Global finance in crisis:

A provisional account of the "subprime" crisis and how we got into it[1]

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The current financial crisis has become a major international event and can be compared to the 1997-1999 world financial crisis[3]. The current crisis has spread from the US mortgage market, where it exploded in the spring of 2007, to the global banking and financial system. It now, spring 2008, threatens a systemic collapse of the banking system. It has pulled the US economy into recession and already by late 2007 its consequences were being felt in the Euro-Zone. Most analysts now forecast a GDP fall of between 0.5% to 3.0% in the US economy and very slow growth in the Euro Zone. However, a major difference with the 1997-1999 crisis is that emerging markets look much less impacted than developed economies.

This crisis is far from over, and yet already it offers an outstanding example of how things can go wrong in a deregulated economic system. Like the 1997-1999 crash, today's crisis was predictable. The fact that it was not predicted and then its severity repeatedly under-estimated testifies to the ideological content of mainstream economics.

How and why the US mortgage-market went amok

The crisis began in the US mortgage-market when delinquencies and foreclosures on mortgaged loans began to multiply in the winter 2006-2007. The rate of delinquencies and foreclosures increased steadily during 2007 and then accelerated further in early 2008. Delinquency rates on subprime mortgage loans originated in 2005 and 2006 have exceeded the highest recorded rates of all previous vintages. Mortgages originated in 2007 are performing even worse. During the third quarter of 2007, 43% of foreclosures were on subprime Adjustable Rate Mortgages (ARM), 19% on prime ARM, 18% on prime fixed-rate, 12% on subprime fixed rate and 9% on mortgage loans with insurance protection from the Federal Housing Administration. Clearly, the Adjustable Rate Mortgage mechanism has been one of the major triggers of the crisis.

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[1] This paper expands presentations made at the Russian-French Seminar co-organised by CEMI-EHESS and Institute of National Economy Forecasting, Russian Academy of Science at Vologda in December 2007, before the *Moskovskaya Shkola Ekonomiki's* faculty seminar and at the Troïka-Dialog organized RUSSIA-FORUM on January 31st, 2008. An earlier version has been published as a CEMI-EHESS working paper.

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[3] J. Sapir, *le Nouveau XXIè Siécle*, Paris, Le Seuil, 2008.

The value of Adjustable Rate Mortgages (ARM) contracts, which were reset at higher rates, was 400 billion USD in 2007 and 500 billion in 2008, of which only 250 billion were subprime contracts[4]. Although they comprised only a limited share of all outstanding mortgage contracts, s*ubprime* ARM contracts nonetheless seriously unbalanced the whole mortgage market. Their resetting could be extremely costly for homeowners. It has been estimated that the resetting of ARM contracts in 2008 will result in a 31% increase in payments[5]. The more accommodating monetary policy recently implemented by the Federal Reserve System (FED) aims to ease but not eliminate the reset-shock on ARM contracts. Although subprime contracts have received the most attention, it would be a mistake to think that delinquencies are confined only to this catagory. The delinquency trend is perceptible also in the higher quality alt-A and non-agency sectors. In fact alt-A and Jumbo contracts could be the source of an even greater reset shock than subprime contacts in months to come[6].

This situation has resulted from a lending policy of inducing households to take on too much debt through ARM contracts and from the development of "special compartment" mortgages, *Subprime* and *alt-A*[7]. These compartments, which previously played only a marginal role in the mortgage industry, became increasingly significant after 2001(figure 1). This was an important change in the nature of US mortgage industry.

Between 2001 and 2006 it was not just lower-income households which were enrolled in this system but also wealthier middle-class ones. These last used mortgage refinancing to raise money for other purposes (mostly to pay university fees). This created a credit bubble leading to a huge rise in real-estate prices. During its acceleration phase it had a cumulative effect of making it even easier to get mortgaged loans (and thereby leading to even higher real-estate prices) and inducing middle-class households into real speculative behaviour[8].

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[4] http://money.cnn.com/2007/10/16/real_estate/October_resets/index.htm

[5] C. Cagan. *Mortgage Payment Reset: The Issue and the Impact*. Santa Ana, CA: First American Core- Logic, 2007 pp. 29-31, available at http://www.facorelogic.com/uploadedFiles/Newsroom/Studies_and_Briefs/Studies/20070048MortgagePaymentResetStudy_FINAL.pdf

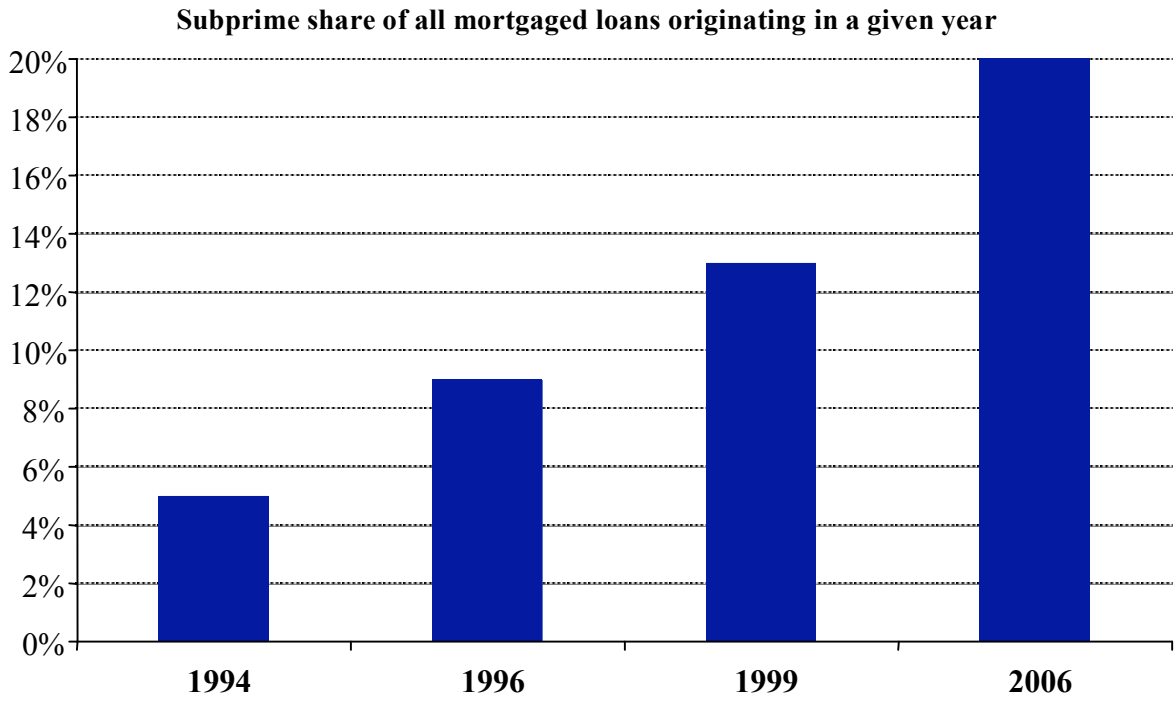
[6] IMF *Global Financial Stability Report*, April 2008, Washington DC, p. 5.

[7] *Subprime* are mortgages where the borrower debt/income ratio is over 55% or where the loan/house value ratio is over 85%. *Alt-As* are mortgages still qualify for an "A-rating" by Moody's and other rating firms but where references are incomplete. They are colloquially called "Liar's mortgages" as there is a strong incentive for the borrower to hide his/her own financial situation. There is a third "special" compartment called "Jumbo" for mortgage loans over USD 455,000.

[8] People were entering the ARM process in the hope they could re-sell the house before the planned rate hike and make a large profit. Households have been led to jump into the market not just for the need of a house but for the profit they hoped to make because of the upward movement of prices.

Subprime loans were over 1300 billion USD by March 2007[9], against 150 billion in 2001. By 2007 subprimes comprised as much as 14% of the mortgage market against 2.6% in 2001, with *alt-"A"* mortgages at a roughly similar level.

