LEADING FACTORS OF THE GLOBAL FINANCIAL CRISIS – THE US EVIDENCE

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Abstract
The global economic scene towards the end of the 20th and the beginning of the 21st century has suffered a series of financial crises that had serious consequences in the developed economies in which they initially emerged, but their impact also caused serious problems in many other countries, hence, had a strong negative impact on the global economic development overall.

The global financial crisis originally started as an US financial crisis of 2007/08, transmitting globally after the fall of Lehman Brothers impacting the rest of the developed and developing countries. The subsequent European debt crisis, is proof that financial crises are still present and pose a serious threat in the future onto the development of the world economy in general.

Therefore, in this paper we conducted an analysis of the leading factors that caused the global financial crisis. According to the literature and the empirical work conducted, we can classify these factors in two major groups: macroeconomic and microeconomic. The analysis is done by exploring of the relevant economic on the types of financial crisis, as well as the causes of the American financial crisis.

Keywords: twin crisis, debt crisis, banking crisis, currency crisis, securitization, financial innovation.

Clasificare JEL: F440, E320

1. Introduction

In the last thirty years, many developing countries, as well as some of the developed countries, have been victims of fierce financial crises. Emerging markets are favourite destination for foreign capital but there are more resistant to financial turmoil comparing with the developed countrys. The reason for this is because of the risk protection contracts and the existence of risk aversion (Duduilała, L., 2014). For this reason, a considerable part of the research was conducted on theoretical and empirical analysis on the causes and consequences of contemporary financial crises. Such activities are undertaken for the purpose of timely recognition, mitigation and/or successful dealing with the negative effects of financial crises.

During the global financial crisis a large part of the empirical work was basically focused in three separated areas of exploration i.e. the possibility of creating an early warning mechanism, the global financial crisis incidence and intensity and the transmission channels. These closely interrelated areas of research are rich of theoretical and empirical work done during the period of the crisis.

Economics literature which explores the causes and consequences of the financial crises (e.g. Krugman, P. 2008, Stiglitz, J. 2009, Thakor, A. 2015, Malliaris, G. 2016…) is substantial and continuously evolving. , A (2015, p.156) for example, says the following for the US financial
crisis: “Despite the familiarity the financial crisis of 2007-09 came as a major shock that is widely regarded as the worst financial crisis since the Great Depression of the 1930s. The crises threaten the global financial system with total collapse, led to the bailouts of many large financial institutions by their national governments, caused sharp declines in stock prices…”

Mallakis, A.G. (2016, p.38) refers on the severity of the 1.5 year recession of the US economy that was the result of the financial crisis. To be specific, during the global financial crisis, the unemployment rate increased to 10%, the real GDP dropped by about 4%, the S&P 500 decreased by 57%.

The analysis of the authors Reinhart, M.C (2009) and Reinhart, M.C & Rogoff, S.K (Letica, B.2010, p.4) has shown that the American financial crisis is no exception, but a rule in the historical process of occurrence and managing with financial crises. They have made a comparative analysis of 18 banking crisis in the developed countries of which they have selected the Spain crisis from 1977, the Norwegian from 1987, the Finnish from 1991, the Sweden from 1991 and the Japan crisis from 1992. From their comparative analysis can be concluded that the analyzed financial crisis are historically related to “4 deadly D's”:

- Sharp economic downturns follow banking crises;  
- worsen fiscal deficits;  
- deficits lead to debt;  
- debt lead to decline in credit rating.

Thakor, A (2015) has reviewed a various research on the causes and consequences of the American financial crisis and he concluded that there were many factors that caused the crisis. The most significant factors are the following:  
- the monetary policy;  
- growth of securitization of the credits portfolios with bad quality;  
- fragmented regulatory structure;  
- Inappropriate policies etc.

Further, according to Lucjan, O (2008), Borio, C (2008) and JA WorldWide (2008) monetary expansion, large capital inflows in the United States, the great indebtedness of US real estate buyers, the expansion of the US real estate market, the inadequate methods for assessing credit risks, the expansion of new financial instruments followed by inadequate financial supervision and regulation, the issuance of high risk loans to clients with poor or no creditworthiness were the main reasons for the exacerbation of the US crisis. These factors are analyzed in the second part of this paper.

Therefore, the main idea of this research paper is to analyze the main factors that lead to occurrence and development of the American financial crisis. We contribute to the existing literature by identifying the key reasons for occurrence of the American financial crisis that still remains a challenge for many researches. Having in mind the severity of the crisis this analysis is essential in order to be able to recognize and prevent the future financial crisis.

