Global Economic Crisis. Case Study on the Romanian Financial Market

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Abstract: *The first part of the present paper proposes to study the concept of global financial system and the issues that led to outline its approach frame, as well as what effects could have the actual economic crisis on the global financial system and which are the factors considered to be the causes that generated economic crises in the last few years.*

Moreover, in this paper we refer to the concept of financial instability, more precise we underline the fact that banks can represent the main financial instability stimulus.

In the final part of this paper we analyze the Romanian capital market on the global economic crisis background being emphasized the fact that the effects of this crisis are felt also on our national economy.

Keywords: economic crisis, global financial system, financial instability, portfolio, return, risk, Markowitz.

1. Introduction

Alan Greenspan, the ex Federal Reserve Chairman has recently defined the economic crisis as "a credit tsunami that arises once in a century" [1], the instability wave generated by this tsunami being spread from one sector to the other, first from the property sector to the banking sector, then to other financial markets, and finally to all the real economy domains.

On the other hand, the governor of the Romanian National Bank, Mugur Isarescu, appreciated[2] that "the evolutions on the inter

[1] Justin Yifu Lin, (2008), *The impact of the financial crisis on developing countries*, The Korean Development Instittute.

[2] The conference "*The way towards european standards in financial services*", held on 23 september in Ramnicu Valcea.

national financial markets of the last months have had no precedent in the whole postbelic period making governments and the central banks from the United States of America and the other developed countries to take drastic measures”. He also emphasized that the present “financial crisis has overlapped a less benefic period for the real sector of the economy. The aggregated demand in the most developed economies has recorded a decline, whilst energy and raw materials prices have attracted inflationary pressures, which have limited authorities’ capability to reduce interest rates.”

So, on the background of the latest evolutions in the world, the economic crisis effects are felt also in Romania, the financial system - one of the most important components of a country’s economy – being also affected. This paper’s start point has been to analyze the global economic crisis and efforts have been made to underline the effects of this crisis on the Romanian capital market.

2. The Global Financial System

In the last few years a wave of change has been felt in the global financial system, the private capital flow from the industrialized countries towards the developing countries rising considerably. Moreover, not few have been those that questioned in the last two decades if a global financial system is desirable.

In order to answer this question one must first understand the role of the financial system for a country’s economy, and only after extend the analysis. So, the financial system has a well defined role in capital resources mobilization from those who own them (the investors) towards those who need them (private or public entities). Through the financial system the economy grows along with the growth of investments generating high earnings, the consumers also grow their capacity to consume, risks are shared, and individuals confront with a smaller volatility of the weights they are able to consume. All these correlations that take place in a country’s economy extend to the level of the global financial system, a system that works as a powerful and efficient mechanism when the economy is characterized by stability.

Whereas the potential of the financial system certainly exists, words like “moral hazard” or “adverse selection” remind us that the economic theory has identified the reasons why financial markets do not always work perfectly, the failure of one or more markets generating losses for the other ones under the conditions of a global financial system. The financial crises that have said their word along time, culminating with the recent economic crisis, are the ones that teach us very clearly that the capital flows guided by the financial markets can represent something very different from an efficient and optimal allocation of savings towards the right investment projects.

3. Causes of international financial crises

Leo Tolstoy observed that “every happy family is the same. Every miserable family is miserable in its own way.” Similarly, Lawrence H. Summers said that every financial crisis is different and implies its own elements. Summers also stated that there can be elements specific for many emerging financial markets. So, with some exceptions, the pattern for all crises seams to implicate three distinct elements.

Firstly, after a period of sequential substantial capital in-flows, investors (internal, as well as external) have the tendency to reduce the volume of assets held in the affected country as a response to the manifested influences.

Secondly, after analyzing the economic situation of the respective country, they canalize their attention towards the behavior of the other investors. Once the information is disseminated a panic phenomenon settles and its propagation is done rapidly leading to interpret the crisis in terms of liquidity.

Thirdly, the capital withdrawal and the sudden changes of interest rates as well as the restricted access to capital, generates general weakness, the financial markets response being exacerbated. The real depreciation of the interest rate leads to the revenue and real savings reduction.

So, in order to understand the economic crises each of these three elements has a special importance. Also very important in the economic crises analysis is the financial instability phenomenon, that eases the installation of a financial crisis and leads to the amplification of crisis effects.

4. The financial instability phenomenon

As we have already underlined, the essential function of the financial markets is to canalize funds towards individuals or firms that hold productive investment opportunities. In the case that the financial system fails to realize its objective, the economy does not function properly, and economic growth is affected. So, the financial system has to confront itself with issues regarding information asymmetry.

Regarding the issues related to informational asymmetry, the main purpose for financial intermediaries such as commercial banks, insurance companies, mutual funds or pension funds, from which banks play the most important role, is to hold the capacity as well as the economic incentives to address the problems of informational asymmetry.