Figure 1



Sources

1994 : http://www.bankrate.com/brm/news/mortgages/20040615a2.asp

1996 http://www.npr.org/templates/story/story.php?storyId=12561184

1999 http://www.bankrate.com/brm/news/mortgages/20040615a2.asp

2006 http://www.npr.org/templates/story/story.php?storyId=12561184

The ensuing "credit bubble" was induced not just mortgage market practices but also by the combination of specific social and institutional contexts that allowed some mortgage-market practices to be used in a purely speculative way.

The relevance of "special compartments" and the crisis of the US social model.

In the US mortgage industry, "special compartments" traditionally played a minor and marginal role. What changed after 1998, and particularly after 2001, was the fast increase in subprime and alt-A shares in mortgages originations. This was, first and above all, a response to a change in the social situation: the weakening of the middle-class and the resurgence of a true Veblenian world dominated by the *leisure class*.

[9] Associated Press, March 13th, 2007.

The change began with Reagan's conservative revolution of the early 80's. It was slowed down but not reversed under the Clinton's administration. The conservative fiscal and income policy implemented by the Bush administration dramatically curtailed "middle-class" income growth to the benefit of the wealthiest part of the US population. In 2007, 0.1% of the US population earned 7% of the national income (the equivalent figure is 2% in France and Germany).

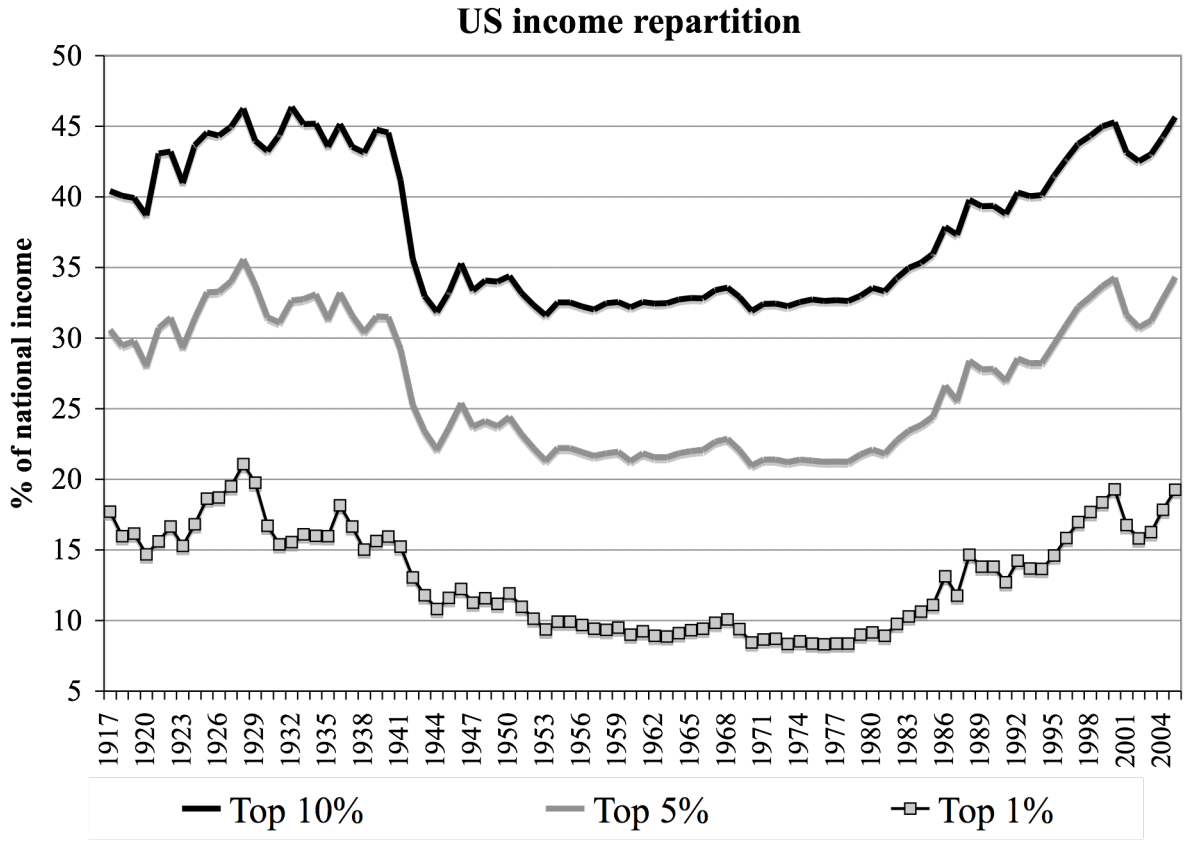
Average per capita income increased by around 3% a year from 2001 to 2007, but *median* per-capita income did not increase at all. This shows that US economic growth was mostly captured by the very wealthiest part of the population (in France and Germany, where growth had been much lower, the *median* per-capita income increased by 2% in the same period). Income inequality in the USA, as shown in figure 2, has now reached its level at the time of the 1929 Crash and the onset of the Great Depression[10].

Because of the relative impoverishment of America's middle class, expansion of credit was needed to sustain internal demand and economic growth from 2001 to 2007. This explains why subprime and *alt "A"* developed so rapidly from 2000 onwards. But as a result, total household outstanding debt jumped to 94% of US GDP during the same period, a clear departure from the long-term trend (Figure 3). The expansion of household indebtedness was central to George W Bush's "compassionate conservatism"; credit became a proxy for a more balanced income policy. The device has been copied in Spain and Great Britain, two countries held up by conservative economists as European success stories. Household debt has reached 124% of GDP in Spain and 130% in GB.

The credit-bubble that developed on the mortgage-market can be seen when the yearly growth of mortgaged debt is compared to yearly growth of GDP (Figure 4). From 1967 to 1996, both curves are clearly correlated. The mortgage market was a good proxy (with some amplification) of US economic trends and business cycles. However from 1996 on these growth dynamics diverged. In 2003 and 2004, the growth of mortgaged debt was close to that of the peak years of 1971, 1978 and 1985 but without a commensurate increase in GDP growth. This shows that the mortgage-market had become divorced from the general level of economic activity and was boosted purely by speculation.

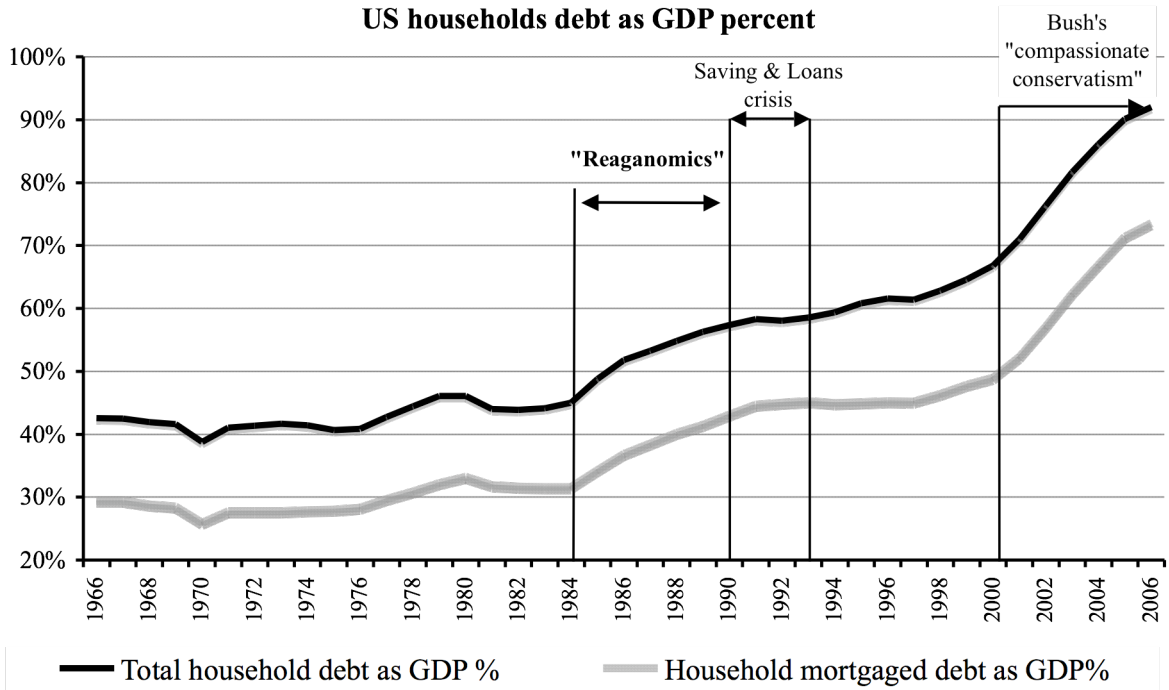
[10] T. Piketty and E. Saez, "Income Inequality in the United States", *Quarterly Journal of Economics*, February 2003

