

**The U.S. political brawl over
the causes of the crisis.
Some Critical Comments**

**By
Giorgio Szegö**

SPECIAL PAPER 198

FINANCIAL MARKETS GROUP SPECIAL PAPER SERIES

March 2011

Giorgio Szegö is Professor Emeritus of Financial Economics at the University of Roma “La Sapienza” and President of the Association for Banking and Finance at the University of Lugano. He co-founded the *Journal of Banking and Finance* in 1977 and served as Managing Editor. After graduating in 1956, he did postgraduate work at the Technische Hochschule Darmstadt. In 1961 he was hired by the Research Institute of Advanced Studies in Baltimore. Before obtaining a Chair in Financial Mathematics in 1971, he held a teaching position at the University of Milan and visiting positions in various Universities in USA, UK and France. He authored more than 300 papers and books. He has been a consultant for IMF, WB and OECD and served on the board of many banks and markets. Any opinions expressed here are those of the author and not necessarily those of the FMG. The research findings reported in this paper are the result of the independent research of the author and do not necessarily reflect the views of the LSE.

The U.S. political brawl over the causes of the crisis. Some Critical Comments.

By Giorgio Szegö[§]

Abstract.

The Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States was released on January 27 2011. The strong political differences within the commission prevented the draft of a shared report. In addition to the majority report, two dissenting ones have been produced. I shall criticize some of their conclusions and point out some unreported facts.

§ 1. Introduction.

On January 27, 2011 the US National Commission on the Causes of the Financial and Economic Crisis released its inquiry report. The strong political differences within the commission prevented the draft of a shared document. In addition to the majority report, two dissenting ones have been produced.

This commission was installed by Congress in July 2009 with the statutory mission “to examine the causes, domestic and global of the current financial and economic crisis in the United States”.

The commission, composed by ten members (six democrats and four republican), performed a long investigation and heard more than 700 testimonies. The Commission work lasted too long to be of any use in drafting the obese (848 pages) Dodd-Frank “Wall Street Reform and Consumer Protection Act” of July 21 2011.

The commission work was characterized by strong conflicts among its members, mostly along party lines. Three different reports were released: a majority report (410 pages) signed by the six democrat and two dissenting reports drafted by the four republican members of the Commission. The first dissenting report (30 pages) is signed by three Committee members, the very interesting second minority report is due to Peter Wallison of the American Enterprise Institute in Washington.

The majority report falls short of the mission given to the commission and is essentially a summary of events without any attempt to pinpoint the causes of the crisis; the first dissenting opinion tries to prove that the crisis was not made in USA. The second minority report provides the only thorough, albeit incomplete, analysis of the causes of the crisis and attributes the main responsibility of the crisis to US government housing policy aimed at increasing home ownership among middle-low households, in particular among minority groups. This report is in total disagreement with the other two, and in particular with the majority report,

In the following pages, I shall critically compare the conclusions of the three reports and recall some additional relevant facts.

§2 A summary of the three reports.

The majority report has the aim of justifying the actions of past democratic administrations that might have caused or contributed to the crisis. It reaches the following ten conclusions:

[§] La Sapienza, Università di Roma.

1. The financial crisis was avoidable. The crisis was the result of human action and inaction.
2. Widespread failures in financial regulation and supervision proved devastating to the stability of the nation's financial markets.
3. Dramatic failures of corporate governance and risk management at many systemically important financial institutions were the key cause of this crisis.
4. A combination of excessive borrowing, risky investments, and lack of transparency put the financial system on a collision course with crisis.
5. The government was ill prepared for the crisis, and its inconsistent response added to the uncertainty and panic in the financial markets.
6. There was a systemic breakdown in accountability and ethics.
7. Collapsing mortgage lending standards and the mortgage securitization pipeline lit and spread the flame of contagion and crisis.
8. Over-the-counter derivatives contributed significantly to this crisis.
9. The failure of credit rating agencies were essential cogs in the wheel of final destruction.

Finally

10. The Community Reinvestment Act (CRA) was not a significant factor in subprime lending leading to the crisis. Many subprime lenders were not subject to the CRA.

This report presents many facts that have been reported in the hearings. It could be an interesting technical appendix to a conclusive document that unfortunately has not been produced. Let us comment the main "results". The first statement is obviously correct. It is a pity that the nature of "human actions and inactions" are not described, possibly because it would have been impossible to reach an agreement even among the majority group. Another example of the lack of any analysis is shown in the section on "Mortgage Fraud: Crime-facilitative Environment"¹ that presents a long detailed description of the extensive frauds connected with mortgages². It presents the summary of different testimonies³, but not one single comment on the causes and the possible remedies. Clearly, there were some reasons that justify the total lack of care of intermediaries (banks as well as mortgage brokers); for instance the possibility the mortgage contracts could immediately be resold either to financial institutions possibly after securitization, or to GSE (Fannie Mae, etc.). Another possibility that the loan officers' compensations depended from the number of mortgages issued, and not from their quality. The report does not analyze the consequences of frauds beside the large losses that at the end the US taxpayer had to cover, for instance fraud-induced delinquencies distort the profit and loss distribution of mortgages⁴ and

¹ Chapter 9, pp. 160 – 167.

² In the majority report it is reported that during the period 2005-2006 the monetary value of all mortgages obtained via false documentation reached \$ 1 trillion, the monetary value of the frauds, i.e. systems designed to obtain mortgages for amounts vastly superior to the value of the lien. The mortgagor then walks away and "leaves the keys" of the property to the careless mortgagee. The monetary amounts of these mortgage frauds during the same period reached \$ 160 bn. They caused net losses of \$ 120 bn. to the lenders. These results confirm the ones obtained by Szegő 2009 and 2010, combining IMF and FBI data.

³ The responsibility to investigate and prosecute mortgage frauds falls to local, state and federal law enforcement officials. No information is given about actions undertaken by the first two. Much space is given to FBI testimonies that claim that they were aware of the problem but it had low priority within the agency. Indeed the FBI published Mortgage Frauds reports in 2007, 2008 and 2009, and seems to have started a serious drive against these frauds from March 1 2010. It also is reported that banks (Bank of America, and Well Fargo; among others) did not report to the proper body (Financial Crime Enforcement Network of the Treasury Department) any suspicious case. A former fraud analyst at Well Fargo told the commission "at least half the suspicious cases that she flagged for fraud were nevertheless funded over her objections".

