

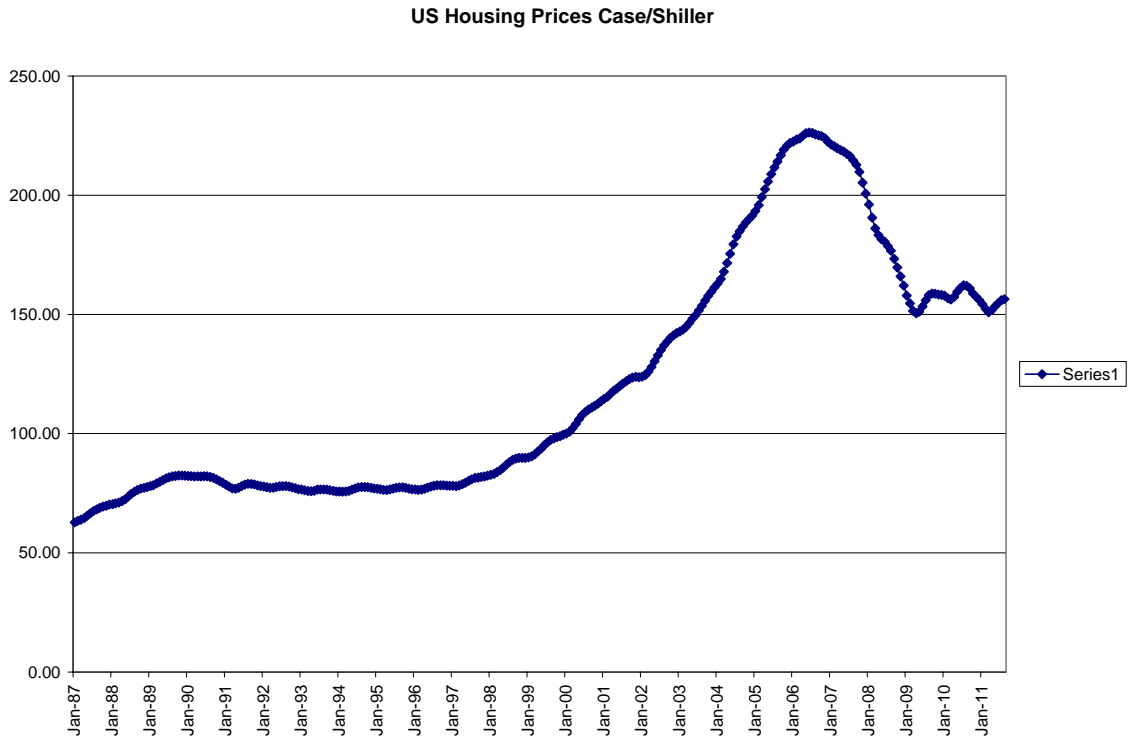
## The Great Recession (a draft more to come 11/11/11)

1. In 1999 US housing regulations changed to end “redlining”. This and other regulations permitted borrowers who were “subprime” risks to borrow for federally insured mortgages.
2. Economic Conditions
  - Rapid US income growth after 2001 to 2007
  - Low US real interest rates. There is a discussion about why they were low. (a) Is it because the US Fed kept rates low to stimulate economic growth, and/or (b) Foreigners found US assets attractive and purchased US securities in massive quantities?
  - Consequently borrowing costs on mortgages were very low by historical standards. This encourages home ownership with low mortgage costs. This in turn meant that housing prices rose and many new houses were built.
3. Mortgage backed securities (MBS) and other related financial instruments became an enormously popular. Perhaps as much as \$7 trillion or so were issued.
  - Banks packed local mortgages and sold them
  - Financial Institutions repackaged these mortgages dicing and slicing them into what were perceived to be attractive bundles.
  - In packaging local mortgages banks sought to diversify their holdings since mortgages tend to be geographically concentrated for any one bank. (Recall that there are thousands of banks in the US unlike Canada.) However, by quickly selling their local mortgages, local banks had less incentive to monitor the quality of the mortgages that they issued. Mortgage backed securities became enormously popular.
4. Fannie Mae and Freddie Mac were entities that insured mortgages. They were originally established as government organizations to promote home ownership in 1938, but were ostensibly cut loose from government. By 2008 they were deeply in debt and were taken over by the US government.
5. Bond rating agencies gave high ratings to MBS. The ratings did not reflect their ultimate riskiness...nor should we expect it to do so. Prediction is very hard, especially about the future! The high ratings allowed MBS to be bought and sold as low risk assets.
6. US GDP growth peaked in 2004 and began to slow. By 2006-07 it was weak by historical standards