Figure 2



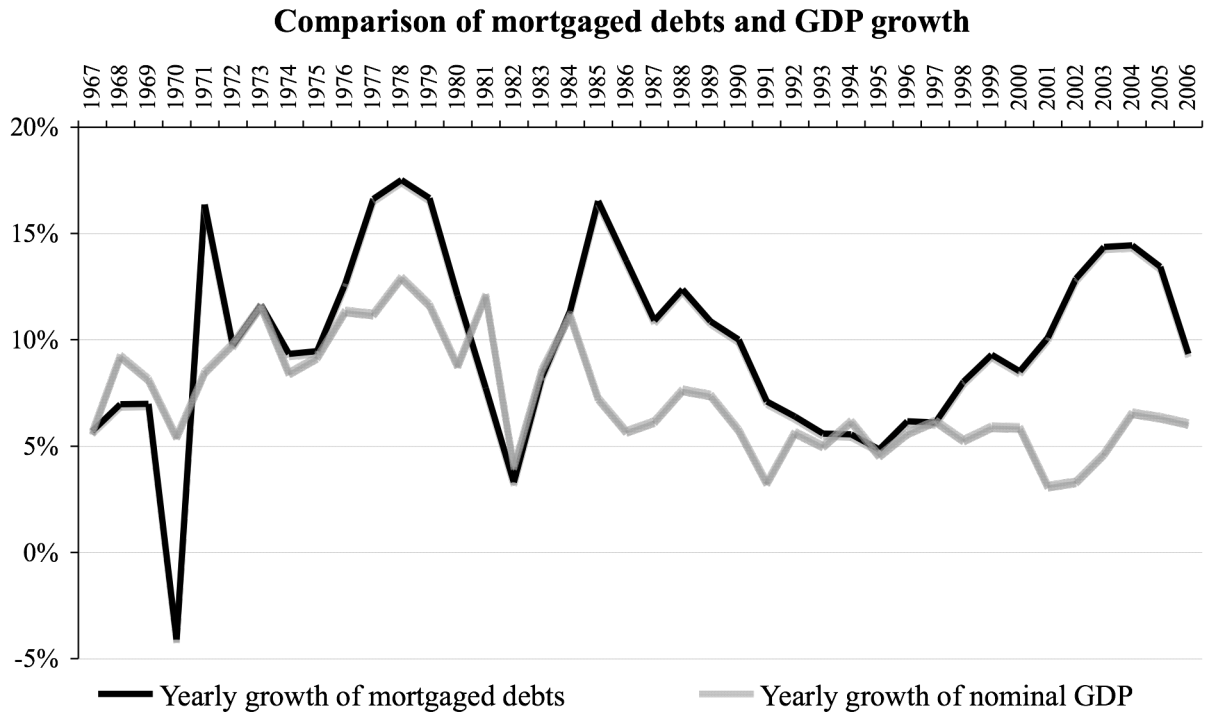
Source: T. Piketty and E. Saez, op.cit. Data updated by authors from IRS data.

Figure 3



Source: Bureau of Economic Analysis, US Department of Commerce and US Joint Economic Committee.

Figure 4



Source: Bureau of Economic Analysis, US Department of Commerce.

Although the conservative policies implemented by the Bush administration aggravated the situation, the divorce initially came about through the economic regime change that took place between the notorious Long-Term Capital Management crash in 1998 and the explosion of the Internet bubble in 2000. Those years, sometimes described as a wake-up time for the US economy and lauded in the selling of the US economic "model" to Europe[11], are the ones when this "model" actually derailed. As in the "roaring twenties", the accumulation process was unsustainable.

Credit leverage accelerated as subprime contracts encouraged minimal direct contributions from households.[12]. The use of adjustable rates in contracts also increased (see Table 1). Mortgage contracts qualifying as *Subprime* ARM comprised only 6.8% of loans outstanding, but accounted for 43% of foreclosures started during the third quarter of 2007.[13]

[11] For example, in Nicolas Sarkozy's election campaign for President of France in 2007.

[12] By the last quarter of 2006, the average mortgaged-loan amount had reached 99% of the transaction amount .

[13] Home-purchase loans are not the only kind of loan burdening US households. The total payments-to-income ratio may be over 55% when credit card and car-purchase debts are included.

Table 1

Characteristics of *Subprime* Home-Purchase Loans

	Share of ARM contracts	Debt Payments-to-Income Ratio (Solvency Ratio)	Average Loan-to-Value Ratio (Leverage Ratio)
2001	73.8%	39.7%	84.0%
2002	80.0%	40.1%	84.4%
2003	80.1%	40.5%	86.1%
2004	89.4%	41.2%	84.9%
2005	93.3%	41.8%	83.2%
2006	91.3%	42.4%	83.3%

Source: JEC, *The Subprime lending crisis – The economic impact on Wealth, Property Values and Tax Revenues, and How We Got There*, US Congress, Joint Economic Committee, Report and Recommendations by the Majority Staff of the Joint Economic Committee, US-GPO, October 2007 table 10, p.21.

Deterioration in mortgage-contract underwriting standards: a case of adverse selection

Subprime contracts were not alone in undermining the mortgage industry. The development of the *alt-"A"* compartment facilitated fraudulent loan applications by borrowers who desperately needed loans because they were unable to face other and previous financial charges or because they wanted to be part of the ongoing real-estate boom. By definition the *alt-"A"* compartment allows for incomplete loan applications. When this compartment began to grow rapidly, mortgage-lenders in other compartments began to relax, at least informally, their controls on applications so as not to suffer too much from the competition coming from *alt-"A"* mortgage contracts. The total share of low or no documentation mortgages among subprime home-purchase loans rose from 28.5% in 2001 to 50.8% in 2006.

It is estimated that more than 3 million loan applications made between 1997 and 2006 were fraudulent, a large majority being made in 2005 and 2006. The US Department of Treasury reports that "suspicious activity" increased 14-fold between 1997 and 2005, with the largest increases coming in 2004 and 2005[14]. So long as real-estate prices steadily increased, the deterioration in underwriting standards could to some extent be ignored. But not so once the market levelled and then began to turn down. A recent Joint Economic

[14] http://www.fincen.gov/MortgageLoanFraud.pdf .
See also Tyler Cowen in *New York Times*, January 13th, 2008, http://www.nytimes.com/2008/01/13/business/13view.html?_r=2&scp=1&sq=Tyler+Cowen&oref=login&oref=slogin

Committee report explains what happened as follows:

> The deterioration in underwriting standards in the subprime market as the market expanded is well documented. (…) Although underwriting standards in the subprime lending market began to decline after 2001, the effects of this decline were, until recently, mitigated by house price appreciation. If a borrower is struggling to make mortgage payments, but the value of his house has appreciated, he can solve his financial problems at least temporarily by refinancing the mortgage. Cash can be withdrawn from the increased equity in the house, and the new, higher mortgage can be sustained for a while. The house can also be sold, and the loan principal repaid. However, when house price appreciation does not create equity, borrowers' financial weakness cannot be disguised and default rates rise[15].

