International Economics
Lecture 12
Causes of the Great Recession, 2007-2009

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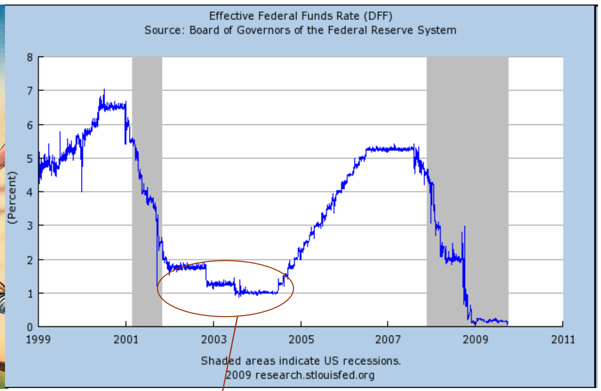
Preview

- US interest rate too low for too long
- Misconceptions on housing and housing bubble
- Global savings glut and global imbalances
- *The Great Moderation* and its unintended consequences
- Financial deregulation and “innovative” financial products
- Rating agencies

Greenspan's Legacy in Question

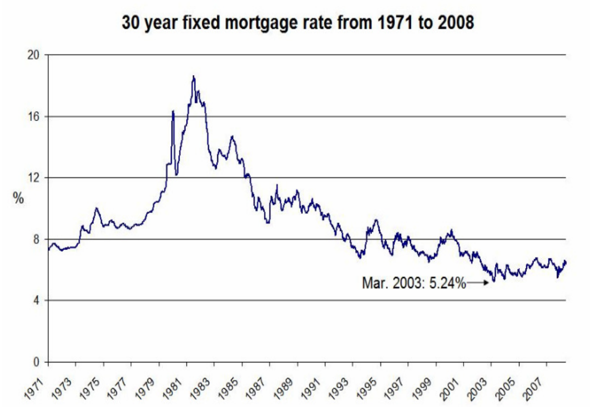
Economist Mag., January 2006



Interest rates stayed too low for too long...

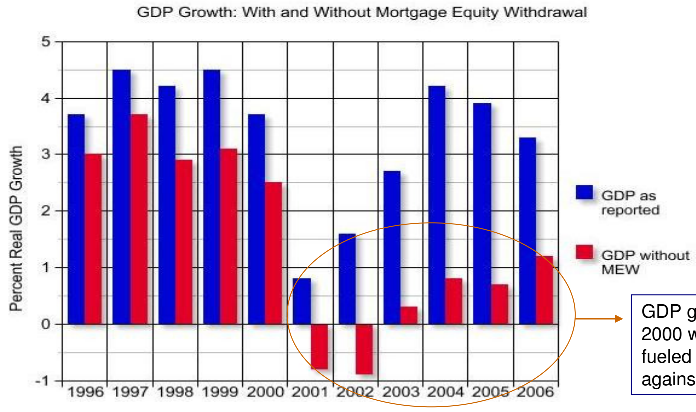
Housing: The sole growth engine after dot.com bubble and 9.11

- The low interest rate helped push down mortgage rate to historically low level



Housing: The sole growth engine after dot.com bubble and 9.11

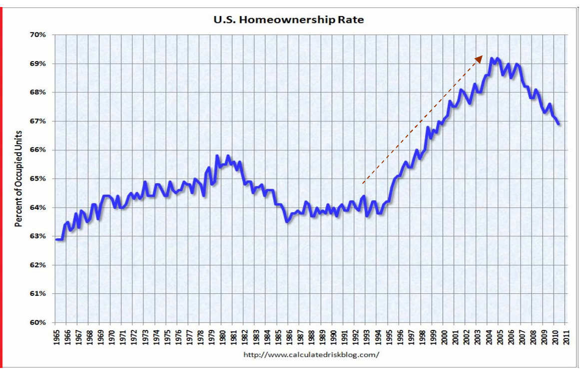
- Boom in mortgage refinancing and house owners' heavy borrowing against their mortgage equity.