Year	GDP Growth
1999	4.1
2000	5
2001	0.3
2002	2.45
2003	3.1
2004	4.4
2005	3.2

2006	2.1
2007	1.1
2008	-2.6
2009	2.8

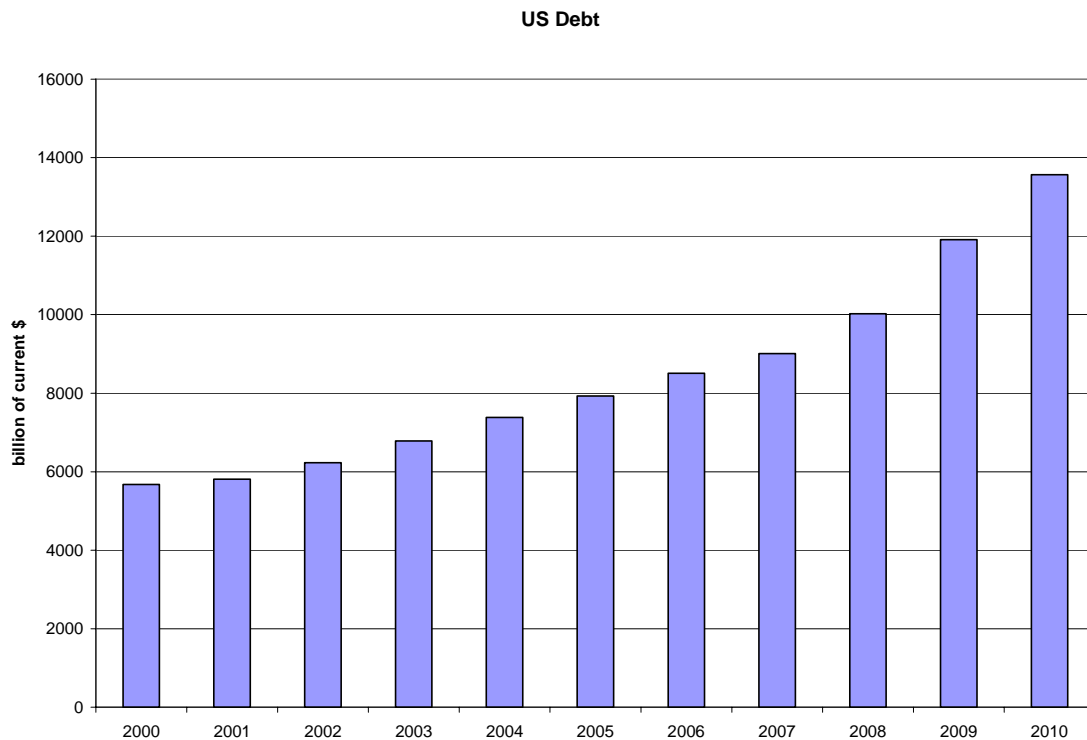
- House prices which had been rising, started to fall in July 2006.