One important reason why "special compartments" developed so fast was the noticeable reduction in the risk-premium borrowers had to pay. In 2001 the difference between a subprime contract and one done in a "normal" compartment was 280 basis points (or 2.80%). The premium steadily decreased, reaching 130 basis points by early 2007. Meanwhile the subprime lenders were able to escape the escalating risk through "securitization", issuing mortgage-backed securities. Subprime lenders also introduced the adjustable-rate mechanism, which for the borrower had the effect of delaying the impact of monthly repayments. Interest rates during the first year were kept artificially low to induce new borrowers to enter into these contracts[16].

What happened here resembles a typical case of adverse-selection induced by increased competition. Financial deregulation implemented in the early 80's allowed economic actors to enter the mortgage market from the margins and destabilize the whole industry through their competitive impact. The greater risk of low or badly documented contracts would normally have deterred mortgage-brokers. But the intensity of competition generated by specialised high-risk mortgages brokers induced others to accept excessively high levels of risk so as not to lose market-share. The risk premium levied on subprime contracts did not keep borrowers from taking out loans that they actually could not afford. Adjustable Rate Mortgages and "payment option" mechanisms created the illusion of affordability at a time when middle and lower-middle-class incomes were constrained by the Bush administration policy. The credit bubble that emerged was largely the result of competition and market mechanisms in a weakly regulated environment. Although 41 states

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[15] US Congress, JEC, *The Subprime lending crisis – The economic impact on Wealth, Property Values and Tax Revenues, and How We Got There*, Report and Recommendations by the Majority Staff of the Joint Economic Committee, US-GPO, October 2007, p. 3.

[16] The adjustable-rate mortgage is a system where home owners only have to pay the interest (not the principal) during an initial period of one to two years. Another type is a "payment option" loan, where the homeowner can pay a variable amount, but any interest not paid is added to the principal.

have laws regarding asset-based mortgages[17], their enforcement is uneven and frequently weak[18].

With adjustable rates, the interest rate burden began to be felt 20 to 27 months after the mortgage loans were issued. Prime delinquencies began to increase, with most ending in mortgage foreclosures and with people having to leave their houses which were then put on the market. Inevitably real-estate prices began to drop, which in turn undermined middle-class owners who had planned to sell their houses at a profit before the burden of the interest rate reset kicked in.

The combination of highly leveraged mortgages and high indebtedness in a time when middle-class household income was stagnant was a recipe for disaster. The neo-liberal deregulation of the banking and credit sector had enabled in the 1980s a merger between credit and market activities in the banking industry. This resulted in a deep institutional change whose consequences were greatly underestimated. Managing credit risk is not only a different job than managing financial market risk; it also requires a different business culture. The combination of weakened financial institutions and the increasingly unequal distribution of income soon led to dramatic consequences.

The Bubble Bursts

Defaults increased steadily from early 2007 onwards, reaching 16% of the outstanding *subprime* loans by October 2007[19]. By late January 2008, 24% of subprime mortgages were delinquent or in foreclosure. By late September 2007 nearly 4% of all mortgages were delinquent or in foreclosure, meaning that for non-subprime compartments the average rate of delinquency was 2% against the traditional 0.5% rate. By late January 2008 the figure was 7.3% of all mortgaged loans, and 3.7% for all non-subprime compartments or seven times higher than the traditional rate. During 2007, nearly 1.3 million U.S. housing properties were subject to foreclosure, an increase of 79% over 2006[20].

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[17] R. Quercia et al., *The Impact of North Carolina's Anti-Predatory Lending Law: A Descriptive Assessment*. Center For Community Capitalism, University of North Carolina, Chapel Hill, 2003; E. Renuart, An Overview of the Predatory Mortgage Lending Process. in *Housing Policy Debate*, Volume 15, Issue 3/2004.

[18] W. Li and K. Ernst, *Do state predatory home lending laws work*? Center for Responsible Lending working paper, 2006; R. Bostic et al., *State and Local Anti-Predatory Lending Laws: The Effect of Legal Enforcement Mechanisms*, Center for Responsible Lending Working Paper, Aug. 7, 2007, http://ssrn.com/abstract+1005423.

[19] B. Bernanke, "The Recent Financial Turmoil and its Economic and Policy Consequences", October 15th, 2007, http://www.federalreserve.gov/newsevents/speech/bernanke20071015a.htm

[20] http://www.realtytrac.com/ContentManagement/pressrelease.aspx?ChannelID=9&ItemID=3988&accnt=64847

In February 2008, the number of foreclosures was at the highest monthly level since the onset of the Great Depression in 1929. Nevada was the worst hit state with a monthly foreclosure ratio of 1 in 165 homes, followed by California (a 1 to 242 ratio), Florida, Texas, Michigan and Ohio[21]. The situation varied greatly between states. Eleven states are expected to account for over 70% of total US losses in home equity and property values, and of these, three states, California, Florida and New York, for over 40%.

Table 2

States where subprime foreclosures are expected to be above national average

	Total of *Subprime* contrats	Expected *Subprime* foreclosures 3Q07-4Q09	*Subprime* expected foreclosures as a percent of total *subprime* contracts
Ohio	293,566	82,197	28.0%
Michigan	275,931	65,607	23.8%
Minnesota	121,471	27,871	22.9%
Florida	708,195	157,341	22.2%
Arizona	250,799	53,372	21.3%
Nevada	134,528	28,390	21.1%
Illinois	286,246	59,328	20.7%
New Jersey	179,873	35,117	19.5%
Massachusetts	115,780	22,292	19.3%
California	1,030,920	191,144	18.5%
New York	364,433	67,386	18.5%
Total	3,761,742	790,045	21.0%
Percent of US total	**51,1%**	**59,7%**	**US average: 18.0%**

Source: JEC, *The Subprime lending crisis – The economic impact on Wealth, Property Values and Tax Revenues, and How We Got There*, op.cit., p.13.

Real estate prices fell by 8.9% in 2007, the largest decline In the *Case-Shiller* national home price index in at least 20 years. By the end February 2008, the C-S index was down by 10.2% compared to January 2007. This is just the beginning of a process which could see real estate prices falling on average by 20 to 25% and maybe up to 40% in some states. Here again the regional discrepancy in the mortgage crisis will be significant. Some US states will

[21] A. Veiga, *Foreclosure Activity Rises in February*, AP Business, Thursday March 13, 5:16 am ET.

be hit much harder than others. Nonetheless, there is no doubt that the drop in house prices will have a widespread effect on US consumer behaviour.

The crisis goes global: from the mortgage crisis to the credit crunch.

The relevance of "special compartment" mortgages increased quickly because they were backed by a powerful string of financial derivatives, especially "collateralized debt obligations" (CDOs) and "collateralized loan obligations" (CLOs). It is the "collateralization" process, which spread the current crisis; about 75% of recent subprime loans have been securitized[22].

Securitization is basically a process where assets, be they receivables or financial instruments, are offered as collateral for third party investment, thereby transforming debts into investment instruments. Securitization of course spreads risks, but more important it makes it difficult for the buyers of the derivatives to determine what risks they have bought. This financial innovation transformed structured finance into a highly complex game, where derivatives of derivatives were commonly issued, CDOs re-packaging other CDOs. Also these asset pools became more and more heterogeneous, combining hugely different asset-types with hugely different risks[23].

From the mortgage crisis to the bank crisis.

Structured finance began to develop in the 70's, but until the late 90's its use was relatively limited in the mortgage industry. However, Mortgage-Backed Securities (MBS) developed rapidly fast from 1998 onwards and were in the forefront of "risky" credit expansion[24]. After reaching 1,500 billion USD in 2002, they reached 8,500 billion in 2004 and 45,500 billion in 2007[25]. 54% of *subprime* mortgages were securitized in 2001 and 75% by

[22] A. B. Ashcraft and T. Schuermann, "Understanding the Securitization of Subprime Mortgage Credit", *FIC Working Paper* n° 07-43, Wharton Financial Institutions Center, Philadelphia, Pa., 2007.

