

The Roots of the Financial Crisis

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Some internet sources

- <http://www.crisisofcredit.com/>
- http://www.dailymotion.com/related/x684wa/video/xtbp7_milton-friedman-on-icelandic-state_news
- http://www.dailymotion.com/related/xtbp7/video/x684wa_the-last-laugh-george-parr-subprime_fun
- <http://www.youtube.com/user/nibelungensohn>
(the 1929 crisis)

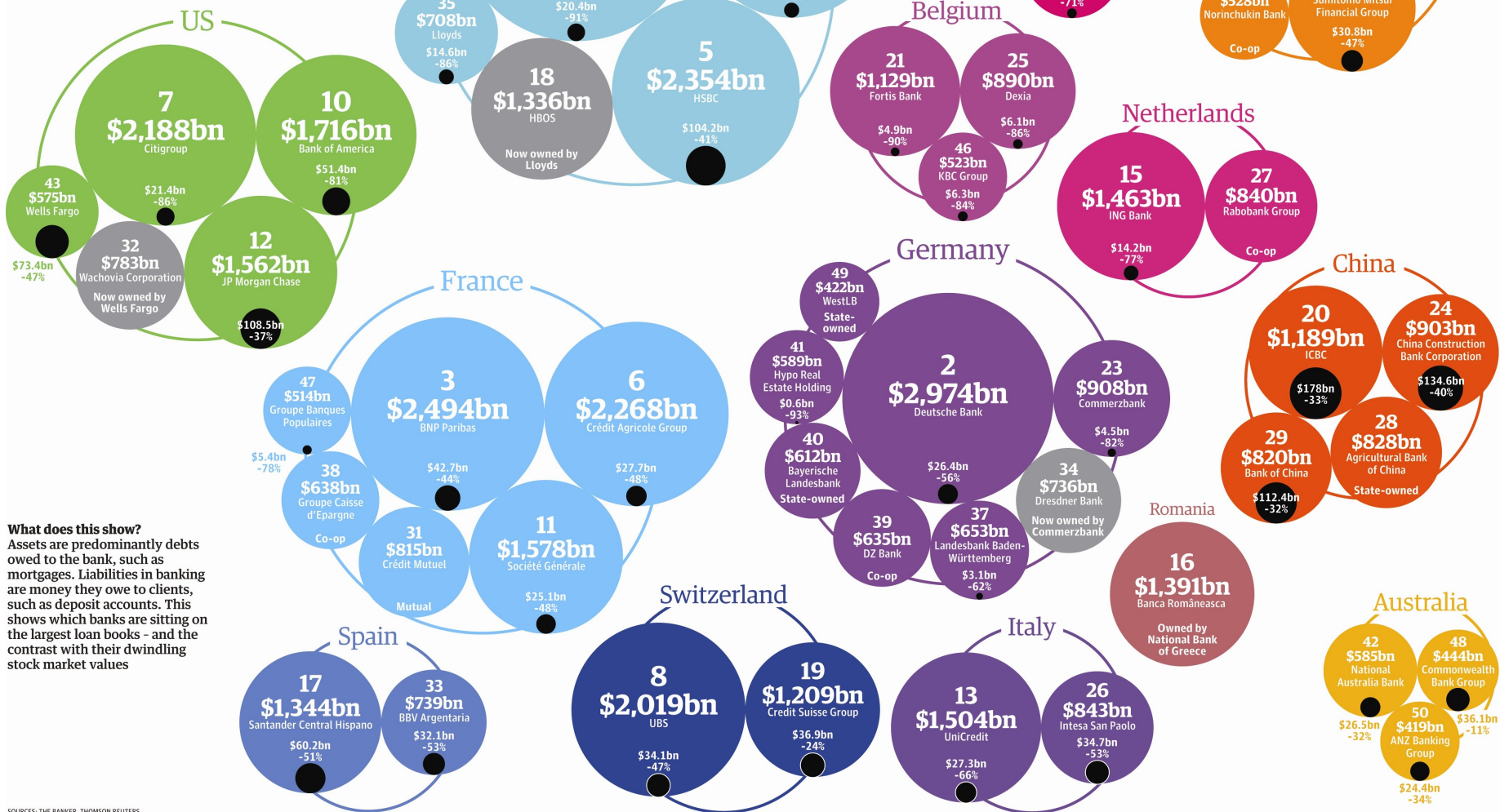
SOME ORDERS OF MAGNITUDE

Rank	Country	GDP (millions of USD)
—	<i>World</i>	60,689,812
—	<i><u>European Union</u></i>	18,394,115
1	<i><u>United States</u></i>	14,264,600
2	Japan	4,923,761
•	China (PRC)	4,401,614
•	Germany	3,667,513
•	France	2,865,737
•	United Kingdom	2,674,085
•	Italy	2,313,893
•	Russia	1,676,586
•	Spain	1,611,767
•	Brazil	1,572,839
•	Canada	1,510,957
•	India	1,209,686
•	Mexico	1,088,128
•	Australia	1,010,699