GDP growth after 2000 was largely fueled by borrowing against home equity

Misconceptions toward Housing

- Housing prices never fell on a national basis
- House ownership and *the American Dream*

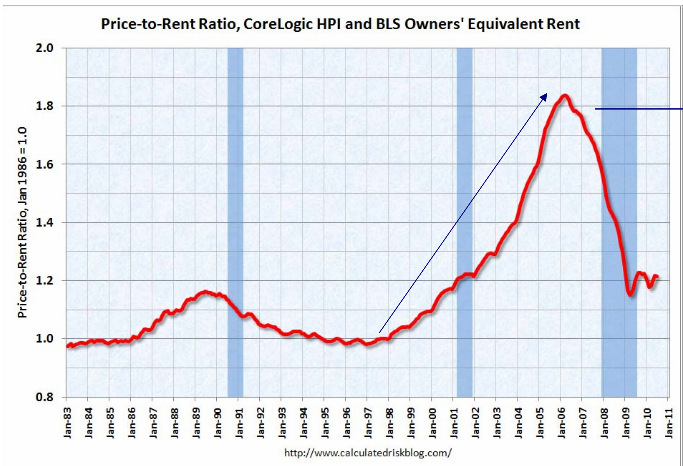


Time Magazine, 2005

Fast Changing Attitude toward Housing

Then (2005) → Now (2010)

Housing Bubble in Full Swing



The hyperbolic rise of home price relative to rent.

Black Swan Event -

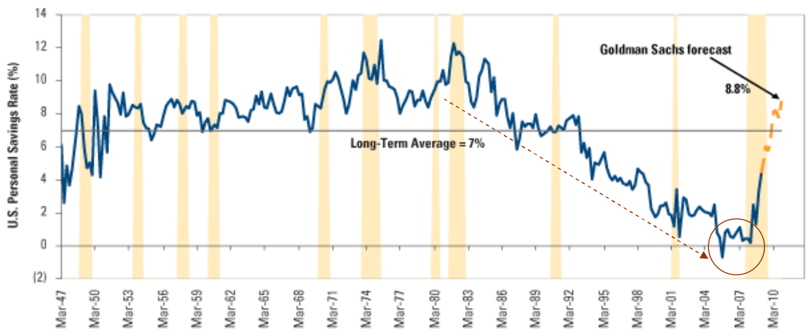
→ Before black swan was discovered in western Australia in 1697, nobody thought it's possible.

→When the rare events in our financial and economic system occurred, such as a nationwide decline of home prices, it threw all risk models into trash can, in which modellers incorporated zero probability of 'black swan' events.

Historical Low Personal Savings Rate

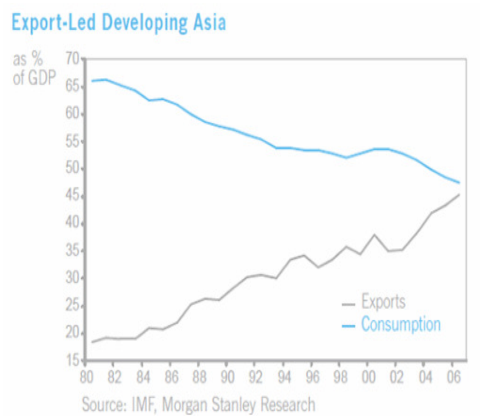
- US personal savings rate became negative in 2005

U.S. Personal Savings Rate



Source: Goldman Sachs Global ECS Research. As of June 18, 2009.