[23] Yu. Demyanyk and O. van Hemert, "Understanding the Subprime Mortgage Crisis", *Supervisory Policy Analysis Working paper*, n° 2007-05, Federal bank of Reserve of St. Louis, St. Louis, February 2008.

[24] J.P. Morgan Corporate Quantitative Research, "Credit Derivatives Handbook,", J.P. Morgan, New York, December 2006, p. 6.

[25] J.P. Morgan Credit Derivatives and Quantitative Research, « Credit Derivative : A Primer », J.P. Morgan, New York, Janvier 2005.

2006[26]. MBS became an important financial tool in a highly competitive context, where even small profit-rate gains could change the values of bank stocks.

The process of issuing "derivatives of derivatives" (the notorious CDO-squared) totally destroyed accountability and transparency of the mortgage industry. The development of Special Purpose Vehicles (SPVs) increased these problems. SPVs have progressively supplanted banks in the MBS trade. At the same time banks and insurance companies became willing to buy securities with a higher than average rate of return even if it was becoming more and more difficult to assess what was the precise composition of the collaterals. More importantly, the massive growth of basically unregulated structured finance allowed anyone to be transformed into an insurance company. Prudential behaviour fell victim to the strong competition between banks in global and largely deregulated markets. We have here a second typical case of "adverse selection" where high competition fosters unsustainable portfolio choices[27].

The fast developing MBS trade infected most Western and Asian banks, thereby spreading the US crisis all around the world. Since April 2007 several US banks have defaulted and one medium-sized British bank went bankrupt (Northern Rock). The British government then had no option but to nationalize the bank to avoid a major banking disaster and a 1929-type bank run. Since September 2007 there has been a stream of "surprise disclosures" of losses significantly higher than previously foretold and each adding to uncertainty. This impacted dramatically on the inter-bank monetary market. Elements of a generalized credit crunch began to appear by October 2007, forcing central banks (the FED and the ECB) to significantly increase their short-term liquidity supply. By 2 April 2008, 39 banks and insurance companies had announced write-off totalling 227.95 billion US dollars (Figure 5). Of these 39 institutions, the 11 worst account for more than two-thirds of disclosed losses and write-offs.

On 9 February 2008, the German Ministry of Finance warned that up to 400 billion USD may have been lost in the subprime crisis[28], of which between 50% to 55% would be by banks alone. By early April, the IMF stated that total losses could reach more than 950 billion USD. But because it is so difficult to determine losses suffered through SPV issued MBSs, nobody really knows. One can estimate at 450/500 billion USD the total bank sector loss by March 2008, with insurance companies and hedge funds making up the rest. Compared to total bank assets this is not so large. However, because the losses are still partly

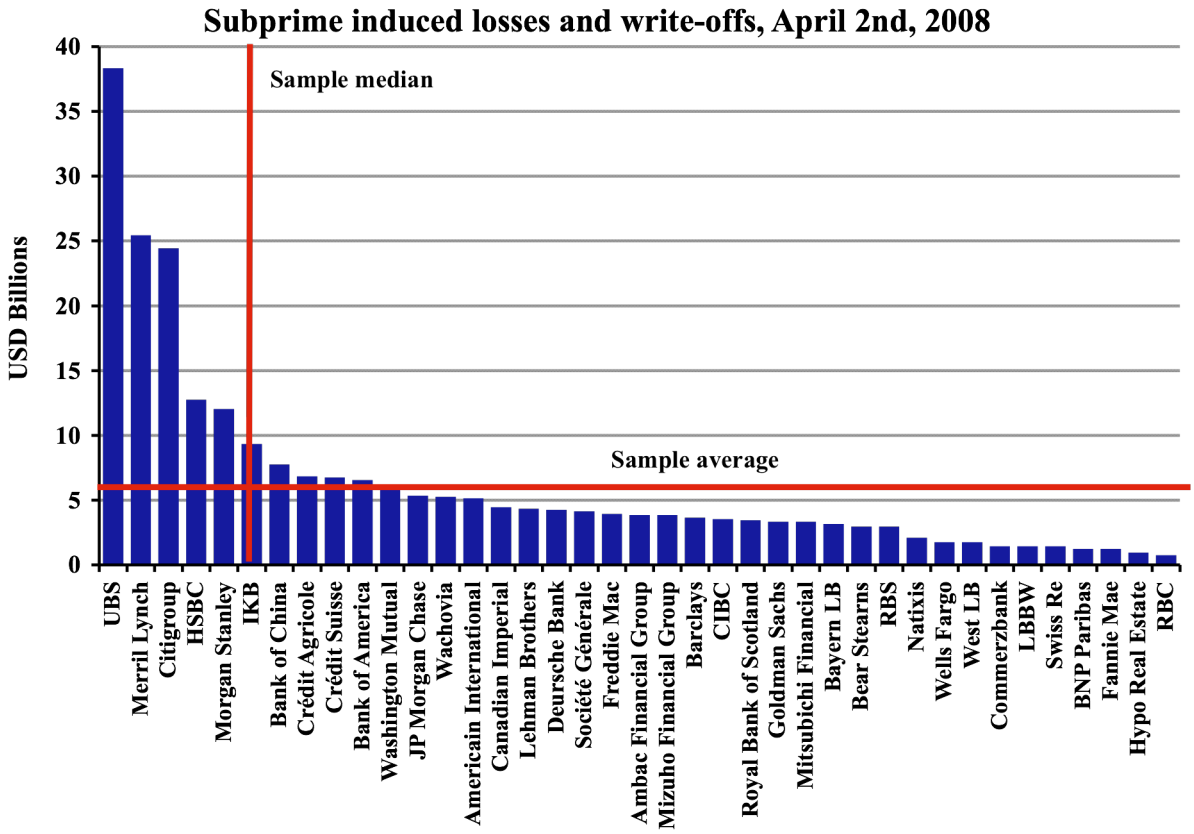
[26] Asset Securitization Comptroller's Handbook, http://www.dallasfed.org/news/ca/2005/05wallstreet_assets.pdf and http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1020396#PaperDownload

[27] M. Hellwig, "Some Recent Developments in the Theory of Competition in Markets with Adverse Selection" in *European Economic Review*, n°31, 1987, pp. 319-325.

[28] Reuters, February 9th, 2008.

unaccounted for and because more could be in the coming, this is enough to boost "margin calls" and generate a worldwide credit crunch.

Figure 5



Source: international press.

The collapse of Bear Stearns[29], a mortgage broker, which had to be bailed out by J.P. Morgan Chase and the FED, signals that otherl financial institutions could be in dire straits and that systemic risk is now a clear and present danger. By early April 2008 more financial institutions, like UBS and CitiGroup, have announced huge losses.

The credit crunch: the FED at bay?

By now, May 2008, we are still far away from seeing the end of this crisis, especially because mortgage defaults have yet to peak and household insolvencies will impact on the

[29] A. Barr, "Bear Stearns gets help from Fed, J.P. Morgan", *Market Watch*, March 14th, 2008, 11.24 a.m. EDT.

credit cards market. The US economy has clearly entered a credit-crunch situation, and it is now spreading to most Western economies[30].

Early in February 2008 it was announced that credit card companies were to write-off 5.4% of their prime card balances against 4.3% in January 2007[31]. More than 7.1% of loans related to personal vehicles and cars were in trouble against 6% by January 2007 and personal bankruptcy filings, which had significantly decreased after the 2005 federal law made it much harder for households to wipe out their debts, are again increasing significantly. Even more disturbing is the fact that auction-rate securities suffered a major blow on 13 February 2008 when closed-end funds had acute difficulties with their usual weekly issuing session and 80% of auctions failed[32]. The auction-rate securities market is a low-profile but important segment of US financial markets. Were it to completely dry up, then most municipal funds and financial insurers would soon be in deep trouble. This was another strong signal that a serious credit crunch was developing in the US economy.