Source: IMF 2008

The world's top 50 banks - and the institutions that no longer exist

Ranked by The Banker magazine, based on latest assets figures



What does this show?
Assets are predominantly debts owed to the bank, such as mortgages. Liabilities in banking are money they owe to clients, such as deposit accounts. This shows which banks are sitting on the largest loan books - and the contrast with their dwindling stock market values

SOURCES: THE BANKER, THOMSON REUTERS

- Tremendous blackmailing potential
- Some economists talk about looting (Akerlof and Romer) via bankruptcy for profit
- Prospect of a tremendous moral hazard

WHERE IT ALL STARTED

The American property bubble

- American property prices were growing in an accelerating fashion since the end of the 80's. If we use the year 2000 as a base (100), then by 2004 they reached 146%, by 2006 180 %.
- This cannot be explained by population increase (about 1 – 1.3% per year) or the increase of per capita income (more or less stagnant in this period).
- In 2000 the number of privately owned homes in the USA was 115 million.
- Between 2000-2004 about 1.8 – 1.9 million new homes were built each year, about 7 million in total.
- The total housing stock grew by about 6%, roughly the increase in population.
- **Why did prices grew by 80% then?**

Mortgage-loan conditions in an earlier period (say, in the 70's)

- Downpayment 25%
- Thorough and extended investigation of credit-worthiness
- Stable job or income as a condition

These conditions posed unsurmountable obstacles for many, they could not get a loan, had to rent their homes, rents exceeded monthly payments on loans many times.

With time, credit conditions had become softer and softer

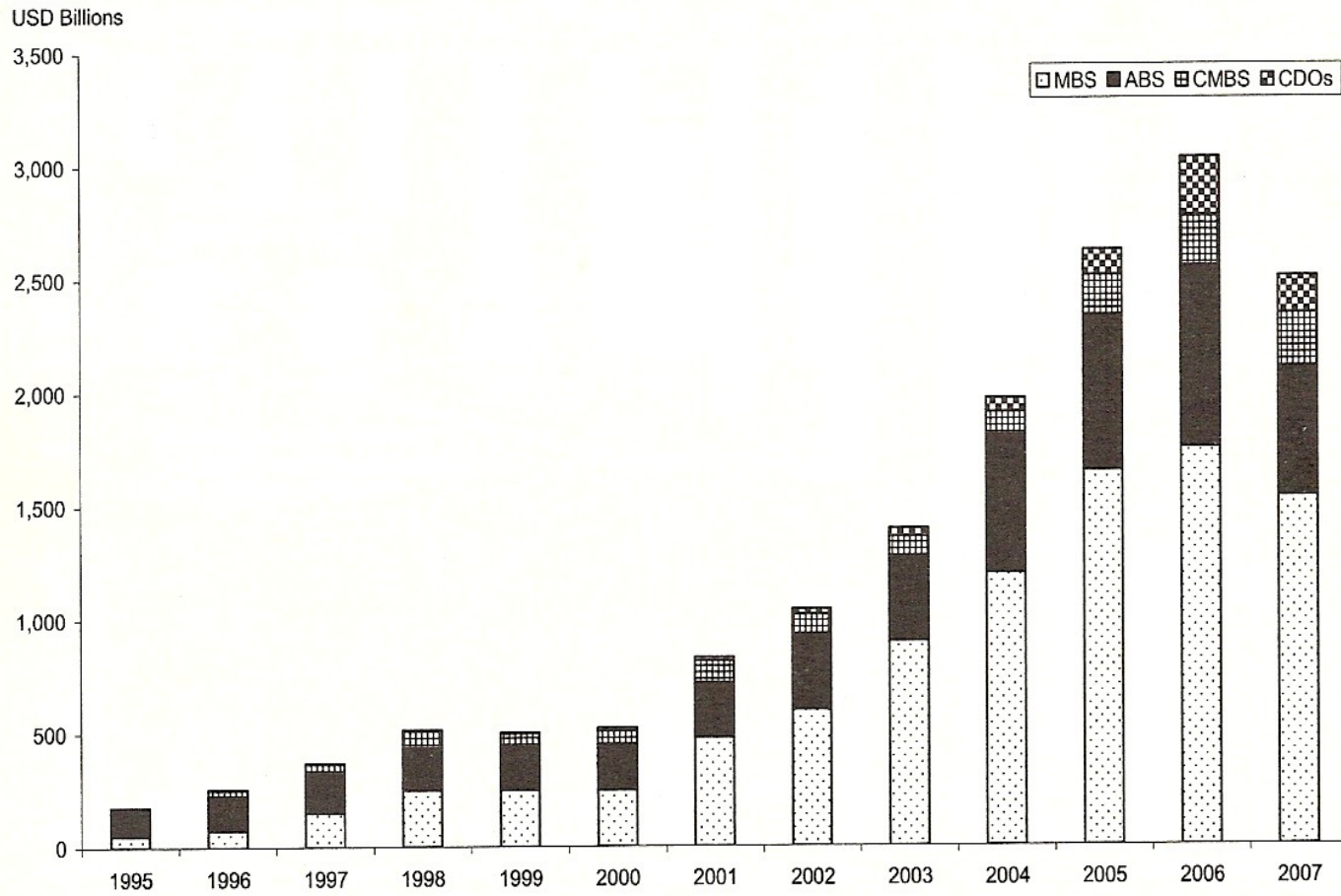
- Earlier the loan was extended by the bank itself, therefore it was directly interested in the reliability of the collateral.
- **Securitisation** (the re-selling of credit packages) started to spread on a large scale around 2000.
- From 2000 on most of the loans were extended by the mortgage broker (e.g. Countrywide) who then passed it on to the bank (e.g. to Bear Stearns)

