

# THE BEHAVIOR OF THE BUCHAREST STOCK EXCHANGE DURING THE CURRENT FINANCIAL MARKETS CRISIS AND PROPOSED MEASURES FOR ITS SUSTAINABLE DEVELOPMENT

**Iulian PANAIT**, investment adviser  
PhD candidate, KTD Invest SA  
e-mail: iulian.panait@ktd.ro

**Iulia LUPU**, Scientific Researcher, PhD candidate  
Financial and Monetary Research Centre “Victor Slăvescu”  
e-mail: iulia\_lupu@ccfm.ince.ro

## *Abstract*

*Our day to day study of the Romanian stock market during the period July 2007 – September 2009 revealed in many cases a specific behavior. Although all the emerging markets from the region evolved in correlation with the more established exchanges, the negative impact of the crisis on our exchange was in many aspects deeper and more powerful than it should have been if we look at the actual macro and micro economic situation, considering the empirical evidence that the capital market is positively correlated with the long term economic growth. We think that this overreaction to the negative side is the direct result of the lack of maturity of our local exchange (in terms of capitalization, liquidity, participants, legislation and surveillance) and we propose a few measures that are supposed to render a sustainable development and may improve its stability during times of financial turbulences.*

**Key-words:** *contagion, correlation, financial crisis, emerging capital markets*

**JEL Classification:** G01, G14, G15

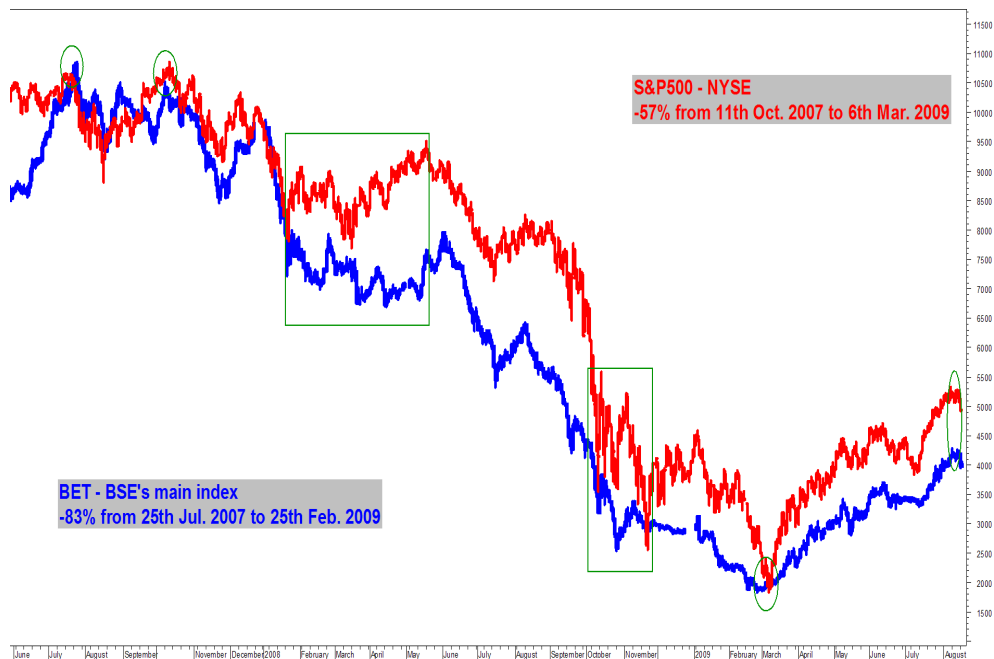
## **1. Two very important characteristics of Bucharest Stock Exchange’s evolution during the first 24 months of the financial crisis**

Given our privileged position inside the Romanian capital market, we were able to monitor the behavior of the stock exchange, day by day, in real time, since the early beginning of the current crisis. Actually, it is our strong belief that in Romania, the Bucharest Stock Exchange (BSE) was in fact the first institution, and the Romanian brokers were the first community that felt the effects and consequences of the subprime collapse in United States of America. This happened because the local stock market was already in the process of getting correlated with the major stock markets around the world. At the moment when the stocks’ decline started in USA and Western Europe, the main indexes of Bucharest Stock Exchange started their long and abrupt downtrend.