Facing the prospect of a major bank crisis inducing a global systemic risk, the FED acted strongly and rightly, moving interest rates from 4.25% to 3.0% in 10 days in January 2008. For the time being this saved most US banks and insurance companies but did not solve the problem. The FED acted again on March 11th, announcing what amounted to a massive bail out of the US bank sector and received support from the Europe's ECB. However, markets stayed cheered for less than 2 days. By March 13th, with Carlyle Capital going bankrupt, markets fell again[33]. On March 14th, Bear Stearns, a mortgage broker, had to be bailed out by J.P. Morgan, with FED help. Bear Stearns was bought during the week-end (March 15-16) by J.P. Morgan, using a $30 billion FED loan[34]. This quite desperate move was needed to prevent a major bank crash on Monday March 17th. Carlyle Capital, formed in August 2006 by the powerful private-equity firm Carlyle Group, in the meantime, had filed for liquidation[35]. Carlyle Capital had used a highly leveraged strategy (32 to 1) to fund a $21.7 billion portfolio of mortgage-backed securities issued by Fannie Mae and Freddie Mac, which

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[30] C.J. Whalen, "The US Credit Crunch of 2007: A Minsky Moment", *Public Policy Brief*, The Levy Economics Institute of Bard College, n°92, 2007, Annandale-on-Hudson, NY.

[31] Moody's Economy.com

[32] Bank of America Securities, February 14th, 2008.

[33] "U.S. stock futures wilt on Carlyle fund, dollar woes", by Steve Goldstein , *MarketWatch*, March 13th, 2008, http://www.marketwatch.com/News/Story/Story.aspx?column=Indications

[34] "J.P. Morgan to buy Bear Stearns for $2 a share Fed to finance up to $30 bln of Bear's less-liquid assets, mostly mortgages " *By Alistair Barr &Greg Morcroft , MarketWatch March 17, 2008* http://www.marketwatch.com/News/Story/jp-morgan-buy-bear-stearns/story.aspx?guid=%7B9B6A846F%2DA585%2D4123%2DBB53%2DCB3E07A3CFCE%7D

[35] "Carlyle Capital to file to liquidate the firm. Lenders take the last of the fund's mortgage-backed securities"*By Robert Daniel , MarketWatch* EDT March 17, 2008 http://www.marketwatch.com/news/story/carlyle-capital-liquidate-lenders-take/story.aspx?guid=%7b644261EF-1080-4079-9CEE-AAC9C52AFF91%7d&print=true&dist=printTop

were supposed to be much safer than subprime and alt-"A". However, the value of these securities has fallen during the credit crisis as buyers for any kind of mortgage securities have pulled out of the market. Losses suffered by UBS and Credit Suisse were also linked part to alt-A and partly to "normal" commercial real estate credits.

The events in the period 13 to 17 March showed clearly that the massive combined FED-ECB move of March 11th had been unable to check the crisis. The FED board reacted strongly during the fateful March 15th-16th week-end[36]. The discount rate was lowered by 25 basis points to 3.25%. The FED board also approved the creation of a special lending facility through the New York Fed that would be available to members of its primary dealers list. This lending facility amounts to a kind of liquidity guarantee given to most of the vulnerable operators and represents a new and very large injection of liquidity aimed at preventing a bank collapse. In the first three days of the operation of this facility, more than $50 billion were borrowed.

If institutional financial authorities were to lose their market credibility, then market agents could forecast "catastrophic events" (like a massive bank failure or a run against the USD) and begin to act accordingly. Even if only a limited number of market agents came to doubt the wisdom and ability of financial authorities to control the current crisis, their cumulative actions would be enough to create conditions making their own gloomy forecasts self-fulfilling.

The credit crunch began to be felt in Europe by January 2008 and is now clearly worsening. In Great Britain the inter-bank offered rate (LIBOR) rose to 6% by March 28th when the central bank was lowering its key rate. The situation is also tense in Germany and Spain, but somewhat less in France where the banking system looks a bit less exposed. Still there are no doubts that the crisis will cross the ocean.

The FED's March 16th dramatic move was certainly necessary, even if it has been criticized as not transparent enough and prone to generate a moral hazard syndrome in the US bank community. The systemic risk now hanging over Wall Street is much too serious not to be forcefully addressed. However, there clearly is a panic element in the FED reaction. This is an ominous signal for months to come.

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[36] "Fed acts Sunday to prevent global bank run Monday" *By Rex Nutting &Greg Robb , MarketWatch March 16, 2008* http://www.marketwatch.com/news/story/fed-acts-sunday-prevent-global/story.aspx?guid=%7b43265631-1656-4697-8377-55F05D859B76%7d&dist=TNMostRead&print=true&dist=printTop

What next?

One wonders what moves will come next..

The FED could again lower rates for federal funds (the primary interest rate) to 2.0% as well as the discount rates, as the assets held by banks and insurances companies suffer from downward turns in stock-markets and real-estate markets and from the Basel-II rules implementation (mark to market)[37]. Financial institutions are already downgrading the asset side of their balance sheets as markets go down, leading them to restrict even more than necessary their lending activities. By doing so they increase the severity of the credit crunch and push the real sector further into stagnation and recession. This could increase delinquencies not only on mortgage loans but also on credit cards and other consumption credits as well, leading to a new deterioration of the asset balances of financial institutions. The real and financial sectors may heavily interact with a clear snowballing possibility during summer 2008. The heterodox prediction that Basel-II rules will not foster financial stability may unfortunately be proved true[38]. If so, once again institutionalists, who hold that uncertainty is both systemic and endogenous in financial markets and that they therefore cannot be relied upon to determine the "fair value" of assets except for the most short-term ones, would be proved right and the mainstream wrong.

One can reasonably expect US prime rates to go down as low as 2.50% or even 2.00%. However, there now is a strong possibility that this still could not be enough. Paul Krugman's gloomy vision before the FED's March 11 move seems to have been vindicated[39]. It is possible that the interest rate weapon has reached a point where it is no longer useful in fighting the oncoming disaster. If worries were to turn into a panic, even going down to 0.5% (as the Bank of Japan did some years ago) would not stop the calamity. A more radical path would have to be taken, with a probable government guarantee to some institutional lenders (Fanny Mae and Freddy Mac), possibly extended to banks. A government bailout of the banking (and probably insurance) sector is now clearly a possibility. But a consequence would be to increase the already rapidly growing US public debt[40], making it more difficult to keep interest rates low and increasing downward pressures on the USD..

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[37] Basel Committee on Banking Supervision, *Basel II: International Convergence of Capital Measurements and Capital Standards. A Revised Framework-Comprehensive Version*, Bank of International Settlements, Basel, June 2006.

[38] L. Randall Wray, "Can Basel II Enhance Financial Stability ?", *Public Policy Brief*, The Levy Economics Institute of Bard College, n°84, 2006, Annandale-on-Hudson, NY. This point had also been made by Mr. J.J. Bonnaud at the last French-Russian seminar in Vologda, on December 10th, 2007.

[39] P. Kugman, "The face-slap theory", *The New York Times*, March 10th, 2008.

[40] Rex Nutting, *Budget deficit widens to record $175.6 billions*, Market Watch, March 12th, 2008.

All this needs to be put in the perspective of the Iraq War's budgetary burden. Nearly 251billion dollars were spent on the war between 2003 and the end of 2005. The direct cost could rise to $750 billion, and total economic cost could reach 1,026 billion if US forces are to stay until 2010. If a residual US military presence would be needed until 2015, the total economic cost could reach 2239 billion[41]. There is no way the US economy could face the current financial crisis and at the same time carry out military operations in Iraq at a level compatible with a strategic stabilisation.

All economic and political factors point toward a huge increase in the US public debt for 2008 and 2009. Against the overwhelming pressure to avoid raising interest rates, massive debt monetization and then inflation are likely to occur with consequences for the USD and the US economy to follow.