Until 2008 BSC had been one of the largest international investment banks, security traders and brokers, with a stock of derivatives of nominal value of \$ 13,4 trillion, and a leverage ratio of 35.5. As a consequence of fair value accounting (mark to market), its two hedge funds (Bear Stearns High-Grade Structured Credit Fund and Bear Stearns High-Grade Structured Credit Enhanced Leveraged Fund) cracked in March 2008, the FED tried to save BSC, at the end of May JP Morgan bought it up at \$10 a share (to be compared to the earlier \$172). The CEO's of the two hedge funds went to prison.

Securitisation

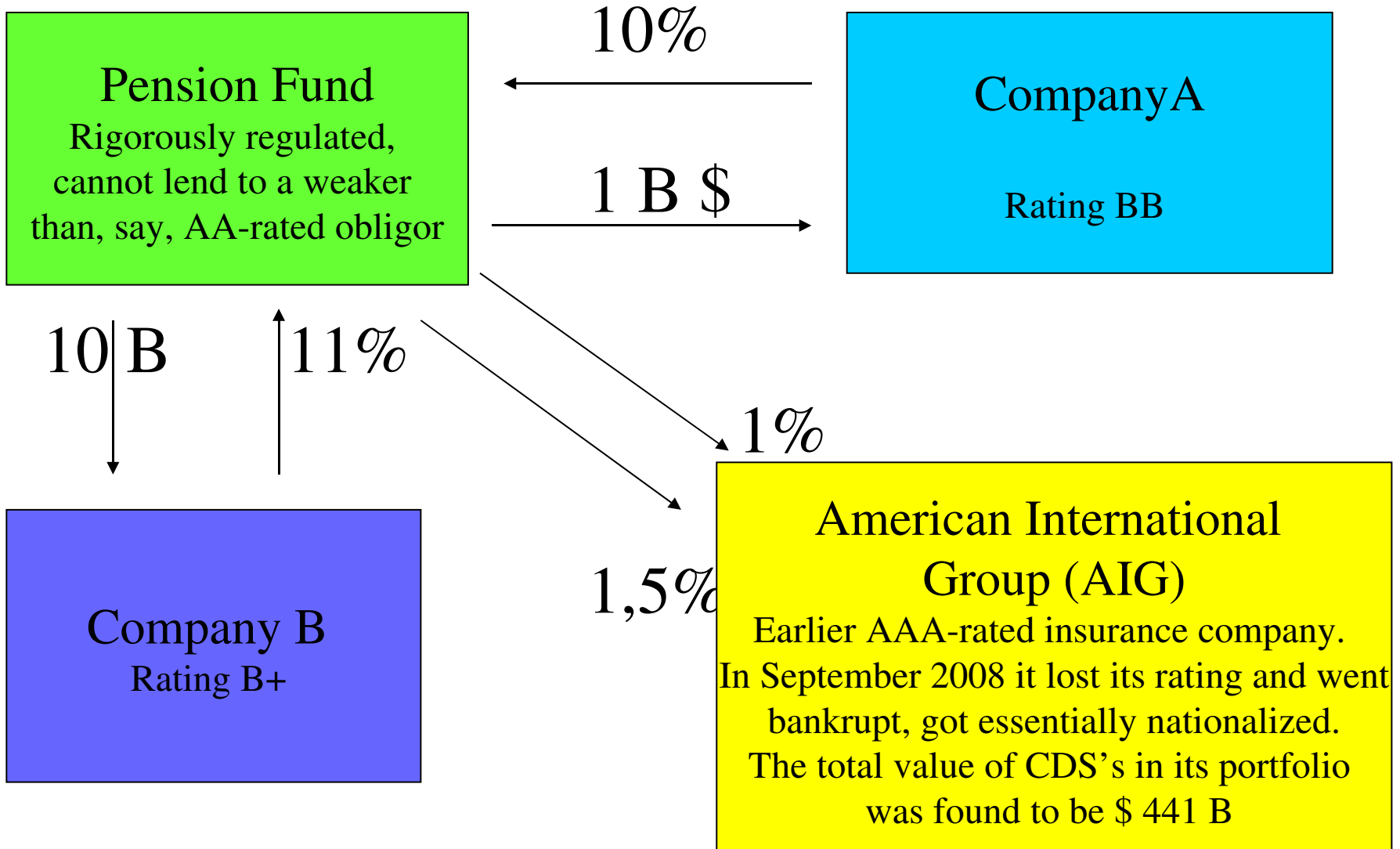
- Huge quantities of claims put into tradeable packages, sorted in typically three, in principle homogeneous, risk-categories, and rated by the rating agencies (e.g. Moody's, Standard & Poor, Fitch, etc.). Via the **credit derivatives**, the best packages get an AAA rating, and are sold to pension funds, foreign banks, China, etc.. The bank gets a fee for its services, but since it does not carry the risk of the package any more, it does not have an interest in quality assurance: **originate to distribute business model**.
- Reliable rating of these packages is, however, almost impossible. (Gaussian copula – „the formula that brought down Wall Street”)
- The rationale behind securitisation is to distribute risk among the economic players, furthermore, to bring the assets tied down in property back onto the market, thereby increasing liquidity.