The rest of the paper is organized as follows: A literature review on the different types of financial crisis is presented in the first section. The second section focuses on the macro and micro aspects of the American financial crisis. Last section offers concluding remarks and suggestions for further research. The scope of the research will cover the explanation of the mentioned objective and will depend on the knowledge that exists in the financial crisis literature.

2. Literature review

In this section we provide a brief review of the existing literature on financial crisis focusing on the understanding the different types of financial crisis. We believe that the classification of the financial crisis is essential in order to find the right measures for identifying, resolving and even preventing the future financial distress.
The term "financial crises" in literature, and often in financial practice, is used to mark a banking crisis, debt crisis and/or a crisis in foreign exchange markets.

We will quote Claessens, S and Kose, M (2013, p.3) according to which:

"Crises are, at a certain level, extreme manifestation of the interaction between the financial sector and the real economy"

Currency crises can be consequence of speculative attacks on the domestic currency, which can result in value decline. Monetary authorities when faced with currency crisis, are forced to intervene with extensive spending on foreign exchange reserves and/or significant interest rates increase. Goldsten, I. and Rain, A. (2015), while explaining the reasons for the currency crises occurrence, began with the so-called trilemma, i.e. the choice for the governments regarding the three economic goals: an independent monetary policy; a fixed exchange rate; and free capital flows. For example, the stability of the exchange rate regime and open capital markets can be achieved by establishing fixed exchange rates. If such policy is implemented, the monetary policy is subordinate towards pursuing the two goals. If, however, a particular government is determined to pursue an independent monetary policy, and on the other hand, it allows open capital markets, then, the exchange rate must freely fluctuate, which means that there will be no exchange rate stability. And finally, if the government decides to pursue an independent monetary policy and exchange rate stability, then, they give up the potential benefits of the free capital movements and integration with the foreign capital markets.

International economists and politicians, such as Krugman, P. (1979), Flood and Garber (1984), Obstfiled (1994) D’Apice, V and Ferry, G (2010), Goldstain, I and Rain, A (2015), in order to explain the volatility of modern currency crises, develop or contribute to the understanding of certain models that can be grouped into three generations, in which emphasis is placed on specific aspects that lead to currency crises. The first generation models focus on the inconsistency between the expansive macroeconomic policy and the fixed exchange rate as the reason for the currency crises occurrence. The second generation models emphasize the reciprocal impact between investor expectations and countercyclical economic policies, while, the third generation models emphasize the role of the banking sector and the importance of moral risk, asymmetric information and the sudden turnaround of capital inflows when the currency crisis arises.

Researchers Laeven, L and Valencia, F (2012, page 11) define the currency crisis as a nominal depreciation of the domestic currency compared to the US dollar of at least 30 percent. Having in mind this definition, in the period from 1970 to 2011, they identified a total of 218 currency crises, of which 10 crises occurred in the period 2008-2011, 146 banking and 66 debt crises.

Figure no.1

Figure no.1 Financial crises in the period from 1970 – 2007

Figure no.1, presents the different types of financial crises, including twin crises (when debt and currency, banking and debt or banking and currency crises exist at same time) and triple crises (when the countries are affected by bank, currency and debt crisis simultaneously). Laeven, L. and Valencia, F. (2012) concluded in their research that the most common case is when currency crisis accompanied by a banking crisis (28) or a debt crisis (29), and, only 11 countries faced simultaneously banking and debt crisis. Debt crisis occurs when the country is unable to pay its obligations towards domestic and foreign creditors. Twin crisis are identified in situations when the banking crisis occurs at T time, and the currency crisis in the time period T-3 to T+3. During the review period, only eight countries experienced the three types of crisis simultaneously. In fact, these are all situations when the banking crisis appears in time T, and the currency and debt crisis in the time period T-3 to T+3 (three periods before or after the banking crisis occurrence).

A number of economic theorists who are studying financial crises point out the so-called systemic banking crisis. According to Leaven and Valencia (2008, p.5): "In case of a systemic banking crisis, the corporate and financial sector in the country can not fulfill their obligations on time. The result of this situation is the exhaustion of the entire or most of the total banking capital. This situation can be complemented by an increase in real interest rates and a slowdown or outflow of capital, a reduction in asset prices including capital and real estate."