From the US recession to a world crisis?

Most analysts now expect the US economy to enter a recession, but will it be mild or severe and will it spread to Asia, Europe and Latin America and will "uncoupling" develop between the US economy and emergent ones like China, India and Russia?

Some Asian banks (mostly Chinese and Japanese) have suffered significant losses in the MBS trade. However foreign currency exchange reserves are so high in Asia-Pacific countries that the possibility of a major financial local crisis is quite remote. This is true also for Russia, whose banks have not been involved in the MBS trade. Russian FOREX reserves were over 509 billion USD by April 2008. The financial situation here is much better than in 1997/98, and both Asian and Russian Sovereign Funds are set to emerge from this crisis as major players.

Asian countries could be more affected by a strong recession in the USA. However, even if the US economy were to suffer a -3.5% recession (which would qualify as "severe") this would reduce current Chinese growth only from 11.5% to 8.0%. If the US economy undergoes only a "mild" recession (-0.5%), the Chinese growth would decrease from 11.5% to 10.0%/9.5%[42]. The effect a US recession on Chinese growth is expected to be small because Chinese products are now widely exported to other markets. The development, even if too slow, of the Chinese internal market will also dampen the effect of any US

[41] L. Bines and J. Stiglitz, *The Economic Cost of the Iraq War: An appraisal, three years after the beginning of the conflict*, NBER working paper 12054, February 2006, NBER, Cambridge, MA.

[42] Different scenario are covered in Institute of International Finance, *Global Economic and Capital Market Forecasts*, Washington, January 2008, and by several East-Asian research institutes to which the writer had access late January 2008.

recession. The same situation holds true for other East-Asian economies. China now imports form them more than the US economy does. This is why there is a strong possibility of an uncoupling between what is happening in the US economy and East-Asia. It has to be added that Asian emerging economies are accumulating a large share of world currency reserves. In such a situation Asian growth looks much more robust than in 1997.

Unfortunately the situation the EU faces is quite different. The Euro-Zone is already suffering low growth because of constrained household demand and an uncompetitive situation induced by too strong a Euro. This will exacerbate tensions in a zone where there is still no convergence of real sectors[43]. The combination of a lack of a "federal" budget at the Euro-Zone level and an ECB policy much too geared to fighting inflation could be a recipe for disaster when facing so strong a shock[44].

The US recession will probably lead to a European recession or stagnation. Growth will not exceed 1.1% in Germany for 2008, probably 1.3% in France, and will be under 0.5% in Italy. However, the main concern for Europe is the possibility of a mirror mortgage crisis in Great-Britain and Spain.

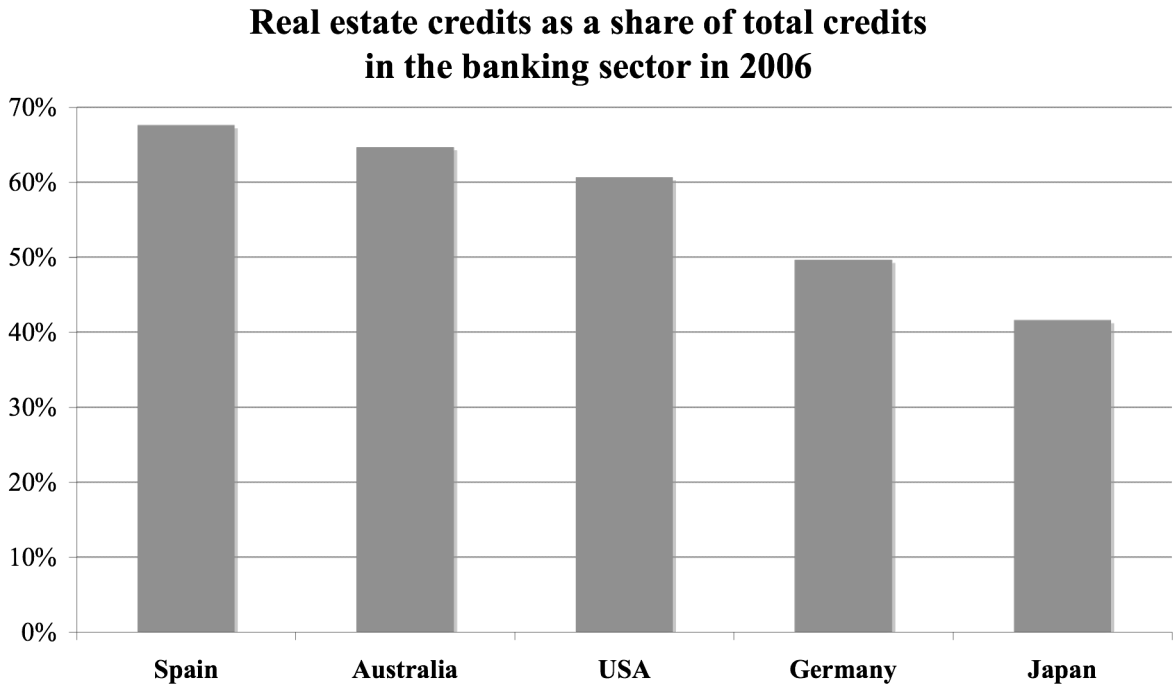
Mortgage based securities have increased in Spain from 25 to 200 billion euros between 2001 and 2006 and by the third quarter of 2007 had topped 247 billion. The solvency of Spanish households is now decreasing fast. The average weight of yearly loan payments (prime and capital) jumped to 45% of average yearly income in early 2007 and total Spanish household debt had reached 124% of GDP by the autumn of 2007[45]. Spain looks like the weakest link in Europe for 2008. As the ECB is less reactive than the FED, one cannot dismiss the possibility of a major crash in the Euro-Zone. One possible crisis transmission link to the EU could be through a mortgage and real-estate crash in Spain. German banks have invested heavily in the Spanish financial sector, which is clearly the most vulnerable to a real estate crisis (Figure 6).

[43] C. de Lucia "Où en est la convergence des economies dans la Zone Euro?" in *Conjoncture*, BNP-Paribas, Paris, March 2008. C. Conrad et M. Karanasos, "Dual Long Memory in Inflation Dynamics across Countries of the Euro Area and the Link between InflationUncertainty and Macroeconomic Performance", in *Studies in Nonlinear Dynamics & Econometrics*, vol. 9, n°4, November 2005 (*The Berkeley Electronic Press*: http://www.bepress.com/snde.)

[44] J. Sapir, « La Crise de l'Euro : erreurs et impasses de l'Européisme » in *Perspectives Républicaines*, n°2, June2006, pp. 69-84.

[45] Data from the quarterly bulletin of the Spanish Central Bank.

Figure 6



Source: Central Bank of Spain.

If there is a financial sector collapse in Spain, then German banks, already weakened by losses they suffered on the US market, could face extremely serious difficulties. Already, several Spanish real estate developers have gone bankrupt. House building statistics are showing a major slow-down, moving from 800,000 houses a year to less than 375,000 for the last 12 months. The building rate could even collapse to under 100,000 a year by late 2008. The Spanish government delayed reacting until after general elections. The economic programme disclosed by prime-minister Zapatero on April 15th is probably a case of "too little, too late". Indeed, Spain could be for 2008 what Austria was for 1930, with its real estate sector playing the same fateful role as played by *CreditAnstalt*. Also a Spanish crash would have dramatic consequences not just in Europe but in Latin-America where Spanish banks have been extremely active.

Are we facing another 1929?

One of the most frequently asked questions today is whether the current crisis is roughly equivalent to 1929. Put this way, the answer is clearly no. But that is not to say that the crisis is a minor one.

The current crisis will not turn out to be another 1929 for at least two reasons. First, central banks have learnt some lessons. The FED acted before the US banking sector could

collapse. Preventing the so-called “systemic risk” certainly is a priority for central bankers. This is why some measures like the special FED lending facility have been created before and not after a major bank collapse. To a large extent the fact the policies have been guided by historical experience explains why so far the crisis has been a “slow-burn” one. But we need to remind ourselves that these polices are not enough to stop and even less to cure the current crisis.