Surge in securitisation



Source: Lehman Brothers.

Credit Default Swap (CDS)



The buyers

- Up until 2006-07 delinquency of mortgage loans had been very low. They got good (AAA) rating.
- Investors (China, pension funds, hedge funds) wanted them, because they paid ~7%, at variance with the traditionally popular treasury bills that were kept at the **artificially low level** of 1%.
- In order to keep up the artificial high demand for mortgage loans, accessibility was made easier and easier, worse and worse clients were deemed to be suitable for credit.

Subprime lending; liar loans accounting for 40% of mortgage issuance in 2006; NINJA loans; migrant workers buying houses in Florida; predatory lending, after a teaser period payment resetting to an index plus 4-6%; mortgage loan to cover consumption.

Why was the default rate so low?

- As long as prices go up, it is impossible to lose on mortgage lending, because the value of collateral is growing.
- E.g. I buy a house for \$ 1 M, next year I lose my job, have to give up the loan, I sell the house for \$ 1.1 M, pay up to the bank and I am even left with a certain amount of money.

When the trend turns...

- Many bad obligors give up their loans and sell their houses, an oversupply is created on the market. The first signs of this showed up in the US in 2006.
- Prices start to fall, the bank is losing on every foreclosure, because it cannot sell the house at the original price.

Positive feedback

- First financing becomes easier and easier, this creates an artificial demand, prices grow, frequency of defaults decreases, credit risk decreases, more and more institutions join in the funding campaign, the client base is getting wider and wider, lending standards decline. The mediating institutions (mortgage broker, bank) are not interested in the control and mitigation of risk, only in the increase of volume, while the end users rely on the rating agencies.
- When the trend turns, all this goes into reverse gear, and generates defaults *en mass* through **leverage** .

Reliability of rating

- Rating agencies are important gatekeepers of financial markets. In principle, they are independent, in practice they survive on the fees received from market participants.
- Regulation assigns a fundamental role to them. On less developed markets most of the companies are not rated. The fate of firms, banks, countries may depend on rating.
- Packages of securitized mortgage loans were rated on the basis of the declaration of the seller. There were cases when in the Spring of 2008 the rating of such a package fell from AAA to junk level in one week.

Government Sponsored Enterprises

Federal National Mortgage Association (Fannie Mae)

Established in 1938 in order to provide housing loan for poorer families. Under the New Deal program it was assigned to the Federal Home Mortgage Association. In 1968 the government transformed it into a public company, in order to remove it from the federal budget.

Federal Home Loan Mortgage Association (Freddie Mac)

Established in 1970 as a competitor to Fannie Mae.

Fannie és Freddie obtained a special status – they became government sponsored enterprises (GSE). In principle they did not get a direct government guarantee, but they enjoyed tax relief and implied credit warranty. This arrangement created a high degree of **moral hazard**, and was the subject of constant debate.

- On the whole, the activity of GSE's can be regarded as successful, they helped to make the US population property owners to a very high degree (by 2005, 69%).
- At the beginning they followed a conservative lending policy; in the course of time this has loosened up.
- By 2008 Fannie and Freddy together had financed resp. guaranteed about half of the \$12 trillion (12×10^{12}) US property market. This also implied that **they could not be allowed to go bankrupt.**

Loss of standards

- In 1999, under pressure from the Clinton government, Fannie Mae started to extend credit also to low income families. Predatory lending appeared already then, but at this point it was still suppressed by regulation. This regulation was stripped in 2004, which triggered the last phase of the subprime madness.
- There had been warning signals since 1999 that the GSE's are piling up significant risk, which would not come to the surface only as long as the market was growing.
- In 2002 Bush signed the Single-Family Affordable Housing Tax Credit law – in propaganda lingo: Renewing the Dream.