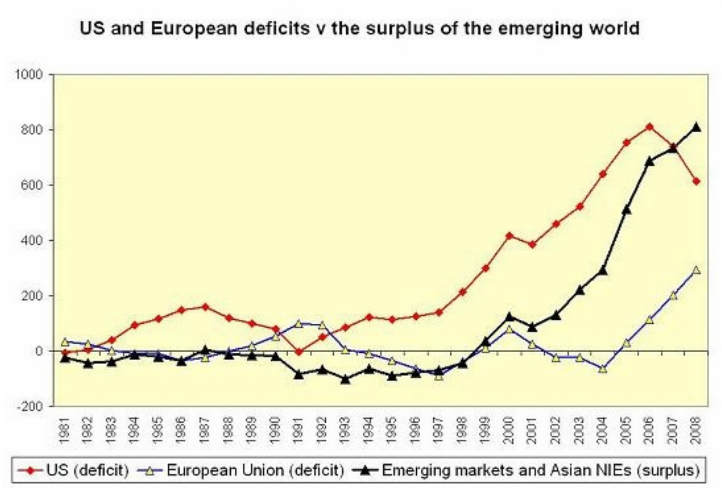
Export-led Asia Fueled American Consumption



Export Linkages to the US

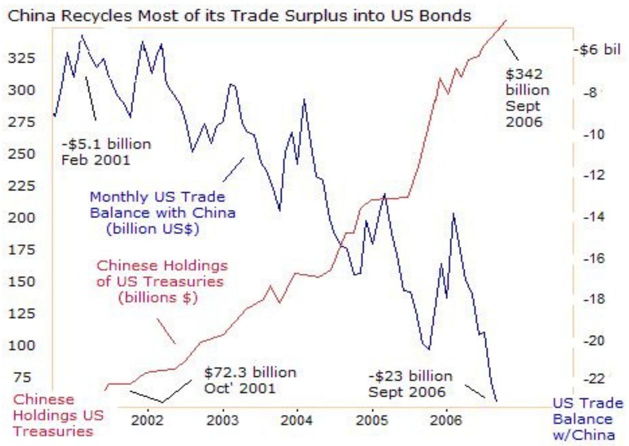
	Export Share of GDP	US Share of Exports
China	36.6	21.0
Japan	14.8	22.5
Korea	36.7	13.3
Taiwan	59.0	14.4
ASEAN	72.7	13.6

Global Imbalances in Full Swing…



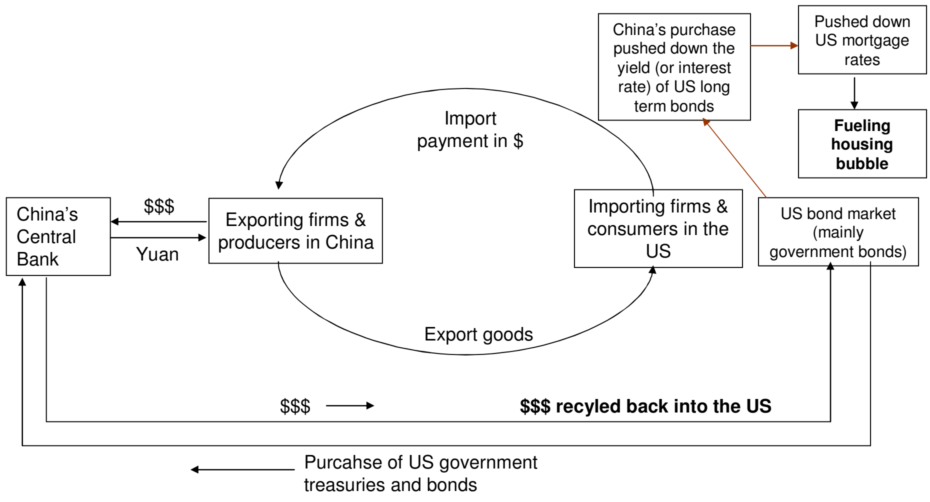
What to Do With The Huge Trade Surplus?

- Dollar recycling



- China's forex reserves reached $2 trillion in 2009
- 70% of those reserves is estimated to be in assets denominated in the US dollar
- China holds nearly $900 billion US treasury securities.