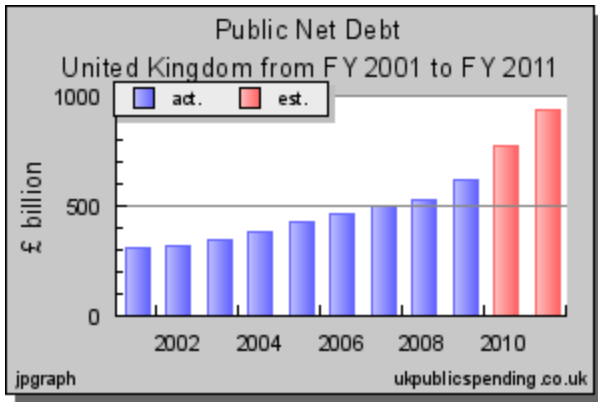


- MBS became very risky as many mortgages were not receiving payments and some were “underwater”: the house was worth less than the mortgage.
  - Insurance on mortgages did not cover the losses as Fannie Mae and Freddie Mac lost many (\$14) billions and AIG revealed that it had not set aside sufficient funds to cover even a fraction of the losses. It received \$180 billion to cover losses (and gave 80% of its stock to the US government) and Freddie and Fannie were effectively reset as government entities.
  - The market for MBS “locked up” as financial institutions could not sell them. Their complexity made valuing them in the short-run very difficult if not impossible.
  - Thus firms that owned MBS’s had trillions locked into securities of unknown value. A package of mortgages might have any number of mortgages that were failing - today or tomorrow or in the next several months or years. Firms would not purchase assets that possessed now highly uncertain income streams.
7. Normal business lending ground to a halt as financial institutions tried to figure out how badly they had been hurt.
  8. Counterparty risk inhibited normal lending as even overnight loans among financial institutions fell prey to the fear that the financial institution to whom the loan had been made might not exist tomorrow. The failure of major financial entities made this prospect very real

9. Governments stepped in as lenders of last resort albeit in a politically charged environment in which some firms were saved and others let fail. A good source on the banking crisis from a more European perspective is the book by Thomas F. Huertas, past chairman of the London-based European Banking Authority, *Crisis: Cause, Containment and Cure* (Palgrave Macmillan 2010)
- There were massive loans to institutions and firms
  - It was hard to know who would be saved and who would be allowed to go under.
  - Terms of loans were unsystematic and were institution dependent.
  - Some governments were unable to honour their commitments: Iceland and Ireland were bailed out by the UK and the European Union.
  - The US Federal Reserve purchased many “bad” assets as did other government regulators in the US and elsewhere.

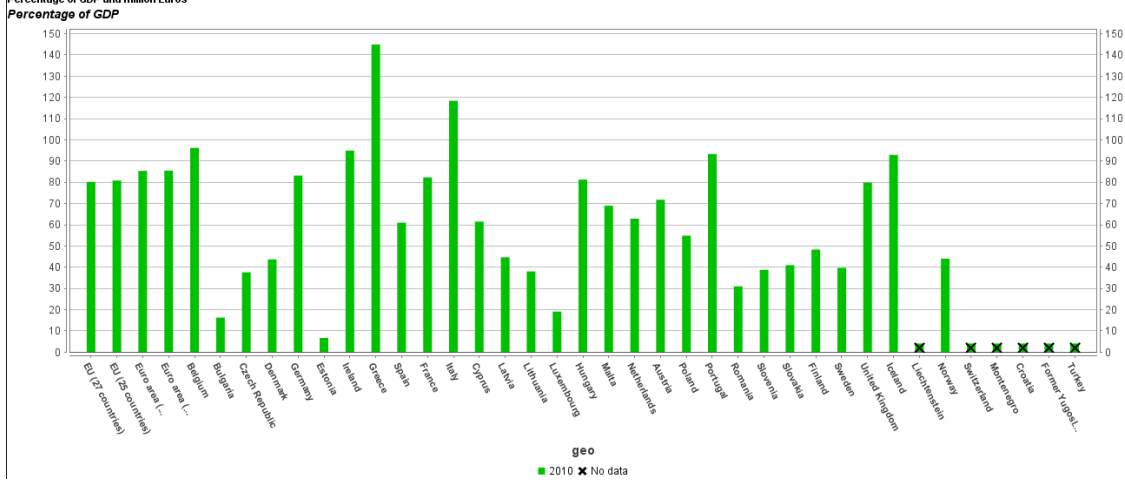
Governments have run massive deficits and have accumulated substantial debts in part because of their response to the financial crisis, but not entirely.





[http://www.ukpublicspending.co.uk/uk\\_national\\_debt](http://www.ukpublicspending.co.uk/uk_national_debt)

General government gross debt  
Percentage of GDP and million Euros



[http://epp.eurostat.ec.europa.eu/portal/page/portal/government\\_finance\\_statistics/data/main\\_tables](http://epp.eurostat.ec.europa.eu/portal/page/portal/government_finance_statistics/data/main_tables)