- In 2003 the government wanted to strengthen the regulation of GSE's, but this failed in Congress, due to the resistance of the democrats and the intensive lobbying of Fannie Mae.
- In 2003 Bush signed the American Dream Downpayment Act into law, which provided help to low income families with downpayment.
- The support for home-creating programs was tripled (e.g. for people offering voluntary community work).
- \$ 440 B was set aside to guarantee the GSE's.
- In 2006 the initiative to bring the GSE's under more rigorous control, and to reveal the background of systematically distorted balance sheets, failed.

The business model of GSE's

- They buy the loan from the mortgage broker and pass it on to the investors. Securitisation started back in the 30's at Fannie Mae. Although the government did not provide a formal guarantee, the general expectation was that in the event of crisis it would save the GSE's. This implied warranty made the financing of GSE's cheaper. (They could get cheaper loans.)
- On September 7, 2008, the Federal Housing Financial Agency took control of Fanny and Freddie.

COMPONENTS OF THE SUBPRIME CRISIS

- National Home Ownership Strategy – an extremely wide PPP „to support affordable housing” by help of „**creative financial techniques**”.
- Active encouragement by regulators (FED, SEC) of the OTC trading of derivatives and securities, which made the proper valuation of these assets and proper risk management at banks impossible.
- Introduction of fair value accounting in 2007.

Affordable housing

- At the end of the 80's the savings and loan industry largely lost its capital, in several parts of the US property prices fell by double digits. By 1991 the GSE's had become essentially insolvent, only the implicit guarantee of the Treasury kept them alive. At this point the construction, property and GSE lobby created an extended alliance, in order to encourage the financial sector to support home ownership.
- This alliance waged an uninhibited campaign on Capitol Hill: they managed to make the „program of affordable home” a central element of local and federal policy.
- The GSE's distributed generous presents and campaign donations to key members of Congress.

- Banks found an opportunity to gain the favour of politicians and local activists, especially by conspicuously satisfying the requirements of the Community Reinvestment Act (CRA) and by lending to minorities. They made a 100% loss on the CRA loans, these were essentially campaigning donations.
- By the beginning of the the 2000's „affordable housing” and „creative financing” had become an essential part of the policies of every mortgage lender. The construction and property industries mobilized all their influence, and home building had become **promoted into the role of the motor of a slowing down economy.**
- From the 70's on the Construction-Property-Mortgage Industrial Complex had been gradually building up, and did its best to construct about 2 million houses each year, irrespective of what would happen with them afterwards.

- The National Partners in Home Ownership program was launched in 1994 with the participation of property brokers, the construction industry, GSE's, mortgage lenders and the Department of Housing and Urban Development. It comprised about 1500 private firms and government agencies, and became the largest ever PPP program. Its declared purpose was to „spread creative financing methods and extend mortgage lending”.
- And indeed: from 1995 on the homeownership ratio and property prices started to grow. This was accompanied by the erosion of lending conditions via the automatized analysis of credit worthiness and the declining documentation criteria. All this started in the market of GSE's and is a **direct consequence of the moral hazard** produced by the implicit government guarantee.

Monetary policy and regulatory errors

- After the burst of the technology bubble (2000) and 9/11 (2001) the FED reduced interest rates in quick steps, down to 1%, with the intent of supporting the US economy.
- In addition, in 2001 the Bush Administration, working with a Republican Congress, enacted a monumental tax cut of \$1.6 trillion - the largest in U.S. history - which kept the economy humming until the financial collapse of 2008.
- In the same period there was an unprecedented liquidity glut in the world (China, India, Arab oil states, Russia, Japan, speculators), this capital sought better returns than 1%. The monetary policy of low interest rates drove the capital towards high risk investments.

- Capital adequacy regulation made banks interested in securitisation.
- Turning a century old trend around, Congress, FED and other regulators actively supported the spread of over the counter (OTC) deals and out of the balance sheet items.
- This made it possible for Wall Street to fabricate packages of opaque, uncontrolled, and untraded products on an assembly line.

- The originate to distribute business model helped to create a dangerous system of **perverted incentives** (astronomical bonuses, short term interests, compensation linked to short term performance), which was tolerated by regulation, despite consistent warnings over a decade.
- The mass of colletterized debt obligations and structured investment vehicles created a totally obscure and unregulated shadow banking system.

- By 2007 the total nominal value of derivatives had reached the level of 20 times the gross product of the world: about \$ 10^{15} ! (The net value is, of course, just a fraction of this – the total Gross Product of the World is of the order of \$ $6 \cdot 10^{13}$, but for the wide distribution of maturities clearing takes a long time.)
- Players are circularly insuring each other, essentially themselves, a total nonsense. Regulation did nothing to demolish this shadow banking empire, and understood nothing of the dangers of the collective nature of this system.
- Mainstream economics hardly gave any signals of the hidden dangers.