This is in our opinion the first important characteristic of the way our local exchange behaved during the crisis: **it was highly correlated with the global markets.**

In the paper *Contagion across Central and Eastern European Stock Markets: A Dynamic Conditional Correlation Test* the authors argue that the conditional correlations become more statistically significant with the global market as we go from the early stages (2005) to spring of 2009.

We can offer a visual demonstration of the correlation between BSE's main index BET and the New York Stock Exchange's SP500 in the chart presented in fig. 1.

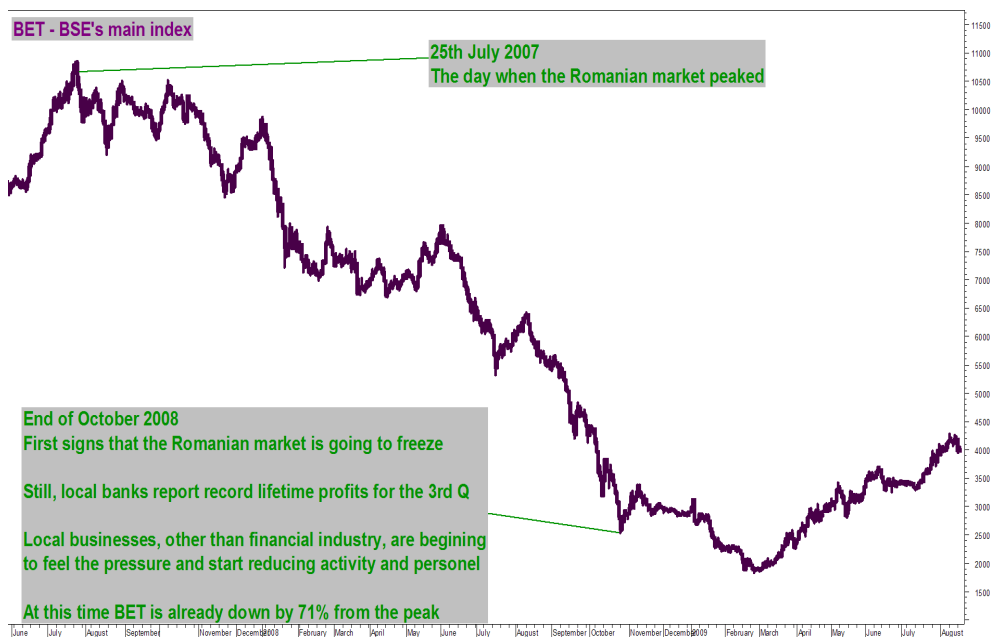


Source: BSE, NYSE data and authors' calculations

Fig. 1. Correlation between BET and S&P500

Between July 2007 and August 2009 we had periods with higher and lower intensity of the correlation, but the major peaks and troughs were almost at the same time. Also the overall direction was almost always the same for the two indices.

The second important characteristic of our stock exchange during the crisis was that **for a long period of time it was decoupled from the local economy**. Bucharest Stock Exchange reached its peak at the end of July 2007. Still, for the local economy, 2007 was a great year. Also, for the most part of 2008, Romania registered a very good economic growth both in terms of GDP and in terms of companies' profits. In the late autumn of 2008, the economic problems started to show signs (or in some cases become evident) for the first time in Romania. By that time the BSE's main indexes had already lost more than 70% as we show below in fig. 2.



Source: BSE data and authors' calculations

Fig. 2. BET evolution between June 2007 and August 2009

Data from Eurostat are showing that Romania's GDP continued to expand until the third quarter of 2008 and only after that the economic activity began its decline. Thereafter, we can say that the stock market anticipated the downturn in the real economy with four quarters in advance. The early decline of the BET and other local stock indices are the result of the sell orders issued by the foreign institutional investors who made their exits from the emerging economies as they anticipated that the crisis will also spread towards them. They acted before the actual economic data could confirm their supposition, which is absolutely normal behavior in the stock market. The only surprising element is that this time, in Romania's case, the period of time between the anticipation and the confirmation was extremely long.

Below we present quarterly GDP data for Romania and the performance of the BSE during the same period.