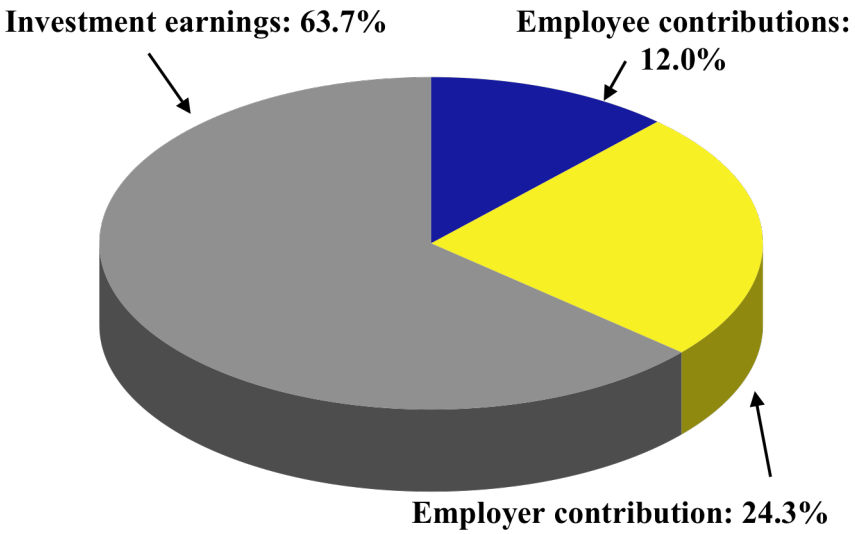
Second, although the crisis will seriously damage the US and possibly some Western European economies, the emerging economies, particularly China, India and Russia, look quite strong. More than two-thirds of world FOREX reserves are held by emerging countries (including Russia). Real sector growth also looks solid with internal markets developing and “middle-class” consumer groups making their weight felt. Thus, emerging economics will dampen the effects of the crisis.

Nonetheless, there are reasons to compare the current situation with the 1929 one. First, the US income distribution is now quite similar to what it was in 1929. Generally speaking, neo-liberal policies have created such huge income inequality that a large share of productive investments made in the last ten years could be without a market if consumption credit collapses in Western economies. The very fact that social safety nets have been dismantled or are in the process of being dismantled in several countries makes consumption spending more vulnerable, as it was before the development of the “welfare-state” in the 1940’s.

A second reason for comparing the current situation to 1929 is linked to the development of pension funds for retirement benefits. If financial markets remain depressed for a significant period of time, pension funds could run into serious trouble. On average, investment earnings account for more than 60% of pension funds revenues (Figure 7). If they decline sharply during the crisis, then pension funds will either have to reduce their payments, pulling down demand or increase employee and employer contributions, which would have the same effect. Already the deficit of UK-based pension funds reached £97.5 billion in February 2008. With US-based pension funds accounting for 45% of all pension funds, a revenue crunch induced by the financial markets crisis could have highly destabilizing consequences. The very fact that pension funds are becoming a matter of public concern creates enough uncertainty to push people to increase their savings at the expense of consumption in countries where pension funds are the dominant form of retirement benefits. Pension funds are a time-bomb inside the current crisis. They will contribute to the depression of demand and make the recession felt longer. Only countries where the “welfare-state” system has not been dismantled will escape this process.

Figure 7

Average Pension Funds revenue sources from 2001 to 2006.



Source: NASRA 2007

A third reason making a comparison with 1929 worthwhile is the dominance of neo-liberal ideology. What made the 1929 Crash so nasty was the fact that, except for a handful of dissenters, ideology blinded authorities and economists alike. In a technical sense corrective measures could have been taken quite early in that crisis, preventing it from spreading as it did. But this would have implied a major breach with the then dominant ideology. The current crisis is happening after more than twenty years of conservative revolution, which has brought about deregulation and a weakening of needed State economic functions. Even though there are now numerous voices asking for more *technical* regulations, the general fact that markets need to be regulated in a global and strategic sense has still not been acknowledged by economic and financial authorities.

A fourth reason making 1929 a possible benchmark for the current crisis in scope if not in historical path is the basic non-sustainability of global capital circulation as it developed after the 1998 crisis[46]. Following this crisis, global finance was restructured on the basis of a balance between extremely aggressive trade policies implemented by emerging countries (and bordering on predatory policies in the case of China) and their willingness to massively buy the US public and private debt. US indebtedness created the market needed by some East-Asian economies and allowed those countries to accumulate trade balance surpluses, which were transformed into USD denominated debts. In some ways this was not so different from the post-Versailles Treaty financial circulation organized by the Dawes Plan. So long as

[46] J. Sapir, *Le Nouveau XXIè Siècle*, op.cit..

this two-sided arrangement worked, there was a natural alliance between USA and China to keep the system going.

However, four factors now point toward a breakdown of this arrangement. The first is that the size of the US debt has increased hugely because of the Iraq War. The second is that the compositional quality of Chinese exports is catching up with that of developed countries trade much faster than expected[47]. This is threatening first some Latin American countries (particularly Mexico) and even developed economies. The very fact that the massive USD devaluation since summer 2007 has not eased the US trade balance deficit is an important point to be kept in mind. The third factor is the already described fact that the US market is less and less relevant for China. The fourth factor is the rise of social tensions in China itself. The Chinese government could be forced to give a greater priority to the internal market. If so, keeping the USD afloat by buying every month a significant amount of USD denominated debts could, from China's point of view, become no longer necessary. Even a limited shift in the Chinese Central Bank reserves from the USD toward other currencies could now have devastating results.

So the underlying economic basis of the trade arrangements between the US and China is now seriously eroded. The collapse of those arrangements could be triggered either for political reasons or by simple mismanagement. Nothing significant, however, will happen before the close of Beijing's Olympic Games in August. But what will happen after is a huge question mark.

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Conclusion

The current crisis is much more than the result of a limited mortgage-industry collapse poisoned by badly regulated derivatives. The 1997-1999 crisis grew out of the Washington Consensus policies imposed on emerging economies. The current crisis is the creation of the conservative revolutions of the 80's and 90's in the USA and some European countries. It is a crisis for and created by neo-liberal policies and thinking. It became global because of the world financial market deregulation[48]. However, the WTO-sponsored global free-trade environment contributed also, by allowing an unsustainable compromise to develop between emerging Asian economies and the US economy.

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[47] P. K. Schott, "The relative sophistication of Chinese exports" in *Economic Policy* n°53, January 2008, pp. 5-47.

[48] Paul B. Farrell ,*Derivatives the new 'ticking bomb' Buffett and Gross warn: $516 trillion bubble is a disaster waiting to happen*, Market Watch, March 10th, 2008http://www.marketwatch.com/news/story/derivatives-new-ticking-time-bomb/story.aspx?guid=%7BB9E54A5D%2D4796%2D4D0D%2DAC9E%2DD9124B59D436%7D&dist=TNMostRead

There are strong similarities with the 1997-1999 world financial crisis. The current one will result in a brutal and wide-ranging re-drawing of the economic and financial "correlation of forces", giving more and more weight to countries like China, India and Russia, which are underrepresented in international financial institutions. It also, already, is causing another massive "cognitive shock" to mainstream economics and highlighting the necessity for "realist" economic theory[49]. The post-autistic movement emerged in the wake of the 1998 crisis. The months to come could see a growing awareness of the need for heterodox or "realist" economists to come forward with a fully developed agenda for institutional and economic policy reform aimed at dismantling what the neo-liberal revolution created.

We must not underestimate what our responsibilities could be in the near future.

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[49] See J. Sapir, *Quelle Economie pour le XXIè Siècle*, Odile Jacob, Paris, 2005.