⁴ Frauds affect the tail of the distribution and distort its predictive precision. If the fraudulent delinquencies are not taken into account, the loss side of the tail becomes smaller and the situation less gloomy.

damages its prediction power. Clearly, as pointed out in the second minority report, it is meant to provide some technical motivation to the anti-market obese Dodd-Frank Act of July 2010⁵. This law instead of simplifying the US baroque financial regulatory system proposes the creation of three new agencies⁶. Possibly this act wants to validate the statement made by Prof. Zingales⁷ that “each financial crises led to the creation of a new agency”; possibly due to the harshness of the current crisis, instead of just one, three of them are envisaged.

I shall comment next on the two dissenting opinions. They have the common aim to deny any responsibility to the Bush economic-monetary policy. The first one blames the rest of the world and in particular, the “nouveau riche”, like China and the oil-producing countries; the second, in my opinion correctly⁸, accuses the US government policy of stimulating home ownership for middle-low income and minority households⁹.

The first dissenting opinion begins with some questions.

1. If the political influence of the financial sector in Washington was an essential cause of the crisis, how does that explain similar financial institution failures in the United Kingdom, Germany, Iceland, Belgium, the Netherlands, France, Spain, Switzerland, Ireland and Denmark?
2. How can the “runaway mortgage securitization train” detailed in the majority report explain housing bubbles in Spain, Australia and the United Kingdom, countries with mortgage finance systems vastly different from that in the United States?
3. How can the corporate and regulatory structures of investment banks explain the decisions of many U.S. commercial banks, several large university endowments, and some state employee pension funds, not to mention a number of large and midsize German banks, to take on too much US housing risk?
4. How did former Fed Chairman Alan Greenspan “deregulatory strategy” also precipitate bank regulatory failures across Europe?

1. Credit bubble. China and other large developing countries and the big oil-producing countries built up large capital surpluses.
2. Housing bubble. Many factors contributed to the housing bubble, the bursting of which created enormous losses for home owners and investors.
3. Nontraditional mortgages. Fueled by cheap credit, mortgage broker firms originated a vast number of high-risk non-traditional mortgages.
4. (Imprecise) Credit rating and securitization, transformed mortgages into toxic financial assets.
5. Financial Institutions concentrated correlated risk. Managers of many US financial institutions amassed enormous concentrations of highly correlated housing risk.
6. Leverage and liquidity risk. Managers of these financial institutions amplified this concentrated housing risk by holding too little capital relative to the risk. Most relied heavily on short-term financing in repo and commercial papers. They placed (wrong) solvency bets that their investments were solid and (wrong) liquidity bets that overnight money would always be available.

⁵ In view of the widespread frauds it would have been more precise, instead of “The Wall Street Reform and Consumer Protection Act” to label this law as “The Wall Street Reform and Protection from Consumer Act”!

⁶ The Financial Stability Oversight Council, the Office of Financial Research, and the Bureau of Consumer Financial Protection.

⁷ Zingales, 2009.

⁸ See Szegő, 2011.

⁹ It started with the Community Reinvestment Act of 1977 introduced under the Carter presidency.

7. Risk of contagion. In some cases, the financial system was vulnerable because policymakers were afraid of a large firm sudden failure threatening their counterparties. The danger of contagion forced policymakers to intervene.
8. Common shock. Unrelated financial institutions failed from a common shock, like a decline of housing prices.
9. Financial shock and panic. The failure or near failure of ten firms in September 2008 spread panic.
10. Financial crisis causes economic crisis. The financial shock and panic caused a severe contraction in the real economy.

According to the second dissenting opinion the crisis was caused by
US government housing policy, and in addition.

1. Low interest rates and a flow of funds from abroad.
2. Deregulation or lax regulation.
3. The shadow banking business.
4. Failures of risk management.
5. Securitization and structured products.
6. Credit Default Swaps and other derivatives.
7. Predatory lending.

I shall start from the statement shared by the two dissenting reports about low interest rates and the flow of funds from abroad, in particular from China, and other large developing countries and the big oil-producing countries that built up large capital surpluses. Clearly, this statement is connected with the housing bubble. It is the most ad-hoc explanation that I have read during my life. Do these people mean that the USA has lost its monetary independence? How could they explain then the strong rise of interest rates from 2004 in face of unchanged flow of funds from abroad?¹⁰

I wish next to attack the questions posed at the beginning of the first dissenting opinion. These questions essentially challenge the responsibility of US monetary policy for the crisis, by arguing that the same developments took place elsewhere and in particular in Europe. The first question challenges the readers to explain financial institution failures in other countries similar to those that took place in US. Unfortunately, as shown in the next figures and tables, US monetary decisions are followed by all currencies and in particular by the EURO.

Table 1. FF rates: main trends 2001-2011. Range 6,50% – 0,25%.

↓ Jan. 2001 - Dec. 2001 6,50% -1,85%
 → Jan. 2002 – June 2004 1,85% - 1%
 ↑ June 2004 - June 2006 1% - 5,25%
 → June 2006 - Sept. 2007 5,25%
 ↓ Sept. 2007 - Dec.08 5,25% - 0,25%
 → Dec.2008 - Feb.2011 0% - 0,25%

¹⁰ This is a typical example of the financial market version of the well known ice-cream theorem: the ice-cream man has reduced prices, the child eats more ice-creams, the child gets bellyache, the fault is of the ice-cream man!

Figure 1. Federal Funds, 2000-2010.