In their next survey, they include banking interventions as a second condition that needs to be met a crisis to be classified in the category systemic banking crisis. Namely, according to Leaven and Valencia (2012, p. 4), a banking crisis can become a systemic banking crisis when the following conditions are met:

1. Significant financial shocks in the banking system caused as a result of simultaneous mass withdrawal of deposits by customers and / or bank liquidations.
2. Significant political interventions in the banking sector taken in response to losses in the banking system. In addition, at least three of the following five measures should be implemented in order to be considered as a systemic crisis:
   - Significant liquidity support (5% of the deposits or liabilities of non-residents)
   - At least 3% of GDP to be used for bank reconstruction.
   - Significant nationalizations of banks.
   - Significant guarantees of obligations have been provided.
   - At least 5% of the GDP used for the purchase of funds.
   - Freezing of deposits.

The above two take into account the year in which these conditions are met as the beginning of a systemic banking crisis.

In the event of a systemic banking crisis, governments are undertaking various programs to help troubled banks that are "too big" to fail. Otherwise, the negative effects that would have occurred would cause much more damage to individual economies, especially in developed countries that have developed banking systems.

In the next sections we are focusing on answering the following research question: What are the key conduits that lead to the occurrence of the American financial crisis?

3. What caused the American financial crisis?

The main feature of the American financial crisis is that it came about as a result of the combination of elements at the macro and micro level, which existed before its appearance in 2007. The macroeconomic factors contributing to its emergence are mainly: monetary expansion in the United States, large capital inflows in the United States due to the so-called “global savings glut”
Among the new instruments can be mentioned CDSs - loan and credit facility loan agreements through which creditors’ portfolios can be separated and re-used to meet the requirements of individual investors. This category includes collateral debt obligations - CDOs supported by themselves and CDSs, but also by ready-made instruments.
such as basic insurance and loan insurance. In most cases, credit institutions sold the converted portfolios of the capital market to obtain funding for the issuance of new loans (Borio, C.2008, p.4).

Figure no.3 presents the largest buyers and sellers of CDSs to get an idea of the percentage share of these instruments in the capital market.

In 2006, the largest individual buyers and sellers were the banks, and immediately behind them were the insurance funds and the insurance companies. According to the report of the Bank for International Settlements, the abstract value of CDSs was $ 42.6 trillion, and in June 2007 they reached a value of $ 721 billion (Saxton, 2008).

The short success of new financial products was possible by the expansion of global savings. Foreign investors were eager to buy these high-profile products, hence the global financial assets managed by investment funds were allocated to high-end CDOs. The risk arising from investing in these instruments was completely underestimated by the credit agencies. The question that everyone poses was what is the reason for the wrong estimates by the credit rating agencies? The issuers of financial instruments paid the credit agencies for their rating?, which should be actually a conflict of interest.Hence, credit agencies were not objective in their estimates thus, influencing creation of asymmetric information for the investors who invested in new financial instruments, that is, prior to their purchase, investors believed that they invested in low-risk instruments. Until 2006, the US real estate market recorded steady growth, mainly supported by mortgage insurance, and the use of new financial products. High mortgages were the reason for the rising debts of US homeowners, which in fact was one of the reasons for the impending credit crunch.

The situation of the real estate market in the United States in the period from 1990 to 2008 is presented in Figure no.4.

Figure no.4. Total new privately-owned housing starts and new one-family houses sold in the U.S (in ‘000), January 1990 – June 2008 series.


Figure no.4 shows a significant increase in the construction of homes, from a monthly level of about 800 thousand units in 1991 to 2,273 thousand units in January 2006. The same trend was also achieved on the side of the sale of new houses, which rose from 401 thousand units in January 1991 to around 1400 units in May 2005. The construction of new apartments continued to increase in the period from May 2005 to January 2006, but the renting of new buildings declined. Until June 2008, the movements of these indicators decreased by about half. Between 1994 and 2006, the average price of a family house increased by nearly 200%. The reasons for such enormous growth in prices can be mentioned as follows: low rates for mortgages, reduced use of bank rules on the mortgage market and changes in consumer expectations.

For most people, buying a house was a dual purchase, that is, they bought a house, but also a mortgage. According to the basic economic theory, when the price of a product falls, which goes into pair with another product, then the demand for the other product begins to increase. Hence, the fall in mortgage rates, as a result of the previously discussed factors, has affected the increase in house prices. Further, deregulation in banks' operations has changed banking practices. Specifically, as already mentioned, deregulation in the financial sector enabled banks and other financial institutions to introduce new financial instruments by which banks could convert mortgages and sell them to the capital market. Using these instruments, the banks did not pay attention to the quality of the loans, as they eventually turned out to be bad, they no longer belonged to the banks that issued them.