- The growth of the OTC market turned around a century old trend: In the wake of the crises of the 19th century and the beginning of the 20th century, the laws of the US essentially forbade trading outside organized exchanges, so that prices could be discovered and counterparty risk made public.
- In contrast, over the past decade the overwhelming bulk of credit derivatives were traded over the counter.
- Because of their complicated valuation, derivatives are typically off the balance sheet items.
- Nobody knows how much of these toxic items can still be found in the portfolios of the various institutions, which is the main cause of suspicion and global lack of trust.
- Even such technicalities played a role as the transition to a decimal system in 2001 which diminished the fees of securities' traders and drove them towards the OTC market where spreads were higher.

- The CDO's can be vastly different from each other, contracts cannot be compared (400 pages long contracts), no obligatory deposit or reserves against risk, an infinite amount of risk can pile up at the buyer.
- This may also form the basis of unlimited litigation, buyers are accusing sellers with perfidy.
- Hedge funds that had grown to systemic importance over the past decade and that had been working on the basis of often extreme leverage (such as 1 to 60) went from producing double digit profits to astronomical loss, and this sometimes within the space of a few hours!

Fair value accounting

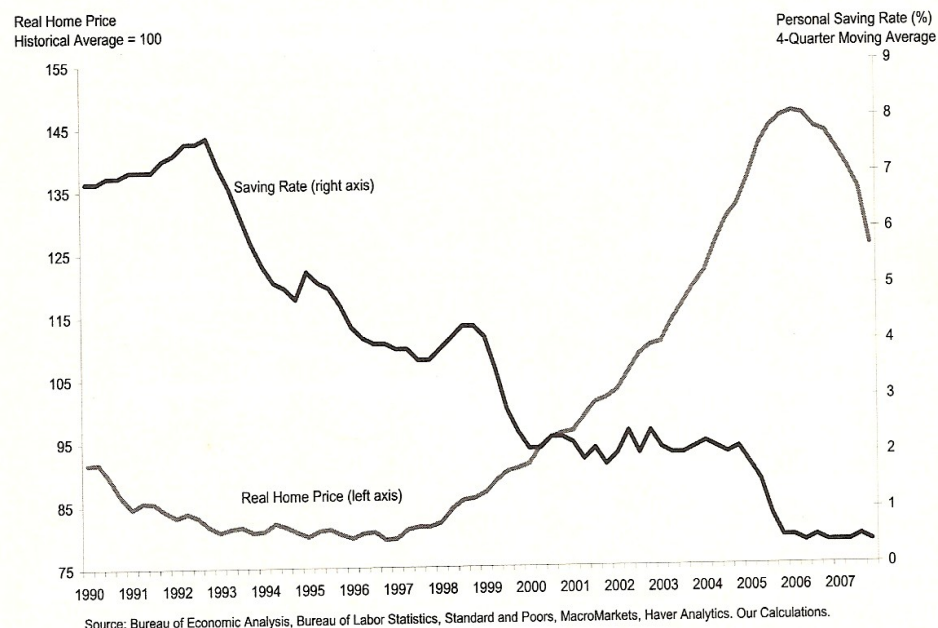
- Traditionally it was the price of purchase that figured in the books, irrespective of the asset's actual price. This had been criticised by economists, accountants, and regulators alike for decades.
- In 2007 the Financial Accounting Standards Board (FASB), a branch of SEC, suddenly introduced the obligation to go over into fair value accounting: „If available, a **quoted market price** in an active market is the best evidence of fair value.” This is basically the price at which the item can be sold on the market, and its use is indeed logical, as long as there is enough liquidity in the market.
- Under the conditions prevailing during a crisis, however, nothing can be sold, not even the items that perform satisfactorily. Totally illiquid OTC items are especially hard to sell, as they do not even have an agreed price.

- **Price is not the same as value!** (Whatever is the meaning of value...)
- The introduction of fair value accounting brought down many firms that would otherwise have survived.
- On the other hand, valuation on the basis of actually realizable price is like showing ones hand: the moment of truth.
- The „true” valuation scheme would be something like assigning fitness to the species of a biosystem.