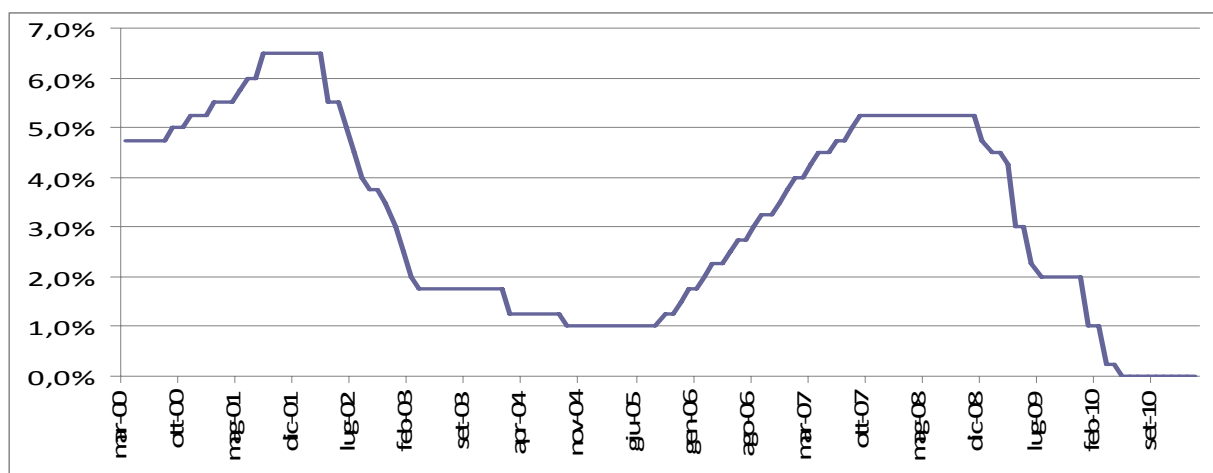


Figure 2 Eonia European OverNight Index Average 1999-2011.

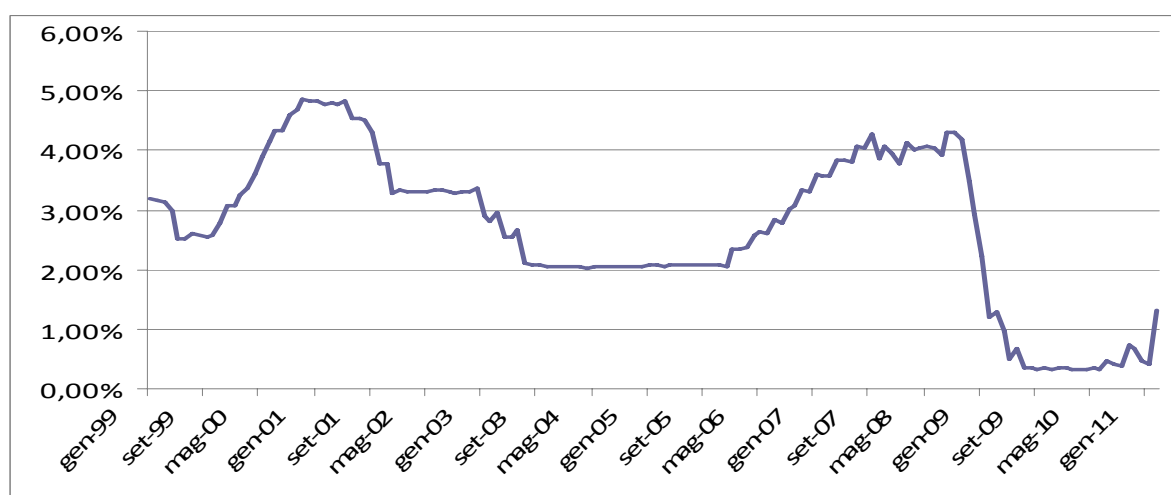


Table 2. EONIA rates: main trends. 2001-2011. Range 4,83% - 0,34%.

- ↓ Sept. 2001 – Dec. 2001 4,30% - 3,30%
- Jan. 2002 – Dec. 2002 3,35% - 2,35%
- ↑ Jan. 2006 - Sept. 2007 2,35% - 4,30%
- Sept. 2007 - Sept. 2008 4,30%
- ↓ Sept. 2008 - July 2009 4,30% - 0,34%
- July 2009 – Jan. 2011 0,34%

It is evident that the Euro rates followed the \$ rates. In particular, in January 2001 the FED sharply decreased interest rates, with the political aim of supporting the US stock market.. ECB followed this decision only in September 2001, after the World Traded Center destruction. Again, in June 2004 the Fed started to increase interest rates until June 2006; the size of the increase was 4.25%, one of the major causes of the crisis. The ECB followed this move only in January 2006 when FF rates had already reached 5.25%. This “lagged correlation” between US and Euro monetary policy decisions is also evident for all other major currencies: C\$, Au\$, £St., and even Yen (see Appendix). All currencies seem to follow (reluctantly) the monetary decisions of the US. This can be explained by the impact of interest rates on rates of exchange and the role of exchange rates

on international trade. All currencies of the main industrialized countries seem de-facto to be pegged to the US \$. This provides a general answer to the four questions in the first dissenting opinion why the US behaviour was shared by many European countries. Unfortunately Euro and US \$ rates show a strong interdependence. It is not true that China decides US monetary policy, but that Washington decides the monetary policies of all industrialized countries!

Low interest rates caused the housing bubble¹¹. The low interest rates caused a strong search for yield, for profitable investments and a consequent risk appetite. The consequent real estate price bubble was, in my opinion, also motivated by the relative ease of investment decisions in the Real Estate sector with respect to the investment decisions regarding industrial projects. Indeed the investment rate of mature economies has declined significantly since the 1970s. The nominal investment rate as a percentage of GDP showed the strongest decline from 1989 (24.2%) to 1993 (22%), and then reached its lowest level in 2002 (21%)¹². While the Committee report throws the blame on the supply (China & Co), it forgot the decline of demand due to the de-industrialization of the mature countries, in particular US and UK.

