THE DEVELOPMENT AND IMPLICATIONS OF THE U.S. SUBPRIME CRISIS

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The changing characteristics of the international financial systems starting from the second half of 2007 came as no surprise. Looking at the events in a synthetic manner, the main factors that led to the triggering and amplification of the crisis can be identified in the dramatic increase of new and more complex financial instruments, with increasing lack of transparency, in the conflicts of interest between market participants, in the imprudent lending practices in the financial services industry, in the deficiencies of rating agencies, together with the excessive confidence in the market's self regulation, the unrealistically low risk attributable to certain investments and, the inability to respond to early warning signals or to learn from the lessons of the previous crises.

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Subprime loans, as a triggering factor of the crisis

While not all mortgage loans may be automatically placed in the category of subprime mortgages, one can observe the proliferation of this kind of loans in the 21st century. Approximately 21% of the total mortgage loans, between 2004 and 2006, fell into the subprime category, as compared to the 9% level in 1996 (Golsbee, 2007). In the third quarter of 2007, subprime mortgage loans with variable interest rate, represented only 6.8% of the mortgage loans, but accounted for 43% of the loans for which the right for mortgage repurchase because of unpaid obligations had stopped. The subprime mortgages with fixed interest rate accounted for 6.3% of the total mortgages and only for 12% of those with cancelled right of mortgage repurchasing.

Objectively speaking, as long as the risks involved with such loans is closely monitored by creditors, imposing higher interest rates and guarantees, one can say that there was no imminent danger related to such loans. But, as in many previous crises, the relaxation of lending standards was one of triggers of the initial losses. Often, it was allowed for borrowers to enter into the possession of large sums of money that would later increase the borrowers' expenses, once the period of low interest rates expired and once the repaying of rates of capital had started (Dodd & Mills, 2008).

The reasoning that lied at the basis of such loans was found in the *increasing prices of real estate*. Thus it is considered that potential repayment problems could be reduced and even eliminated by the market value of the presented guarantees. If borrowers failed to repay maturing rates on time, the high value housing could facilitate refinancing the loan.

Specific developments due to the process of financial innovation

Concretely, the disruptions relate to the developments in the U.S. mortgage market and, for a better understanding of the transformations suffered, one should make a brief foray into history.

Thus, after the 30's crisis, based on the "New Deal" program of the Roosevelt administration, a public body-the Federal National Mortgage Association was created, whose objective was to increase the volume of loans and mortgages, thus stimulating the economy by all the positive effects that the development of the construction sector may have on it. Fannie Mae took over from the initial lenders the default and liquidity risk, which it could manage much better than the first line distributors credits, as it had a portfolio of mortgages much more diverse and more widespread at the national level than the usual banking institutions. This body could borrow funds itself on longer term than banks, which was likely to reduce the liquidity risk. In 1970, the Government National Mortgage Association another governmental institution, began issuing bonds collateralized by mortgage debt, which enabled the transfer of risk of default to the subscribers of such titles and relieve the federal budget of a substantial part of the debt incurred for financing of public programs for the construction of housingThese titles are placed on the capital markets, and their redemption at maturity is done directly from the owners. Also, in 1970, a new body was established, the Federal National Mortgage Corporation (Freddie Mac), to issue securities based on classical mortgage loans, but also to create a competitor to Fannie Mae, which was to be privatized.

In time, these institutions were able to mobilize significant capital for mortgage refinancing, their main operations aiming at acquiring and holding assets in prime mortgages, as well as the transformation of mortgage loans in a variety of debt securities collateralized by mortgages. This operation is called *securitization*, generally, a *technique that transforms less liquid financial assets into negotiable securities such as bonds.*

Mortgage securities that are based on mortgage loans from one lender, are usually issued through swap transactions in which the lender changes the package of mortgages for MBS. Mortgage securities backed by multiple creditors allow some creditors to pack mortgages in exchange for the receipt of mortgage securities representing a proportionate part of a larger package (Cerna, 2008). Generally, mortgage securities tend to provide coupon rates higher than the treasury securities issued by the U.S. Government. In part, this is because the interest rates charged for mortgages are higher than the interest rates offered by the U.S. government. At the same time, however, the higher interest rates of the mortgage securities also reflect the level of investment risk raised by the uncertainty due to the advance repayments. In the U.S., these mortgage securities are guaranteed by the GNMA, FNMC and FNMA. The mortgage pass-through securities issued and/or guaranteed by the organizations listed above are the most numerous and, are characterized by an AAA credit rating.