How Dollar Recycling Works

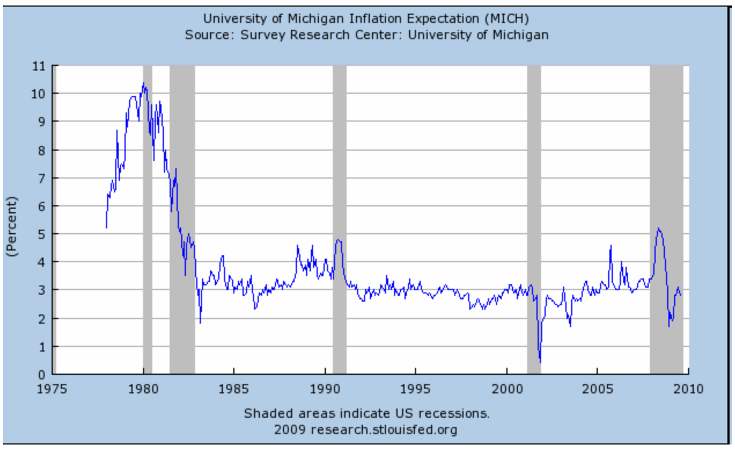


The Greenspan "Conundrum"

- Countries with huge trade surplus, China and Japan, recycled their dollars into the US by buying US treasuries and long-term debt, such as mortgage securities
- The increasing demand of mortgage debt increased prices for those securities and pushed down interest rate on those securities
- US mortgage rates were pushed down to the historically low level, adding extra fuel to the housing bubble
- Central bankers in the US were really puzzled by the historically low long-term interest rates, and Greenspan called it a "conundrum" (or a riddle)

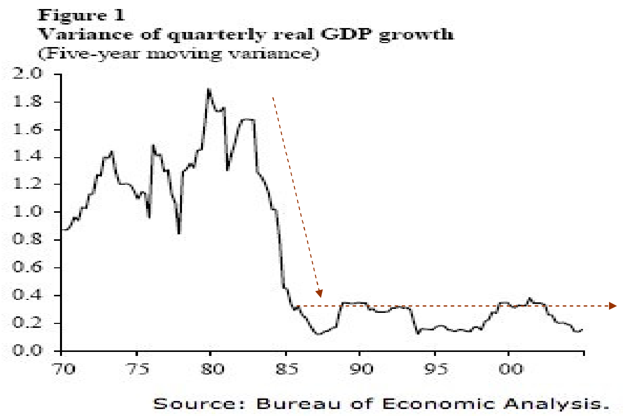
Great Moderation and Its Unintended Consequences

- Low inflation expectations since mid 1980s…



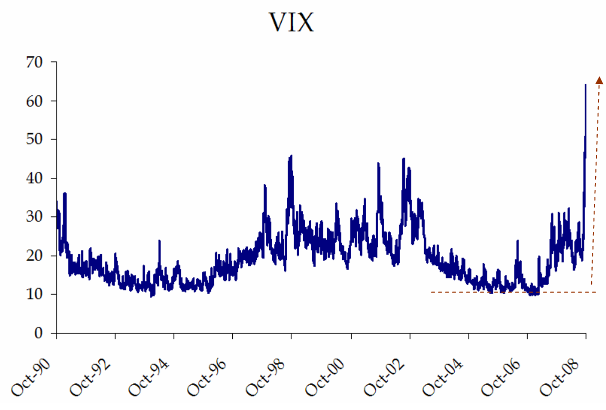
Great Moderation and Its Unintended Consequences

- Stable GDP growth and two minor recessions (1991 and 2001)
- Economists seemed to have cured recessions and business cycles → so-called *the Great Moderation*



Great Moderation and Its Unintended Consequences

- Stock market volatility (as measured by VIX) was also at historical low right before the crisis hit