Table 1

**Romanian GDP and BET performance (quarterly data, 2006q1-2009q2)**

	<b>GDP (mio EUR)</b>	<b>%QoQ GDP growth</b>	<b>BET value (points)</b>	<b>%QoQ growth</b>
<b>2006q01</b>	22276.7		7499	
<b>2006q02</b>	23616.1	6.01%	7056	-5.91%
<b>2006q03</b>	24391.1	3.28%	7952	12.71%
<b>2006q04</b>	26413.7	8.29%	8050	1.22%
<b>2007q01</b>	27861.1	5.48%	8547	6.18%
<b>2007q02</b>	30255.1	8.59%	9665	13.08%
<b>2007q03</b>	32152.6	6.27%	9635	-0.31%
<b>2007q04</b>	31868.3	-0.88%	9825	1.97%
<b>2008q01</b>	32161.9	0.92%	6920	-29.57%
<b>2008q02</b>	33692.3	4.76%	6502	-6.03%
<b>2008q03</b>	35607.9	5.69%	4258	-34.52%
<b>2008q04</b>	33797.1	-5.09%	2901	-31.87%
<b>2009q01</b>	30159.8	-10.76%	2367	-18.39%
<b>2009q02</b>	28699.9	-4.84%	3434	45.07%

*Source:* GDP data from Eurostat, BET values from BSE and authors' calculations

## **2. Particularities of the correlation between BSE and the global markets**

While being correlated with the global markets is something normal for an emerging stock exchange, the exact way that our local market behaved during the first part of the crisis presented some particularities that worth being mentioned and studied.

First of all, we witnessed higher average intraday volatility at BSE's indexes compared with S&P500, DJI, DAX or FTSE100. During the 2 years of turbulence in the markets there were quite many days when local indexes fluctuated more than 5% (either positive or negative) while mature markets rarely exceeded 3%. Also, BSE had a few panic days (not consecutive though) when blue chips raised or declined 15% (maximum permitted by the electronic trading system) and there were no more buyers/sellers willing to put orders into the market.

Also, during the 2007-2008, most of the time, the negative days for S&P500 were followed by extreme declines on BSE, while positive days for S&P500 were followed by only minor recoveries. We could say that BSE copied and exaggeratedly amplified all the negative events from the international markets, but had only small reactions to the positive events. This behavior is partially explained by the contagion effect.

Very often, BSE opened the day with large gaps that reflect the overnight exchange activity in USA and Asia. Usually these gaps range between 1% to 3%, positive or negative, comparing with the closing price of the preceding trading day.

And last but not least, during the whole period, BSE had very limited or almost no reaction at all when local macro indicators were announced, but fluctuated wildly at 8:30 EST when important US macroeconomic indicators were made public.

### 3. Characteristics of BSE that made it more vulnerable to the global downtrend

The emerging economies are more volatile on short and medium term and less resilient to macroeconomic turbulences than larger and developed economies. As a result, the corresponding emerging stock markets will be less credible for global institutional investors. The speculative capital is tempted to rush out of these markets when a global crisis is anticipated and this will put a powerful downward pressure on the local stock markets. Romania is such a vulnerable emerging economy and because of that, BSE felt the negative impact of the foreign speculative capital outflows since the early beginning of the crisis. Bellow we present the monthly flow of foreign capital at BSE during the period January 2007 – July 2009.

During the first year of the stock market decline foreigners were very active on the Romanian stock exchange, mostly selling stocks and repatriating capital. They contributed a lot to the daily market turnover and influenced the prices with their sell orders.