The second question asks how can the “runaway mortgage securitization train”, detailed in the majority report, explain housing bubbles in other countries? In other words, why foreign investors were very eager to buy MBS based on US junk mortgages? In addition to the previous arguments, regarding the currencies’ correlation, we must recall that structured investments were mostly packaged and sold by the US investment banks that had a de-facto monopoly and a very solid reputation. This high reputation and the fact that the mortgage risk was well hidden among other assets and that it was supposed to be erased via swap operations, convinced non US financial institutions to purchase these obscure structured securities. These non US purchases, fuelled by the frantic search for yield, were motivated by the low interest rates and the declined demand of capital for industrial and infrastructural projects. The purchase of these obscure securities made by non US financial Institutions¹³ was minimal with respect to what took place in US. There the losses were so high that many historic players like Bear-Stearns, Lehman Brothers and Merrill-Lynch failed or were taken over¹⁴. The crisis of US investment banks was also caused by the change in the structure of the originate-to-distribute system: in the years 2007-2008 originators instead of distributing the AAA tranches of the packaged securities, started holding them to use them as collateral in repo operations. In USA the system from originate-to-distribute was transformed into originate-to-hold.¹⁵

Let me answer the last two questions posed by the first dissenting opinion. Clearly, there does not exist any direct relationship between corporate governance of US investment banks, its deregulation and the limited non-US financial crisis. The crisis contaminated other countries by means of the forced correlation between interest rates and via the problems of the real economy. All reports blame securitization and structured products. I spell a contrarian view by saying that I do not find anything wrong in the design and operation of the system, the problems originated from its unchecked and unregulated growth¹⁶. Everybody seems to forget the advantages provided by Mortgage Backed Securities (MBS) – the building stones of securitization on housing economy. They provide liquidity to an illiquid credit, mortgage; existing mortgages become negotiable, thus the cost of mortgages decreases. This has a positive effect on housing costs,

¹¹ See Szego 2010, where additional references can be found.

¹² See McKinsey, 2010, pp. 17-18.

¹³ UBS

¹⁴ Bear-Stearns was taken over by J. P. Morgan with a nice wedding present from the US taxpayer; Lehman Brothers went bankrupt, and Merrill-Lynch was taken over by Bank of America.

¹⁵ Gorton 2010.

¹⁶ The outstanding CDS according to Donnelly and Embrechts (2010) reached the \$ 66 trillion level.

which decline while the demand of residential properties increases. This financial engineering success may have contributed to the housing bubble even without the decline of interest rates. As we shall argue in the next § 3, the disaster was caused not by the system, but by the junk that political demagoguery forced into the system.

I shall next criticize point 6) of the first dissenting opinion according to which financial intermediaries held too little capital relative to the risk. Clearly, it is unconceivable to believe that any amount of capital may protect financial institutions holding trillion of dollars worth of structured securities. Also, let me provide a few comments on “Deregulation or lax regulation” (point 2 of the second dissenting opinion). According also to the fact presented in the majority the problem does not lie in lack of regulation, but in its inefficient enforcement and supervision. The penalties for mortgage frauds are “up to 30 years in prison, up to \$ 1 million fine or both”. Have these penalties ever been applied?

Let me next comment on points 6 and 9 of the first dissenting opinion regarding liquidity and the spread of panic. Indeed one of the consequences of the crisis was a sharp decline in the interbank market that declined from a monthly volume of € 580 bn to € 100 bn at the end of 2009. This was caused by a loss of trust in counterparties caused by opacity of the assets portfolio, by the fact that each bank may not be in the position to know exactly the value and the risk of some of the more complex new assets (CDO, etc.), finally by the fact that banks want to be liquid to profit from possible assets fire-sales¹⁷.

My last comment deals with point 10 of the first dissenting opinion on the causes of the economic crisis. The most obvious cause has been the interruption of the home equity extraction process in USA, i.e. the cash-in of the increase of value of mortgaged housing properties. This could be done either by negotiating an increase of the existing mortgage or by extinguishing the existing one and obtaining a new larger loan. This scheme can be sustained only as long as the value of housing properties keep increasing, it will stop even if the values remain constant. The funds so obtained in 2007 covered 9% of household disposable income and in the period 2001-2005, 3% of Personal Expenditures¹⁸. The hundreds of billion US \$ so obtained (see Figure 3) from one side allowed middle class households to enjoy an undeserved standard of living, on the other side they have been extensively used by low-income and by NINJA “No Income, No Job, No Assets”. These families did not have any stable source of income. How could they meet their debt obligations? In 2004 the then Chairman of the Federal Reserve stated “your home is your credit card!”, encouraging mortgagors to borrow on the increased value of their homes; this activated a continuous **equity extraction**¹⁹. This Greenspan Ponzi scheme provided the solution. This process did not even need Greenspan’s encouragement: it started in earnest in 2001 with the sharp reduction of interest rates. The whole system collapsed when home prices contracted in all 2006. Mortgagors saw their disposable income decline by 9% and their Personal Expenditures cut by 3%²⁰. Due to the extremely high debt level of US homeowners (see Figure 4) many were unable to meet their obligations and saw their homes foreclosed and the reimbursed portion of the principal forfeited. This is the main transmission mechanism from financial crisis to the real economy.

¹⁷ Diamond, Rajan, Feb. 2009.

¹⁸ See Greenspan and Kennedy 2007.

¹⁹ See Greenspan and Kennedy, 2007.

²⁰ See Greenspan and Kennedy, 2007.

Figure 3 Equity Extraction Process.