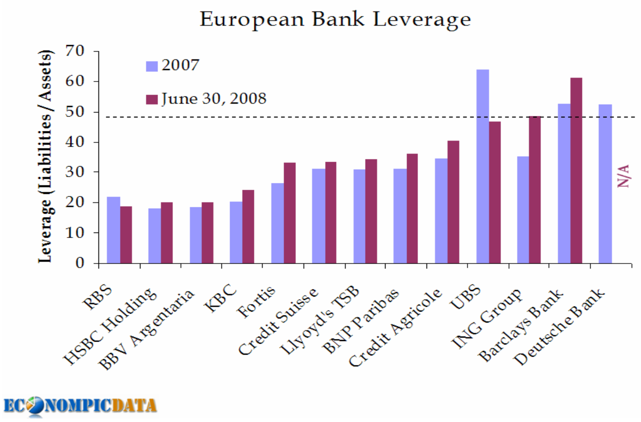


And compare to what happened soon afterward

In other words, people were too complacent with risks

Great Moderation and Its Unintended Consequences

- In a low-risk-and-low-return environment, banks were pressured to leverage themselves up to raise returns, and to beat their peers



Banks leveraged themselves up to an unbelievable level, more than 50:1 in some cases!!!

How Leverage Got People Killed

- **Investing without leverage:**

  you invest $100, and one year later,

  1) if you earn a profit of $10, then your return is 10%;

  2) if you lose $10, then your return is -10% - not a small loss, but you survive. You certainly hope with the rest $90, you will be smarter next time and find some better opportunties.

How Leverage Got People Killed

- **Investing with leverage:**

you have $100, but you borrow $900 from another party, and you invest a total of $1,000. The leverage ratio in this case is 9:1 (or 900:100)

When you borrow the money, you agreed with the other party that you must liquidate all your investments and pay back the loan if your loss exceeds 80% of your original capital of $100.

one year later...

1) if you still earn 10% profits, then your total profits will be $1000x10%= $100. But compared to your original capital, your return is 100%, which is 9 times larger than before.
→ **Your gain is magnified by investing with leverage.**

How Leverage Got People Killed

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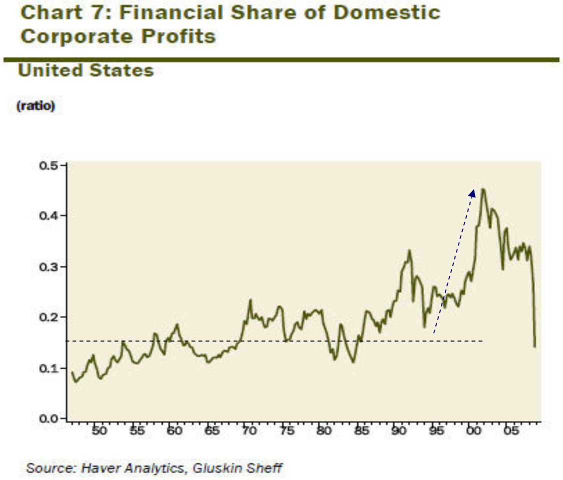
one year later...

2) if you suffer 10% loss with leverage, the 10% loss will become $100 with the total investment of $1000. In other words, your original capital got completely wiped out, and you suffer 100% loss.
You still hold $900, but under the agreement, you will have to sell all your investment holdings, and pay back the loan.
→ **Your loss is magnified by investing with leverage.**

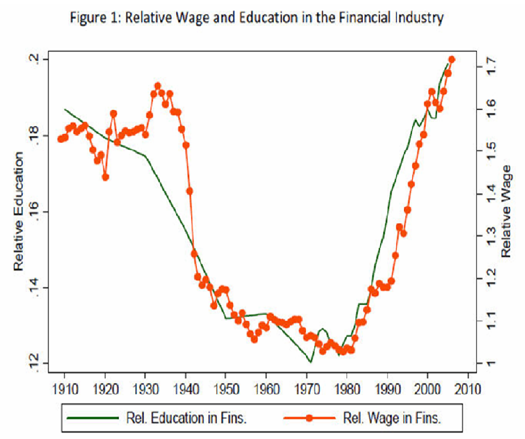
And remember, in our example, the leverage ratio is only 9:1. Imagine how great the loss will be if you have a leverage ratio of 50:1 – you not only lose your shirts, you certainly lose your pants, too.