Many analysts agree that the credit crunch in the United States is a result, above all, of the fact that banks issued high-risk loans to customers who had poor or no credit worthiness. These are so called “subprime mortgage loans”. Table no.1 presents the dynamics of the issuance of subprime mortgage loans in the period between 2001 and 2006. The data shows that the issuance of the subprime mortgage loans was continuously rising in five consecutive years.
Table no.1 Origination and Issue of Subprime mortgage loans

<table>
<thead>
<tr>
<th>Year</th>
<th>Subprime mortgage loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>$190 billions</td>
</tr>
<tr>
<td>2002</td>
<td>$231 billions</td>
</tr>
<tr>
<td>2003</td>
<td>$335 billions</td>
</tr>
<tr>
<td>2004</td>
<td>$540 billions</td>
</tr>
<tr>
<td>2005</td>
<td>$625 billions</td>
</tr>
<tr>
<td>2006</td>
<td>$600 billions</td>
</tr>
</tbody>
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When low-income citizens took a loan to buy a house, then only the house that was mortgaged, but without any additional payments, served as a guarantee of repayment of the loan. Buyers knew that, in the event of a real estate price rise, they would be able to make a profit through the sale of the house, otherwise the bank would have taken away the house. The number of unfulfilled commitments in respect of mortgage loans has reached a very high level. What did the creditors do? In this case, they confused such low-quality loans with quality mortgages, bonds and assets and packaged them in debt packages or collateral debt obligations and sold them to investors around the world. This process is known as "securitization" or conversion of bad mortgage loans into securities.

The aggressive credit policy of US banks and low credit approval criteria have caused enormous borrowing from US citizens. The bulk of the debt increase was used to re-invest in real estate. The result was the creation of a soap bubble on the real estate market which, inevitably, had to crack, and it did in the period from February to June 2007. In such a situation, banks began to reduce their debts by selling risk assets and collecting additional capital to cover the loss caused by the fall in real estate prices. The acquisition of real estate with new money has resulted in a further decline in their prices. What did the banks do in this case? In order to preserve the confidence and security in the banking system, they first stopped lending to other banks, and then began to reduce lending to the population. Receiving loans has become very difficult and expensive, which, in short, is a typical example of a credit crunch. In fact, the crisis has reached such a scale that has not been seen since the Great Depression in the United States since 1929.

4. Conclusion

The analysis of existing literature in which different types of financial crises are presented helps to classify them from the aspect of identifying and solving crisis situations, as well as preventing the emergence of new crises. According to the literature that we have investigated three major types of crisis can be identified: currency, debt and banking crisis. These crises can occur and develop independently or can exist two or three simultaneously. In addition to the mentioned crises, we can distinguish another type of crisis, which is the systemic banking crisis that occurs when financial problems are present in the banking and corporate sector. When this crisis arises, it is necessary to take appropriate measures, both by banks and by governments.

The American financial crisis was a result from the specific action of multiple micro and macroeconomic factors. The expansive monetary policy, the foreign capital inflow in the country, the expansion of the real estate market and the heavy indebtedness of US real estate buyers are among the macroeconomic factors that have caused the escalation of the crisis. Microeconomic
factors include: inadequate assessment of credit risks, absence of adequate banking regulation, asymmetric information, etc.

Among the first few factors that triggered the crisis were the following: excessive global savings and excessive liquidity created by the Federal Reserve i.e. The so-called “global savings glut”, but also some other central banks have affected the reduction in the price of loans. On the other hand, this liquidity increased due to the excessive delivery of loans that was triggered by the insurance of the assets of the banks. Secondly, the over-indebtedness of American citizens over their real possibilities. Thirdly, foreign investors, in search of higher profits, have invested their own funds in high-priced CDOs, considering that these instruments are at low risk. These factors, coupled with the problem of asymmetric information for investors investing in CDOs, the poor credit quality that banks issued to clients with inadequate creditworthiness, as well as the mistakes made by agencies in assessing credit risks and the like contributed to the crisis to cause serious disturbances in the functioning not only of the American but also of the international financial markets.

This research represents the basis for our future research in which the focus will be on identifying the measures and techniques that could contribute to the successful prevention and management of financial crises. In order to do so, the future avenue of research is mainly focused on possibility to create an early warning mechanism that should signal a new crisis appearance.

5. Bibliography