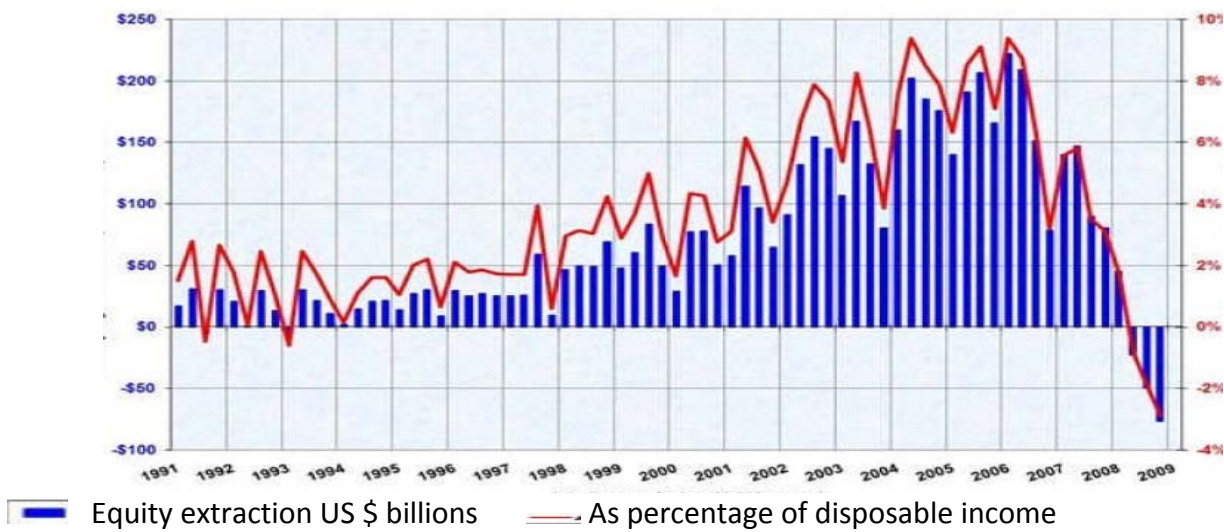
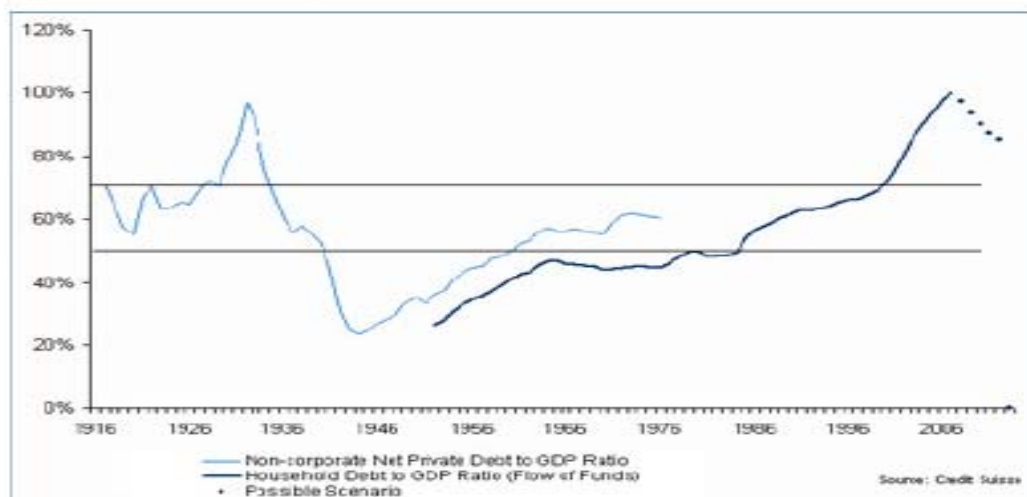


Figure 4 Household debt level.



§ 3 The role of US government housing policy, and in particular of CRA.

This is the main point of interest of the second dissenting opinion that was presented by Peter Wallison. I expressed practically identical views in Rome in June 2010.²¹ In the USA, the impact of the 1977 CRA (strengthened in 1992 and in 1995) is the subject of heated political debate. This well-meaning rule, according to which banks should locally reinvest the amounts locally gathered, has become an incentive to grant mortgages to people with insufficient means.

The counter-argument, presented in the majority report, is that in the USA mortgages are mostly originated by unregulated, profit-seeking mortgage brokers not constrained by CRA. The most important of these, like Ameriquest, Countrywide, New Century, Fieldstone and IndyMac were so large that were listed in US stock exchanges.²² Unfortunately, banks granted mortgages without requiring any down-payment, or documentation. This was caused by CRA and by the biased

²¹ Szegő 2011.

²² Their share values showed a drastic fall in March 2007. This can be regarded as the starting date of the crisis. Most of these Mortgage Brokers went bankrupt, the best one, the California-based Countrywide was taken over by Bank of America in 2008:

mortgage laws. An example of this behaviour is a mortgage offered by Bank of America, called the “Bank of America Neighbourhood Advantage Flex”, no documentation and practically no down payment was required. Clearly, banks’ behaviour forced mortgage brokers to adopt even more lax lending patterns.

One very interesting aspect of the second dissenting opinion concerns the role of securitization of US high risk mortgages and of the connected structured securities containing such mortgages vs. the role of the GSE (Freddie Mac and Fanny Mae) on the generation of the crisis. It cannot be denied that “Wall Street”, i.e. the financial institutions that managed the O-t-D²³ system and that the “securitisation train”, which between 1998 and 2008 has generated more credit than the traditional banking system²⁴, played an essential role in exporting the crisis from USA to the rest of the world. The second minority report, contradicting the majority opinion, presents conclusive data, proving that GSE have been the main purchasers and insurers of junk mortgages, and therefore have heavy responsibilities in the creation of the housing bubble and on its downfall. This provides a political argument against Dodd-Frank Act, punishing Wall Street and not the real cuprites: bipartisan demagogues.

“Owning a home lies at the heart of the American dream”. So declared President Bush in **2002**, introducing his “Homeownership Challenge” — a set of policy initiatives that were aimed at increasing homeownership, especially for minority groups. “As we know, homeownership builds stronger families, communities, and improves our quality of life. Through the expansion of minority homeownership, the Administration will advance housing equality in America.” In **1994**, 13 years before the crash, President Clinton stated “For many potential homebuyers, the lack of cash available to accumulate the required down payment ... is the major impediment to purchasing a home. Other households do not have sufficient available income to make the monthly payments on mortgages financed at market interest rates. **Financing strategies**, fuelled by the creativity and resources of the private and public sectors, **should address** both of these financial barriers to home ownership”. So the Federal Ponzi scheme was activated! This bipartisan policy, based on the assumption that home-owners are better citizens than renters, was enacted by forcing GSEs to guarantee lower class mortgagors.²⁵ Indeed in **1999**, under pressure from the Clinton administration, Fannie Mae, the nation's largest home mortgage underwriter, relaxed credit requirements on its loans, (and on purchased loans from other banks and lenders), hoping that easing these restrictions would result in increased loan availability for Minority and low-income buyers.

Fannie and Freddie then became the main players in the mortgage market and the primary purchasers of all AAA-rated subprime mortgages. When Fannie and Freddie could not make the market, they became the market. In September 2008 both GSEs had to be taken over by the Federal Government. At that time, Fannie alone owned or guaranteed more than \$388 billion of high-risk mortgage investments. Their large presence created an environment within which even mortgage-backed securities assembled by others could find a customer. With this system, no securitization or structured instruments are needed to disregard creditworthiness of mortgage applicants! Any request for relevant information was considered to be “not politically correct”. It is not surprising that in the years 2006-07 the dollar amount of criminal fraudulent unchecked mortgage applications reached more \$100 bn.²⁶

²³ Called also Parallel or shadow credit system,

²⁴ In 2007 the O-t-D system produced \$ 13.5 trillion of credits, while the traditional banking system only \$ 9.5 trillion.