Table 2

**Foreign speculative capital inflows/outflows  
(January 2007 – July 2009)**

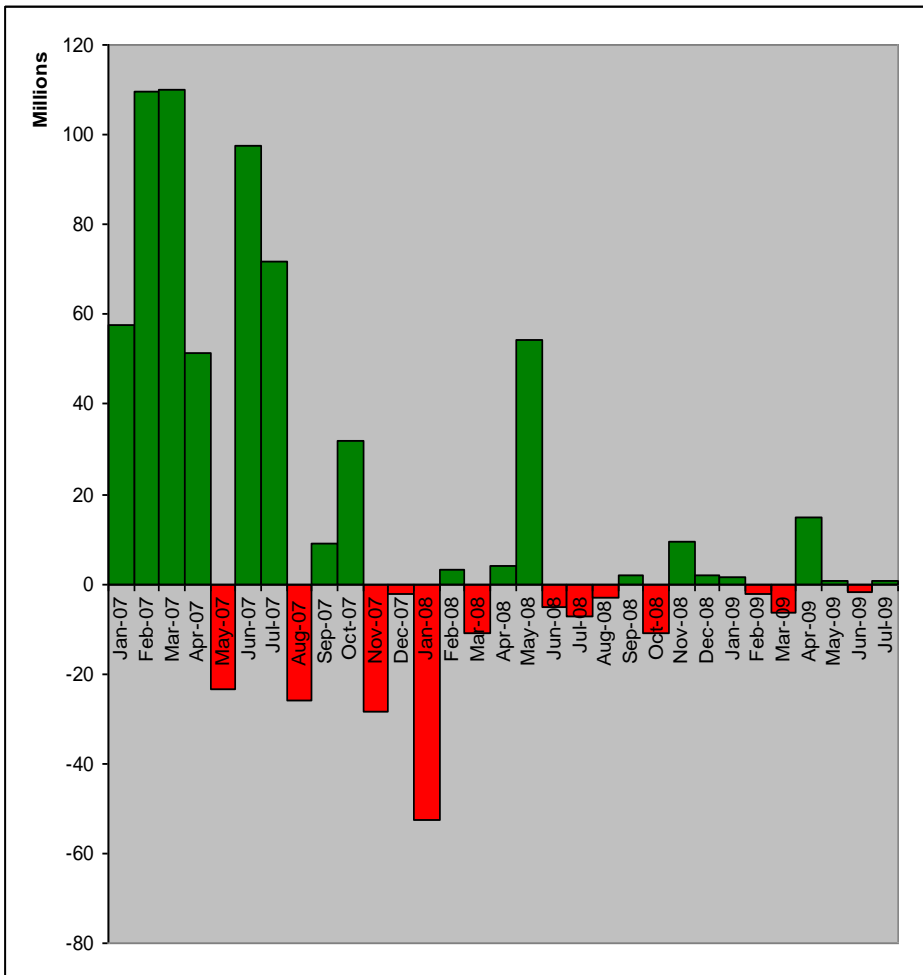
Period	Foreign buys	Foreign sels	Net foreign activity (EUR)
Jan-07	167,861,953	110,046,899	<b>57,815,055</b>
Feb-07	194,375,850	84,884,038	<b>109,491,812</b>
Mar-07	240,202,443	130,385,212	<b>109,817,231</b>
Apr-07	131,266,827	79,685,998	<b>51,580,828</b>
<b>May-07</b>	240,533,847	263,877,433	<b>-23,343,586</b>
Jun-07	331,610,743	234,235,729	<b>97,375,014</b>
Jul-07	273,897,795	202,185,126	<b>71,712,670</b>
<b>Aug-07</b>	156,477,511	182,582,953	<b>-26,105,442</b>
Sep-07	97,578,695	88,758,231	<b>8,820,464</b>
Oct-07	182,007,663	150,201,694	<b>31,805,970</b>
<b>Nov-07</b>	147,408,377	175,968,263	<b>-28,559,885</b>
<b>Dec-07</b>	193,157,724	195,550,487	<b>-2,392,763</b>
<b>Jan-08</b>	74,065,223	126,539,832	<b>-52,474,609</b>
Feb-08	58,386,874	55,151,865	<b>3,235,009</b>
<b>Mar-08</b>	58,880,412	69,790,899	<b>-10,910,487</b>
Apr-08	59,163,899	55,104,257	<b>4,059,642</b>
May-08	101,997,700	47,575,245	<b>54,422,456</b>
<b>Jun-08</b>	48,461,149	53,709,609	<b>-5,248,460</b>
<b>Jul-08</b>	89,312,338	96,500,405	<b>-7,188,067</b>
<b>Aug-08</b>	57,503,942	60,564,583	<b>-3,060,641</b>
Sep-08	53,862,886	51,859,047	<b>2,003,839</b>
<b>Oct-08</b>	36,271,901	47,282,786	<b>-11,010,886</b>
Nov-08	35,712,130	26,461,585	<b>9,250,546</b>
Dec-08	27,108,542	25,208,744	<b>1,899,798</b>
Jan-09	16,538,864	15,032,503	<b>1,506,361</b>
<b>Feb-09</b>	12,738,619	14,792,675	<b>-2,054,057</b>
<b>Mar-09</b>	15,570,435	21,861,596	<b>-6,291,162</b>
Apr-09	40,302,608	25,705,952	<b>14,596,656</b>
May-09	29,284,472	28,670,047	<b>614,426</b>
<b>Jun-09</b>	18,925,893	20,609,600	<b>-1,683,707</b>
Jul-09	5,357,116	4,831,631	<b>525,486</b>