CONFLICTING VALUES

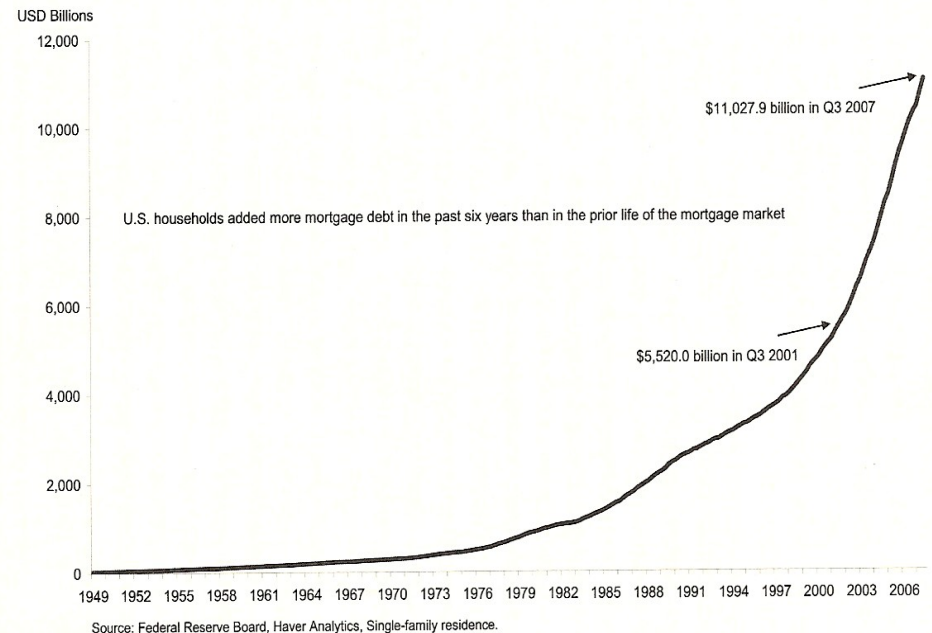
- Runaway property prices: society is automatically getting richer – for a while.
- Credit: creates the possibility of anticipated consumption. Absolutely necessary as long as it helps creating new resources, but detrimental, if it supports excessive consumption and instant gratification.

US personal savings rate



- Monetary policy: low interest rates support economy, but make it lazy. Time has a natural value, an artificial deviation switches off selection.
- Supporting home ownership is laudable, but it is impossible to maintain a state of affairs where Chinese laborers are extending housing credit to jobless Americans.

U.S. Household Mortgage Debt



- Artificially pumping up one branch of industry, and a fairly low-tech one at that, cannot be the locomotive of economy. The growth of consumption cannot exceed the growth of productivity for long periods.
- Under the pretext of supporting home ownership, politicians, lobbies, and banks created a mechanism from which they extracted gigantic amounts of money.
- The public happily accepted that due to the efforts of the Wall Street wizards they will get the house, the car, and anything that they fancy by magic.
- The liquidity liberated from mortgages allowed a tremendous demand to develop in the market of consumer goods, and increased meaningless consumption.

- We all pay the price of the orgy of irresponsibility and greed by a global crisis.
- Due to the trillions pumped into the finance industry, it starts to behave again as if nothing has happened. US stocks have appreciated by 60 % compared to the lowest point in March 2009. A new bubble? (Gordy: We would need an order of magnitude more severe crisis in order to have some serious change in the system.)
- But: The real economy will suffer for a long period (Hartmann: a protracted recession.)
- The long term political consequences are still impossible to predict (G8 to G 20 to G?).

- Most mainstream economists could not understand and did not warn the public of the approaching crisis.
- An important component of the degeneracy of markets is the **distorted model of a human being** (homo economicus) widely taught in business schools and economic departments all over the world even now, as well as the self-acquittal justified by the myth of the invisible hand.
- The complexity of markets barely starts to dawn on us even now.

DOES REGULATION STAND
A CHANCE?

Is it possible to control and regulate such a system?

- In its present form the system is opaque, unknowable and uncontrollable.
- The complexity of the system must be reduced, even at the price of reducing liquidity.

More concretely:

- Trading must be driven back to the exchanges where prices can be discovered.
- Derivatives must be valued and should figure in the books and reports.
- The extent of securitisation must be limited, banks should be obliged to keep a substantial part of the credit packages.
- Leverage must be limited
- The incentive systems should serve the institutions long term stability and interests
- **Regulation must become adaptive.**

The report of the de Larosiere Committee

- Jacques de Larosiere: high position French administrator
- 1978-87: director of IMF
- 1987-93: governor of the Banque de France
- 1993-98: president of EBRD

- The report analysing the crisis was submitted to the EU Commission in February 2009

Excerpts from their recommendations

*Recommendation 1: The Group sees the need for a fundamental **review of the Basel 2 rules**. The Basel Committee of Banking Supervisors should therefore be invited to urgently amend the rules with a view to:*

- gradually **increase minimum capital requirements**;*
- **reduce pro-cyclicality**, by e.g. encouraging dynamic provisioning or capital buffers;*
- introduce **stricter rules for off-balance sheet items**;*
- tighten norms on **liquidity management**; and*
- strengthen the rules for bank's internal control and risk management, notably by*

*reinforcing the **"fit and proper" criteria** for management and board members.*

*Furthermore, it is essential that rules are complemented by more **reliance on judgement**.*

Recommendation 3: Concerning the regulation of **Credit Rating Agencies** (CRAs), the Group recommends that:

- within the EU, a strengthened CESR (Committee of European Securities Regulators) should be in charge of registering and supervising CRAs;
- a fundamental **review of CRAs' business model**, its financing and of the scope for
- separating rating and advisory activities should be undertaken;
- **the use of ratings in financial regulations should be significantly reduced** over time;
- the rating for structured products should be transformed by introducing distinct codes for such products.