Big Banks' Big Gamble



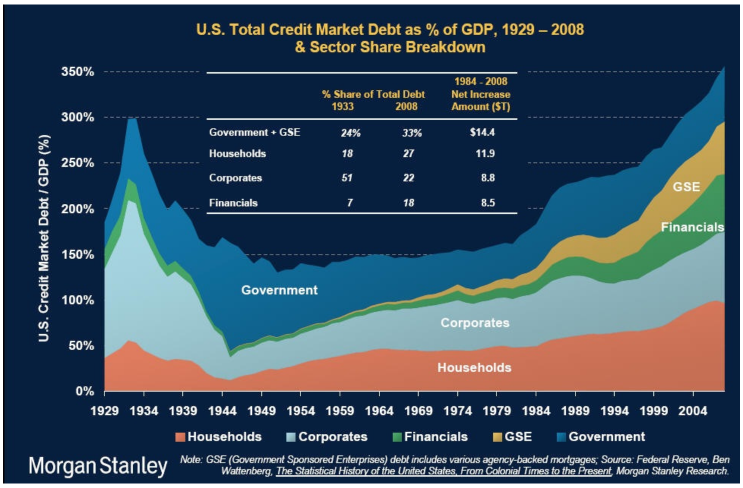
➔ Since mid 1980s, financial sector's profits share had risen from around 20% to 50% at the peak.

Better educated kids flocked to finance and the Wall Street...



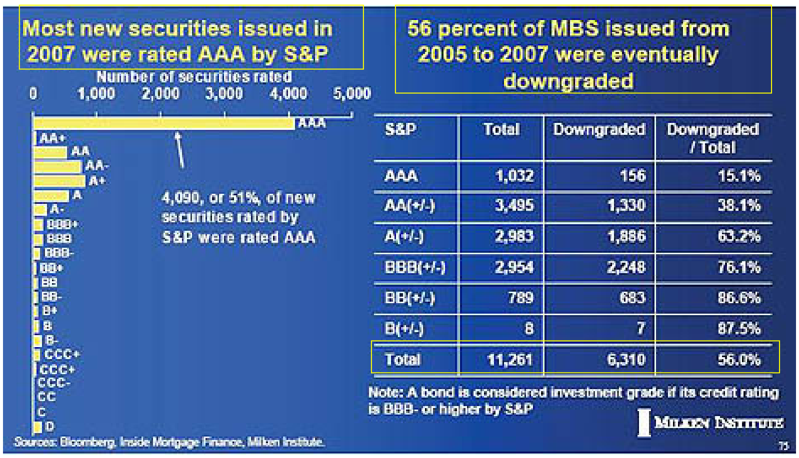
Increasing Risk Appetite Can Be Seen Everywhere

- Household, corporate, big banks…



	% Share of Total Debt 1933	% Share of Total Debt 2008	1984 - 2008 Net Increase Amount ($T)
Government + GSE	24%	33%	$14.4
Households	18	27	11.9
Corporates	51	22	8.8
Financials	7	18	8.5

The Role of Rating Agencies



S&P	Total	Downgraded	Downgraded / Total
AAA	1,032	156	15.1%
AA(+/-)	3,495	1,330	38.1%
A(+/-)	2,983	1,886	63.2%
BBB(+/-)	2,954	2,248	76.1%
BB(+/-)	789	683	86.6%
B(+/-)	8	7	87.5%
Total	11,261	6,310	56.0%