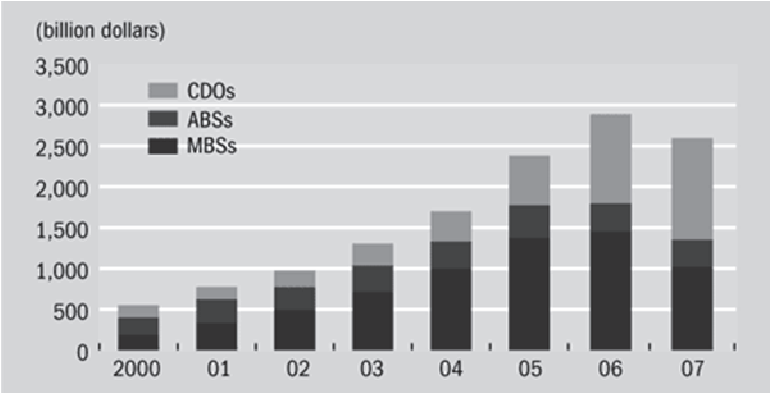
This structure of the market, based on organizations supported by the state, proved to be very profitable, and therefore attracted other financial institutions as well. Thus, if in 2003 the semi-completed 76% of the total issuance of debt securities backed by mortgages and other assets of the issuer, the remaining 24% representing the large financial corporations on Wall Street, in mid-2006, the share of the semi-public bodies decreased to 43%, while the share of private securities increased to 57% of the total. The major private issuers of this type of securities were the well known U.S. investment banks (Wells Fargo, Lehman Brothers, Bear Stearns, JP Morgan, Goldman Sachs, and Bank of America).

Parallel with this rapid and radical transformation of the market, there was a change in lending standards in the U.S. following the deregulation process. In this liberal framework, while Fannie Mae and Freddie Mac have continued to provide almost exclusively prime loans, the private corporations have increased their market share, mainly through the securitization of mortgages with high risk and of the so called "Alt-A loans" granted to solvent, but less reliable debtors than the first class customers. However, this increase in the quantity of securities backed by doubtful mortgages created a problem, because the main purchasers of such securities were institutional investors with a limited exposure to the holding of such securities. Consequently, only a small

proportion of claims with high risk could be sold to institutional investors in search of higher yields.

To address this issue there was adopted a strategy of dividing risks in more categories or "tranches" with separate administration, thus determining a widening of the market for mortgage debts with high risk. From a technical point of view, this operation consists in dividing the portfolio of claims into two parts: one characterized by a low risk level and, one with high risk level. To this end, firms on Wall Street have opted for a new financial instrument, created in 1987 by the financial investment firm, Drexel Burnham Lambert, called *collateralized debt obligations* (Bordo, 2007).

An essential difference between CDOs and other mortgage derivatives on one hand, and securities listed at stock exchanges and futures contracts on the other hand, is that the former are not traded on stock exchanges, but on over-the – counter markets (OTC). On these markets transactions are carried out directly between customers and dealers, unlike the stock market where sale or purchase orders are intermediated, as for the data about the volume of transactions and prices, these are not published officially. The price formation method has no transparency. It should also be noted that there does not exist a supervisory authority for OTC markets, that allows the identification of large or vulnerable exposures, nor do lenders of last resort exist, in order to provide the liquidity needed in special situations.



Issuance of structured credit instruments in the U.S.A and Europe

Figure no. 1

Therefore, the degree of risk involved by such securities has been ignored by investors who sought to obtain high profits. Until the spring of 2007, some top managers of financial companies have begun to concern about debt securities secured by subprime mortgages. But, given the still low interest rates and the high liquidity, the demand for structured credit products with AAA ratings and higher than normal yields, has continued to increase until mid-2007, as it results from Figure 1.

The development and generalized impact of the subprime mortgage crisis

The demand for real estate in the U.S. has increased considerably in the recent years, which led to a considerable increase in prices, which could be said that have almost doubled and even more from 1997 to 2006-2007. From 2003 to 2006 the property prices rose by no less than 30%, (Kodres, 2008).

Price evolution together with the exponential growth of prices after 2000 put the U.S. housing prices in a speculative bubble, the increase being determined by expectations regarding future price increases, rather than by economic foundations. The explanation lies in the fact that the homes were purchased for their future anticipated price level, price that could offset the initial yield offered. On the other hand, this increase was driven by the increased volume of mortgages granted, by the eased access to these credits and also by the development of the construction sector in the period of economic prosperity.

In 2005-2006 interest rates began to rise and housing prices to decline moderately in many U.S. regions. As a result, outstanding loans rose as the initial terms have expired and variable interest rates rose. The inability of borrowers to honor the installments of maturing mortgages resulted in the mass start of the sale of properties by property holders and credit institutions. The market was flooded of houses from liquidation of mortgages, while new houses were not sold so well either, which led to a further decrease in the value of homes. Selling these houses below their market value (and obviously the price of acquisition or accepted value of collateral) has increased the default rate of loans and the incapacity to recover the total claims by credit institutions (Bordo, 2007).