The natural advantages of banks in collecting information and reducing information asymmetry problems are the ones that can explain why they hold such an important role on the financial markets in the world. Once banks do not posses the capacity to make financial intermediation and give loans, investments and aggregate economic activity reduction will be produced. The lack of credits will determine firms and individuals to cut down on their expenses, resulting in a contraction of the economic activity.

The triggering factor of the actual economic crisis has been precisely the failure of the fourth bank in America as dimension, Lehman Brothers Holdings. Its disappearance from the market lead to falls on the European and Asian stock exchanges, the Bucharest Stock Exchange Indexes also deeping their losses on the correlation frame with the evolution of the external markets.

5. The Markowitz financial assets portfolio management model

As we already mentioned the purpose of this paper is to underline the present instability background of the Romanian capital market, financial instability representing the stimulus that led to the economic crisis in our country.

So, starting from the basic hypothesis of the Markowitz Model we have tried to determine two minimum variance portfolios for two different periods of time (between 3 October 2001–12 September 2008), selecting 7 stocks from two different sectors: 5 stocks from the financial investment sector:

- SIF Banat-Crisana (SIF1), SIF Moldova (SIF2), SIF Muntenia (SIF3), SIF Transilvania (SIF4), SIF Oltenia (SIF5);
- And 2 stocks from the banking, insurance and financial services sector:
- BRD Groupe Société Générale (BRD) and Transilvania Bank (TLV).

We have chosen these sectors because we consider them to be fit to test whether financial instability is present or not on the national capital market starting with 2007, the year presumably first signs of instability have appeared. So, the initial time horizon has been divided in two sub-periods: 3 October 2001 – 19 December 2006, 3 January 2007 – 12 September 2008. These two data bases led to the calculation of the returns given by the titles, the formula used to compute the results being

$$R_i = \frac{p_{i+1}}{p_i} - 1, i = \overline{1,780}.$$

Firstly we have applied the model for the period of time between: 3 October 2001 – 19 December 2006. In order to determine the minimum variance portfolio we have parted from the following initial combination of titles: 14% SIF1, 14% SIF2, 14% SIF3, 14% SIF4, 14% SIF5, 15% BRD and 15% TLV with the purpose to minimize the risk of the portfolio, this type of scenario being specific for the investors that have strong risk aversion.

In order to optimize the financial results we have used "Microsoft Excel Solver" taking into consideration the fact that an asset portfolio is optimal when it offers the smallest risk for a given expected return and that the aggregation of the portfolio weights must equal one, and short sales are not allowed meaning that all portfolio weights must be bigger or equal to zero.

We have computed the minimum variance portfolio of 0.0787% that gives the title combination with a minimum risk of 2.8061% for a given expected return of 0.4997%. We have come to the conclusion that the following title combination leads to the obtained results: 14.2% SIF1, 10.34% SIF3, 10.56% SIF5, 24.63% BRD and 40.27% TLV. According to the results we can appreciate that for the given period of time the optimal investment possibility is to invest in the banking, insurance and financial services sector, due to the fact that the feedback given by the capital market leads to this conclusion.

The second part of the analysis lied in the application of the model for the following period of time: 3 January 2007 – 12 September 2008. We used the same initial portfolio weights, the optimization process leading to the following results: 25.18% SIF1, 3.7% SIF4, 29.92% SIF5, 12.62% BRD and 28.58% TLV. The minimum variance portfolio of 0.3274% presents the above title combination with a minimum risk of 5.7215% for a given expected return of 0.4055%. As it can be observed this time the optimal investment choice is to invest more in the financial investments sector, and the expected portfolio return is negative fact that clearly indicates a reduction in the expected return in comparison to the preceding analysis.

6. Conclusions

On the current economic background, the global economy is splintered by the effects of an economic crisis without precedent in the history of the last century. The main occupation of researchers along this century has been to determine the conceptual and practical frame for the global financial system. Precisely this wish has maybe been the factor that led to a harsh recession that started in the United States, spreading afterwards in all the other countries. So, short wile after the New York Stock Exchange crashed significant losses occurred also for the European and Asian stock exchanges, including the Bucharest Stock Exchange.

Banks, financial intermediation institutions, are the ones that hold one of the most important roles of the world's financial markets, because they can gather information and reduce problems of informational asymmetry. Once they can no further carry on their activity an economic blocking is produced that spreads towards all the economic sectors on the level of a country's national economy, afterwards following the countries that had held till then economical relationships with the country initially affected.

According to the analysis done in this paper we can appreciate that the national capital market has experienced reductions in stock returns in the last two years, especially in the banking, insurance and financial services domain, the investors tending to posses more confidence in the domain of the financial investments sector, for example.

All in all we conclude that the effects of the global economic crisis have put their print on the Romanian financial system.

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