²⁵ See Krugman, 2008.

²⁶ See Szegö 2009 a), and 2010. See also Footnote 2.

§ 4 Some overlooked factors.

Even the most serious of the three reports, the second dissenting opinion, has ignored some relevant factors that I shall present in the following pages²⁷.

- A. Foreclosure rules.
- B. GSEs start insuring Adjustable Rate Mortgages (ARM) from 1981.
- C. The Tax Reform Act of 1986 maintained tax-deductibility of interest rates on mortgages, while abolishing it on Credit Card Debts. This rule had an immediate impact on mortgage volumes (1985: \$ 250 bn, 1986: \$ 500 bn). Mortgages became cheaper than other debts!
- D. Financial and accounting regulations.

A. In USA property laws (mortgages, etc.) are not a matter for the Federal Government, but they are independently determined by each state. With some minor procedural differences, in the case of a default in payment by the borrower, the lender can sell the property and keep the proceeds. In many cases if the sale does not bring in enough to pay the existing balance of principal and interest, the mortgagee can file claim for a deficiency judgement. On the other hand, the borrower cannot ask for a restitution of the percentage of the principal that he has already repaid. This system is biased in favour of the lenders: it is legalized robbery. It follows that, under stable housing market conditions, banks are encouraged to grant mortgages to applicants that are likely not to be in a position to service their obligations. However, in the case of declining housing market values, the increased number of foreclosures not only creates social distress, but it also further depresses the housing market and so worsens the financial situation of all lenders.

B. After ARMs were admitted by GSE in 1981, the market share of ARM immediately increased. In 1982 it reached 64% of the total. This percentage has not been stable. On average it was almost 40% of the total. This development had an heavy impact on AR mortgages: it amplified the effect of the 2004 interest rate increase.

The estimated additional bill reached the amount \$ 76 bn.²⁸ Note that this sum was charged to the 3 million ARM-mortgagors only, but, in particular, it penalized the “younger” mortgages. For comparison sake, in order to appreciate the economic impact of this sum, it may be useful to recall that the tax cut of 2003, spread over all US taxpayers, reached the amount of \$ 60.8 bn! This explains how, since 1981, ARMs caused intolerance to interest rate increases. Greenspan (2010) did not take into account this fact while deciding the too fast, too large disastrous increase in interest rates of 2003-2007, that forced people out of their homes. (See Taylor, 2007, and the very weak Greenspan defence of his actions, 2010).

C. The tax reform act of 1986 further enhanced the advantage of borrowing on own property instead of via credit cards or any other unsecured form: mortgage volumes doubled in one year (from \$ 250 bn. in 1985 to \$ 500 bn. in 1986).

D. Financial and accounting regulations enhanced the crisis. I shall briefly comment on the following events

- 1) In 1984 at a House hearing, the Comptroller of the Currency presented a list of the banks that were regarded as too-big-to fail.
- 2) In 1988 Basel Accord on mandatory Capital requirements, enacted in 1992 in EU and introduced the same year in USA via FDICIA.

²⁷ These factors were pointed out by Szegő 2011.

²⁸ The precise computation of this sum is presented in Szegő 2009 pp. 10-12, and Appendix.

3) Early 90s, Introduction of Mark-to-Market accounting

- 1) This statement affected the stock value and behaviour of the 11 largest US banks that were officially labelled as “too-big-to-fail”. Since the Long-Term-Capital-Management FED-orchestrated rescue plan of 1998, the provision of being too-big-to fail has been extended to non-depository institutions, i.e. Large Complex Banking Organizations.
- 2) The introduction of mandatory “risk-adjusted” capital requirements on depository institutions was first proposed in the Basel Accord of 1988 and adopted in 1992 via the Federal Deposit Insurance Corporation Improvement Act. Note that the politically more powerful Investment banks were not subject to any such regulation. This market distortion caused regulatory arbitrage that led to the creation and growth of the “Originate-to-Distribute” parallel credit system. Allen et al, (2003), Berger et al. (1995), Blum (1999), Clerc et al. (1991), Danielsson (2001) and (2002), Hellwig (2009), Kashyap et al. (2008), Stiglitz (2008 and 2009), Szegö (1993), (2002), (2004), and (2010)) pointed out the costs and the lack of any rationale for the system.
- 3) Mandatory capital requirements and Mark-to-Market accounting enhanced the consequences of the crisis. In order to satisfy mandatory capital requirements, also in case of declining assets values, banks were forced to a fire-sale of assets, further depressing their market values.
- 4) Since early 1990s, Mark-to-Market (M-t-M) or Fair value accounting has been a part of the U.S. Generally Accepted Accounting Principles (GAAP). This approach is currently part of the International Financial Reporting Standards (IFRS) of the International Accounting Standard Board (IASB). This system increased the accounted losses after the crisis when the M-t-M was applied to non-traded assets. (see Jenkins (2008), Laux et al. (2009), Plantin et al. (2008), SEC (2008)). According to BIS (2008) and OECD (2008), the current M-t-M accounting system overestimated losses by 62%. The M-to-M rule enhances pro-cyclicality of bank capital requirements. M-t-M cannot provide the true value of a multiple assets portfolio. Market pricing models cannot give a fair estimate in the presence of liquidity problems and panics. “The market value of MBS, based on the synthetic index ABX, published by the company Markit Group Ltd. Overestimate of 62% probable losses. The estimates are consistent with a 0% recovery value. Using a more realistic recovery value of, OECD (2008) estimated the US mortgage market losses \$420 bn, instead of \$1200-1500 bn. The fire-sale of assets made by some financial institutions²⁹ cannot be considered a normal event, it cannot be use in price estimation, but it affected the price estimation of all similar assets.

§ 5 Conclusions.

The politically inspired reports of this US commission are written following precise aims. 1) The majority (democrat) to try to justify the new anti-market Dodd-Frank Act and to deny any responsibility on the part of democratic governments. 2) The first minority report tries to justify the Greenspan acts during the Bush presidency blaming the rest of the world. 3) The third throws the blame on US housing policies and in particular the Community Reinvestment Act. Unfortunately, they all do not recognize that the problem is not a lack of rules, but the lack of enforcement.

²⁹ Like the sale of assets made by Merrill Lynch at less than 20% of the book value.