The mortgage market crisis actually began when investors with very large debts, such as hedge funds have tried to adjust their exposure or, to exit the losing positions, which made the high risk mortgage backed securities' market to become illiquid. In this way, in August 2007, hedge funds were seen stuck on unfavorable positions, and this just when they had to pay the premiums required by their brokers. The situation has worsened even further, because with the termination of transactions, there were no market prices any more, to serve as benchmarks, or other means to determine the value of the securities contained in various tranches of risk (Corbu, 2008). The consequence of the shown disruptions was that hedge funds stopped their transactions, while the CDO market and the credit related derivatives have virtually ceased to exist.

Regarding the banks financing the initial lenders, they have ceased their support, which made the latter unable to meet payment obligations related to the stock of mortgage loans granted Finally, potential buyers and home owners could not get mortgages any more, which has put them in the situation of not being able to pay for construction work performed. In turn, constructors, which have previously got loans to build homes for sale, could not sell their homes and therefore could not repay loans, etc.

All these phenomena have resulted in a strong contraction of demand in the construction of housing, with all the series of negative implications for the economic growth. The fact that hedge funds and other investors did not buy high risk mortgage debt any more has shown that all these claims were no longer considered secure forms of investment. Accordingly, securities prices have dropped and their issuers have not been able to procure the necessary funds for the repayment of mortgages and other types of loans they have contracted from big banks and financial corporations. In this way, when the credit resources were exhausted, in the financial system appeared a new request for additional loans.

Taking into account the consequences of these developments, beyond the losses of the U.S. economy, spectacular bankruptcies, causing millions of unemployed and affecting all sectors, another more serious problem appears, namely the repercussions of the U.S. crisis on international financial markets and world economies. The propagation of the crisis effects appears as an unquestioned reality, through a simple fact that, currently, we can no longer speak of an isolated financial crisis in the U.S., but rather of a global financial crisis, which through the implications on the real economy, has become a generalized economic crisis.

The role of Rating Agencies in crisis triggering

The rating agencies have played an important role in the triggering of the crisis. A feature of this sector is the lack of a consistent standard for assessing the ratings for structured securities. Lack of such a standard of evaluation may lead to arbitrary decisions. The lack of single standards of evaluation, the lack of legislation to penalize the assessment practices that allow changing the rating from one day to another, the lack of competition, the conflict of interest that appears at the financing of a ratings evaluation project, are sufficient grounds to trigger a crisis of loan markets.

Rating agencies were in no position to rate securitized transactions (CDO and MBS), backed by subprime mortgages. The high ratings given to these securities were justified by various improvements in the lending sector, by the greater value of the collateral than of the loan itself, as well as by the existence of the investors in securities willing to take over the risk of losses. On the other hand, rating agencies have asserted that they only took into account the risk of default, and not liquidity risk or market risk, which investors often tend to neglect. Some critics of these agencies say that conflicts of interest also appeared in this process, because rating agencies are paid by companies that organizes and place such instruments to investors, companies like investment banks (Crainic, 2007).

Another criticism brought to rating agencies, is that these agencies have always been late in discovering the signals of a crisis. The situation is similar to that of Enron, when rating agencies have been unable to notify the company's tremendous exposure. Agencies' inability to distinguish signals of the subprime crisis has determined both the U.S. and the EU authorities to improve the regulatory and monitoring framework of their activities and, not least to make them legally responsible for their actions.

Conclusions

The financial crisis can be viewed, in a very broad way, as a state of imbalance, over certain limits, among different parts of the market. Some financial crisis may be predictable, while others are difficult to predict. The ongoing financial crisis, which has developed since the summer of 2007, according to many experts, was expected. The problem that developed was not whether it will actually happen, but when it would begin. The factor that triggered this crisis is represented by the U.S. subprime market.

During the pre-crisis period, low interest rates, high liquidity, low volatility of financial markets and a general feeling of satisfaction, have encouraged many categories of investors to assume much higher risks. The changing characteristics of the international financial systems starting from the second half of 2007 came as no surprise. Many supranational institutions (The International Monetary Fund, The Bank for International Settlements, The European Central Bank) have pointed out that risk is undervalued and that a reverse evolution is progressively more possible.

Looking at the events in a synthetic manner, the main factors that led to the triggering and amplification of crisis can be identified in the dramatic increase of new and more complex financial instruments, with increasing lack of transparency, in the conflicts of interest between market participants, in the imprudent lending practices in the financial services industry, in the deficiencies of rating agencies, together with the excessive confidence in the market's self regulation, the unrealistically low risk attributable to certain investments and, the inability to respond to early warning signals or to learn from the lessons of the previous crises.

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