian Crisis,... where to go?)
- Investors worldwide lap up these exotic securities which promise high returns
- All this works as long as mortgage payments keep coming in and/or prices of houses keep moving up

# Shaky Foundations

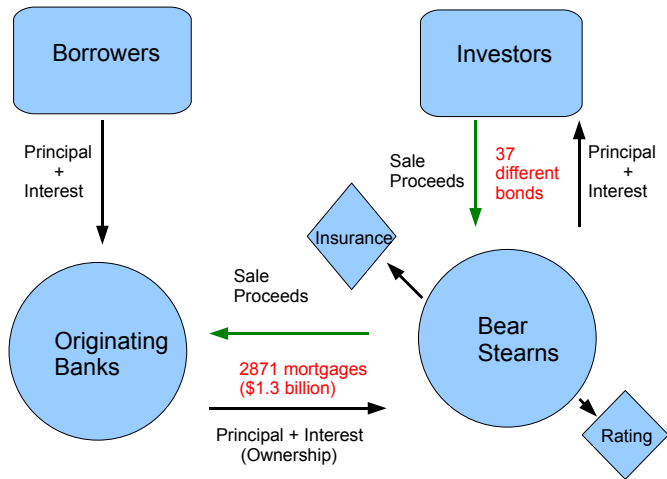


# Structure of an Asset Backed Security



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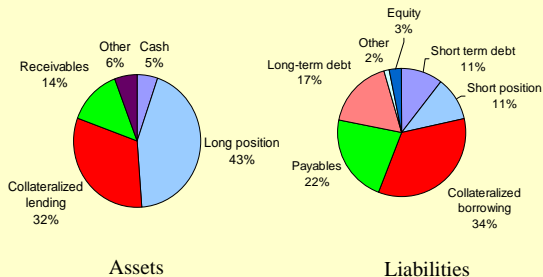
## Bear Stearns Alt-A Trust Mortgage Pass-Through Certificate



# Mortgage Pass-through Certificates

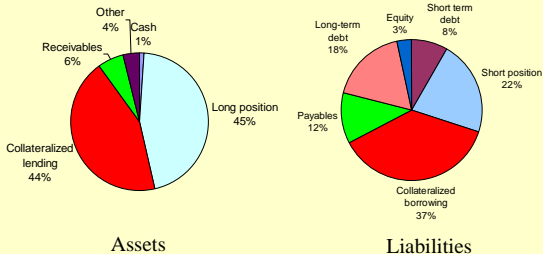
- As an example of a mortgage backed security: Bear Stearns Alt-A Trust Mortgage Pass-through Certificate
  - BS buys 2871 Alt-A mortgages for \$1.3 billion (each roughly \$ 450,000)
  - Sells 37 different kinds of bonds against this pool of mortgages (arranged according to riskiness)
    - payments by mortgage borrowers used to pay bondholders
    - if any mortgage goes bad losses start at the bottom and move up
  - Who buys these? Hedge funds, pension funds, investment banks, etc.
  - BS sells these MBS as an underwriter and also buys them as an investor
  - Uses **short-term borrowings** for buying assets (Huge leverage ratio: 30 to 1)

## Bear Stearns Balance Sheet



Source: <http://www.econ.princeton.edu/news/crisis-panel.html>

## Lehman Balance Sheet (2007)



Source: <http://www.econ.princeton.edu/news/crisis-panel.html>

# Debt Deflation or “Deleveraging”

What happens when mortgage defaults rise?