References

- Acharya, Viral V., Thomas Cooley, Matthew Richardson, and Ingo Walter, 2010, *Manufacturing Tail Risk: A Perspective on the Financial Crisis of 2007-09*, Foundations and Trends in Finance, 4.
- Allen, Franklin, and Douglas Gale. Capital Adequacy Regulation: In Search for a Rationale, In R. Arnott, B.Greenwald, R.Kanbur, and B.Nalebuff eds., 2003. *Economics for an Imperfect World: Essays in Honour of Joseph Stiglitz*. Cambridge, MA: MIT Press.
- Bank of International Settlements, 2008, *Quarterly Review*, June.
- Berger, Allen, Richard Herring, and Giorgio Szegö, 1995, *The Role of Capital in Financial Institutions*. Journal of Banking and Finance, 19, 393-430.
- Blum, Jurg, 1999, *Do Capital Requirements Reduce Risk in Banking?* Journal of Banking and Finance, 23, 755-772.
- Brunnermeier, Markus; Andrew Crocket; Charles Goodhart; Avinash Persaud; Hyun Shin, 2008, *The Fundamental Principles of Financial Regulations*, Geneva Reports on the World Economy 11, London, January.
- Clerc, Laurent, Françoise Drumetz, and Oliver Jaudoin, 2001, *To what extent are prudential and accounting arrangements pro-or countercyclical with respect to overall financial conditions*. BIS Autumn 2000 Central Bank Economists' Meeting on *Marrying the Micro and Macro-Prudential Dimensions of Financial Stability*, Published in the Proceedings, BIS, March.
- Calomiris, Charles, W., 2009, *Financial Innovation, Regulation, and Reform*, Cato Journal, 29, 65-92.
- Daniélsson, Jón, Paul Embrechts, Charles Goodhart, Con Keating, Felix Mennich, Olivier Renault, Hyun Song Shin, 2001, *An Academic Response to Basel II*. Special Paper n° 130, FMG, LSE, London.
- Daniélsson, Jón, 2002, *The emperor has no clothes: Limits to risk modelling*. Journal of Banking and Finance, 26, 1252-1272.
- De Larosière Group, 2009, *Report by the High-Level Group on Financial Supervision in the EU, Chaired by Jacques de Larosière*. February 25.
- Demirguc-Kunt, Asli and Enrica Detragiache, 2002, *Does Deposit Insurance Increase Bank Stability?* Journal of Monetary Economics, 49, 1373-1406.
- Dhillon, Upinder, James Shilling, and C.F. Sirmans, 1987, *Choosing between Fixed and Adjustable Rate Mortgages*. Journal of Money Credit and Banking, 19, 260-267.
- Douglas W. Diamond and Raghuram G. Rajan, 2009, *The Credit Crisis: Conjectures about Causes and Remedies*, NBER Working Paper No. 14739, February, Published in American Economic Review, American Economic Association, vol. 99(2), 606-10, May.
- Di Noia, Carmine, and Stefano Micossi, 2009, *Keep it Simple: Policy Responses to the Financial Crisis*. Bruxelles. CEPS, January.
- Donnelly, Catherine and Paul Embrechts, 2010, *The Devil is in the Tail: Actuarial Mathematics and the Subprime Mortgage Crisis*, RiskLab, ETH, Zurich, January 4.
- Financial Services Authority, 2009, *The Turner Review A Regulatory Response to the Global Banking Crisis*, London: FSA March, 18.
- G-20 Finance Ministers, 2009, *Global Plan for Recovery and Reform*, London: HMS, April 2.
- Goodhart, Charles, 2007, *The Regulatory Response to the Financial Crisis*. London: FMG, LSE, Memo.
- Gorton, Gary, 2008, *The Panic of 2007*. Federal Reserve Bank of Kansas City, Jackson Hole Conference, August 4.
- Gorton, Gary, 2009, *Slapped in the Face by the Invisible Hand: Banking and the Panic of 2007*, Federal Reserve Bank of Atlanta, Financial Markets Conference, May. 11-13.
- Greenspan, Alan, and James Kennedy, 2007, *Sources and Uses of Equity Extracted from Homes*. FEDS WP 2007-20, Federal Reserve Board, Washington, D.C., published in *Oxford Review of Economic Policy*, 24, 2008, 120-144.
- Greenspan, Alan, 2010, *The Crisis*, Greenspan Associates, April 15.

Hartmann, Philip, 2008, *Lessons from the Financial Market Turmoil*. Presented at the International Summer School on Risk Management and Control, Rome, June 30-July 4.

Hellwig, Martin, 2008, *Systemic Risk in the Financial Sector: an Analysis of the Subprime-Mortgage Financial Crisis*, Preprint of the Max Plank Institute, Bonn, November; *De Economist*, 157, 2009, 129-207.

HM Treasury, 2009, *Reforming Financial Markets*. London: The Stationery Office, July.

International Monetary Fund, 2007, *Global Financial Stability Report*. Washington, D.C.: IMF, April.

International Monetary Fund, 2007, *Global Financial Stability Report*. Washington, D.C.: IMF, October.

International Monetary Fund, 2008, *Global Financial Stability Report*, Washington D.C.: October.

JCHS, 2007, *The State of the National Housing 2006*, Joint Center for Housing Studies, Cambridge, MA: Harvard University.

Jenkins, Holman, 2008, *Mark to Meltdown?* The Wall Street Journal, March 5.

Kashyap, Anil, Raghuram Rajan, and Jeremy Stein, 2008, *Rethinking Capital Regulation*. Federal Reserve Bank of Kansas City, Jackson Hole Conference, August.

King, Mervyn, 2007, *Turmoil in Financial Markets: what can central banks do?* London: Bank of England, September 12.

Krugman, Paul, 2008, *Home Not-So-Sweet Home*, *Economist's View*, June 12.

Laux, Christian, and Christian Leux, 2009, *Did Fair Value Accounting Contribute to the Financial Crisis?* Chicago Booth Research Paper No. 41, October 12.

McKinsey & Co. (2010) *Farewell to cheap capital? The implications of long-term shifts in global investment and saving*. MGI, December.

Organization for Economic Cooperation and Development, 2008, *The subprime crisis: size, deleveraging and some policy options*, Paris: April.