It is crucial that these regulatory changes are accompanied by increased **due diligence and judgement by investors** and improved supervision.

Recommendation 4: *With respect to **accounting rules** the Group considers that a wider reflection on the mark-to-market principle is needed and in particular recommends that:*

- expeditious solutions should be found to the remaining accounting issues concerning complex products;*
- accounting standards should not bias business models, promote pro-cyclical behaviour or discourage long-term investment*
- the IASB (International Accounting Standard Board) and other accounting standard setters should clarify and agree on a common, transparent methodology for the valuation of assets in illiquid markets where mark-to-market cannot be applied;*
- the IASB further opens its standard-setting process to the regulatory, supervisory and business communities;*
- the oversight and governance structure of the IASB be strengthened*

Recommendation 6: *The Group considers that:*

- *Competent authorities in all Member States must have **sufficient supervisory powers**, including sanctions, to ensure the compliance of financial institutions with the applicable rules;*
- *Competent authorities should also be equipped with strong, equivalent and deterrent sanction regimes to counter all types of financial crime.*

Recommendation 7: *Concerning the "**parallel banking system**" the Group recommends to:*

- *extend appropriate regulation, in a proportionate manner, to all firms or entities conducting financial activities of a potentially systemic nature, even if they have no direct dealings with the public at large;*
- *improve transparency in all financial markets - and notably for **systemically important hedge funds** - by imposing, in all EU Member States and internationally, registration and information requirements on hedge fund managers, concerning their strategies, methods and leverage, including their worldwide activities;*
- *introduce appropriate capital requirements on banks owning or operating a hedge fund or being otherwise engaged in significant proprietary trading and to closely monitor them.*

Recommendation 8: Concerning securitised products and derivatives markets, the Group recommends to:

- *simplify and standardise over-the-counter derivatives;*
- *introduce and require the use of at least one well-capitalised central clearing house for credit default swaps in the EU;*
- *guarantee that issuers of securitised products retain on their books for the life of the instrument a meaningful amount of the underlying risk (non-hedged).*

Recommendation 10: In order to tackle the current absence of a truly harmonised set of core rules in the EU, the Group recommends that:

- *Member States and the European Parliament should avoid in the future legislation that permits inconsistent transposition and application;*
- *the Commission and the level 3 Committees should identify those national exceptions, the removal of which would improve the functioning of the single financial market; reduce distortions of competition and regulatory arbitrage; or improve the efficiency of cross-border financial activity in the EU. Notwithstanding, a Member State should be able to adopt more stringent national regulatory measures considered to be domestically appropriate for safeguarding financial stability as long as the principles of the internal market and agreed minimum core standards are respected*

Recommendation 11: *In view of the corporate governance failures revealed by the current financial crisis, the Group considers that **compensation incentives** must be better aligned with shareholder interests and long-term firm-wide profitability by basing the structure of financial sector compensation schemes on the following principles:*

- the assessment of **bonuses** should be set in a multi-year framework, spreading bonus payments over the cycle;*
- the same principles should apply to proprietary traders and asset managers;*
- bonuses should reflect actual performance and not be guaranteed in advance.*

***Supervisors should oversee** the suitability of financial institutions' **compensation policies**, require changes where compensation policies encourage excessive risk-taking and, where necessary, impose additional capital requirements under pillar 2 of Basel 2 in case no adequate remedial action is being taken.*

Recommendation 12: *With respect to internal risk management, the Group recommends that:*

- *the **risk management function** within financial institutions **must be made independent** and responsible for effective, independent stress testing;*
- *senior **risk officers should hold a very high rank** in the company hierarchy, and*
- *internal risk assessment and proper due diligence must not be neglected by **overreliance on external ratings**. Supervisors are called upon to frequently inspect financial institutions' internal risk management systems.*

Recommendation 16: *A new body called the **European Systemic Risk Council** (ESRC), to be chaired by the ECB President, should be set up under the auspices and with the logistical support of the ECB.*

- *The ESRC should be composed of the members of the General Council of the ECB, the chairpersons of CEBS, CEIOPS and CESR as well as one representative of the European Commission. Whenever the subject discussed justifies the presence of insurance and securities supervisors, the Governor could choose to be represented by the Head of the appropriate national supervisory authority;*
- *The ESRC should pool and analyse all information, relevant for financial stability, pertaining to macro-economic conditions and to macro-prudential developments in all the financial sectors.*
- *A proper flow of information between the ESRC and the micro-prudential supervisors must be ensured.*

In a larger context

Regulation may mitigate some of the worst consequences of the disfunctioning of financial intermediation, but will not resolve the larger problems of the world economy, let alone the fundamental problems of our times like the population growth in the poorest parts of the world, the impending environmental catastrophe, the pathological overemphasis on the interests of the individual, the extremely sharp discounting of the future, and the concomitant overexploitation of resources that may lead to a conflict of unprecedented magnitude. If no progress is made in these larger fields, this crisis will be wasted.