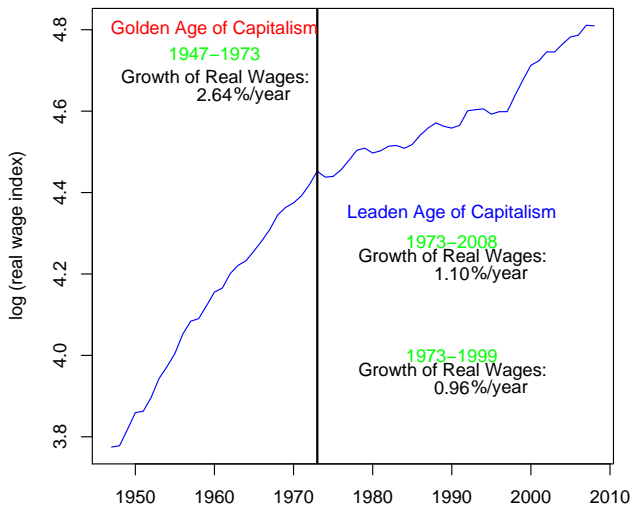
- Foreclosures speed up  $\Rightarrow$  house prices start declining
- Mortgage defaults mean the MBS lose value  $\Rightarrow$  sell assets to cover losses
- Asset prices fall (even those that were not linked to MBS)
- Falling asset values of financial firms  $\Rightarrow$  difficulty in borrowing to cover losses
- Collateral falls in value, interest costs increase
- More asset sales lead to further decline in prices
- Bank Capital (= Assets - Liabilities) goes down

**A downward spiral!**

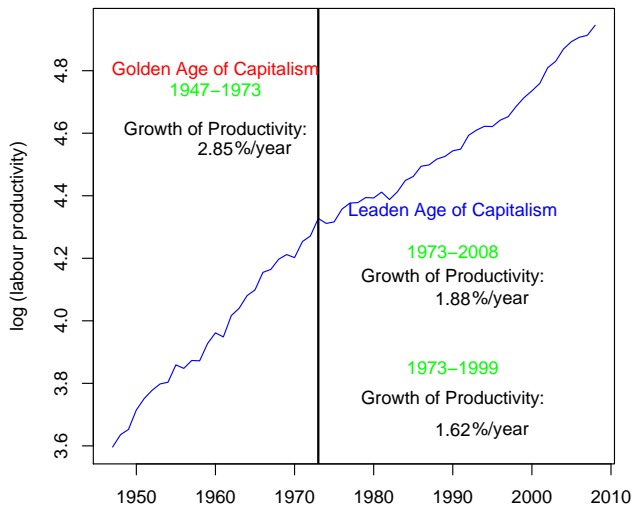
# 30 years of stagnant incomes

- 25 years after World War II: golden age of capitalism
- High productivity growth, high real wage growth, highly regulated finance
- From early 1970's massive slowdown in growth of wages (and productivity)
- Labour productivity growing faster than wages  $\Rightarrow$  growing profits
- Shredding of regulation  $\Rightarrow$  ploughing of profits into finance
- Same kind of consumption needed increasing borrowing
- Leads to huge debt overhang in the economy and creates the basis for financial fragility

# Stagnant Incomes



# Slowing Productivity



# Financial Fragility

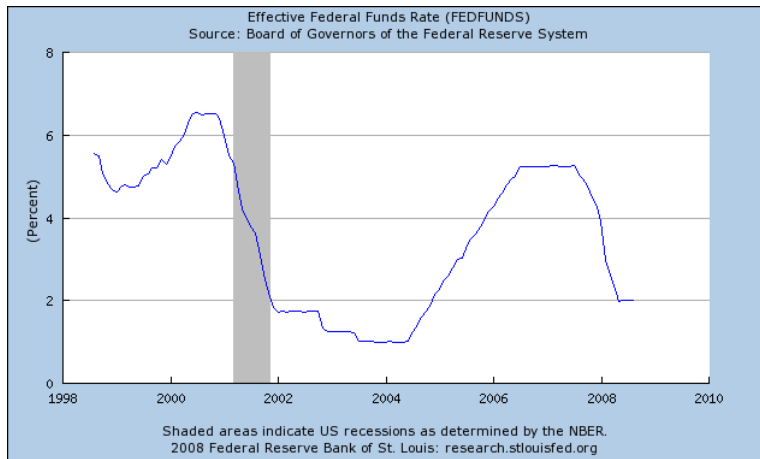


Source: The Economist (<http://www.economist.com/>)

Any meaningful “rescue plan”

- Needs to recapitalize financial institutions
- Needs to stabilize the housing market
- Needs to stabilize wage income
- Needs to bring back regulation of finance

# Interest Rates



Return



# Interest Rates