Plantin, Guillaume, Hraesh Sapra e Hyun Song Shin, 2008, *Fair value accounting and financial stability*, *Financial Stability Review*, Banque de France, October, 85-95

Roubini, Nouriel, 2008, *Ten Fundamental Issues in Reforming Financial Regulation and Supervision in a World of Financial Innovation and Globalization*. RGE Monitor.

Simon, Ruth, 2009, *Banks Ramp up Foreclosures*, The Wall Street Journal, April 15, pg. A1.

Stiglitz, Joseph, 2008, *Government Failure vs. Market Failure: Principles of Regulation*. Preliminary, September.

Stiglitz, Joseph E., 2009, *Davos Economic Meeting 2009*, February.

Szegő, Giorgio, 1980, *Portfolio Theory*, Academic Press, New York: etc.

Szegő, Giorgio, 1993, *Pseudo Risk-Adjusted Capital Requirements; Many Thorns, Little Flowers*. Harvard University, Boston, May 21st.

Szegő, Giorgio, 1995, *Il Sistema Finanziario*. Milano: McGraw-Hill.

Szegő, Giorgio, 2002, Measures of Risk, *Journal of Banking and Finance*, 26, 1253-1272.

Szegő, Giorgio (ed.), 2004, *Risk Measures for the 21st Century*, Wiley, Chichester.

Szegő, Giorgio, 2009 a, *The Crash Sonata in D Major*. *Journal of Risk Management in Financial Institutions*, 3, 31-45.

Szegő, Giorgio, 2009 b, *Sulla Crisi Subprime*, *Bancaria*, 7, 56-68.

Szegő, Giorgio, 2010, *Crash 08: a regulatory debacle to be mended*. Special Paper 189, Financial Market Group, London School of Economics, March.

Szegő, Giorgio, 2011, *Can a flap of a wing of a butterfly in Brazil destroy the coliseum in Rome....after 30 years*. Presented at the International Summer School on Risk Measurement and Control, Rome, July 2010, Published in the Special Issue of The Journal of Risk Management in Financial Institutions, 4, 2011, pp.

Taylor, John B., 2007, *Housing and Monetary Policy*, Federal Reserve Bank of Kansas City, Jackson Hole Conference, September 2007.

The London Summit, 2009, *The Road to the London Summit: The Plan for Recovery*, London: HM Government, March.

The National Commission on the Causes of the Financial and Economic Crisis in the United States, 2011, *The Financial Crisis Inquiry Report*, January 27.

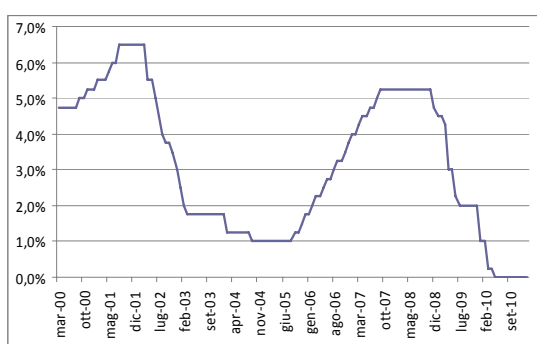
Zingales, Luigi, 2009, *A New Regulatory Framework*, Forbes, March 31 and CITY Journal, Spring 2009, Vol 19, N. 2.

Appendix.

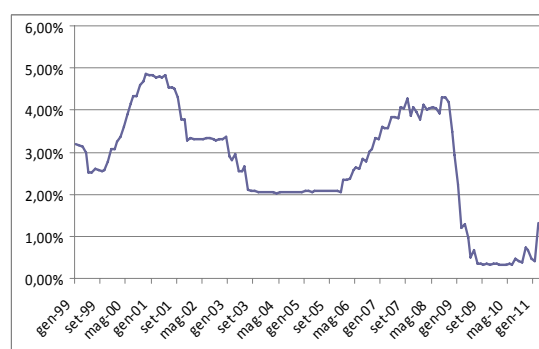
Not only the € overnight rates, follow the US \$, but also these of Au\$, £st, Can\$ and Yen. The width of changes according to the currency: it is the smallest in the case of Yen. For all currencies it is smaller then the one of US \$. We are interested in the time correlation of changes: decline during 2001, increase from 2004, and decline from 2007. Note that the rate reduction of FF from January 2001, caused by the interest to support US share prices was immediately followed by all other currencies with the exception €. In that event ECB has shown its independence. On average Au\$ looks less pegged to US \$, due to the specific characteristics of its economy, based on the export of commodities and not of industrial products.

Overnight rates of US \$, €, Au\$, £st, Can\$ and Yen.

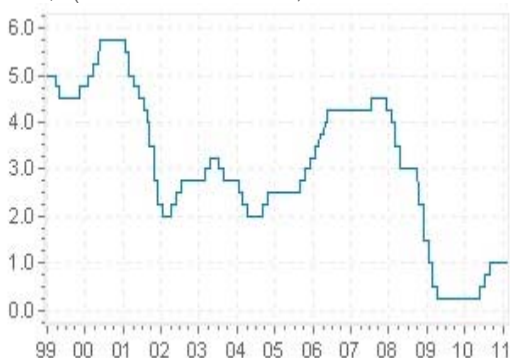
FF US \$. (decline from Jan. 01, increase from June 04)



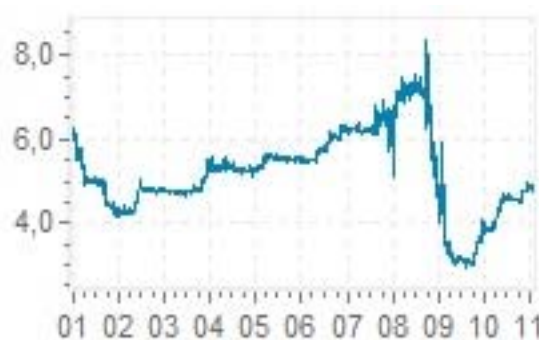
EONIA (decline from Sett. 01, increase from Jan. 06).



CAN\$ (decline from Jan. 01, increase from June 04)



Au\$ (decline from Jan. 01, increase from June 06)



Yen (decline from Jan. 01, increase from June 06)



£ St (decline from Jan. 01, increase from Nov. 03)