Source: Data from Romanian National Securities Commission and authors' calculations

In time, most of the active foreign players (foreign financial investors) liquidated their positions and became inactive. They no longer had stocks or liquidities in Romania so they no longer participated to the daily transactions.

The strategic investors (fewer in number than financial investors) mostly kept their positions but did not buy any more. They were quite inactive during most of the crisis period (until now) and, as a result, they had very little contribution to the daily transactions during all periods.

As a consequence, during the second part of the crisis, the foreigners' activity on BSE declined dramatically. Not being sustained by large players from outside the country, the liquidity dried up on BSE and the market began to be more and more influenced by local players.



Source: Data from Romanian National Securities Commission and authors' calculations

Fig. 3. Foreign speculative capital net flows (January 2007 – July 2009)

Among local players, the portfolio investors were also inactive during the second part of the crisis, mostly because they had sustained heavy losses or because they had already sold everything and preferred to wait on the sidelines. So, during the second part of the crisis period only local speculators remained active. The market became highly speculative and unpredictable. The main habit of the local speculators was to trade in the direction of the global markets. As a result, the correlation between BSE and foreign indices remained very high.

This normal vulnerability was accentuated by the lack of maturity of our stock market, specifically by its reduced total market capitalization, also by its low capitalization of the free float, by the small number of the companies listed on the stock exchange, the low daily turnover and scarcity of the financial instruments available for hedging/risk management.

Also, the reduced influence from local investors (because of their lower financial strength) compared with the pressure exercised by foreign institutional investors was a feature that accentuated the vulnerability of BSE during the crisis.

The local investors that participate in trading at BSE can be described using two main categories: institutional investors and private investors.

The local institutional investors are:

a) general insurance companies that have weak participation in the stock market because they prefer to invest mostly in bonds;

b) life insurance companies (selling unit linked products) that actually have some participation in the local stock market, but very limited;

c) opened-end investment funds, which are the oldest institutional investors on BSE. They invest an important part of their net asset value into Romanian stocks but unfortunately (because of their troubled history) don't succeed to attract significant amounts of capital to manage and invest;

d) level III (facultative) and Level II (mandatory) privately managed pension funds: still very young and until now seriously undercapitalized.

Private investors are very small in number compared with the total active population and on average have little capital available for investing in stocks (most of them prefer fixed income).

#### **4. Proposed measures to render a sustainable development for BSE and to improve its stability during times of financial turbulences**

In our opinion, the vulnerabilities described above are the result of the lack of maturity of BSE. In order to improve its stability during times of financial turbulence, we need to further develop the exchange and stimulate the development of the local investors in order to increase their participation in the market.

Among the things that can be done by the exchange officials and stock market professionals, we consider that the most important is to encourage new large private owned companies to float on the market. By bringing more issuers to the exchange, the market depth will increase (in terms of total capitalization, free float, daily market turnover and total number of daily stock transactions).

One particular way of development may be to promote companies that are currently traded/listed on the Rasdaq OTC market to the second tier of BSE. These are small but dynamic companies, mostly private owned, with a very diversified field of activities and with potential for the current investors.

Of course, the fastest way to improve the market depth would be to float on the stock exchange the companies where the state is currently the major shareholder. This could be done as part of faster and more transparent privatization process. Also, if the Ownership Fund will eventually be floated on the exchange, this will represent a powerful boost for BSE. While many promises were made during the last years from the government officials, these large state owned companies will probably not be floated in the near future. This is why although they will represent the most important breakthrough in the sustainable development of the BSE, the exchange officials and the local brokerage community must only rely on their own efforts directed towards convincing private owned companies of the advantages of being traded on our local stock market.

Regarding the local investors, the participation of both private persons and institutional investors is deficient and has a lot of room for improvement. If the local capital will grow and will begin to represent a larger share of the average daily market turnover, the BSE's vulnerability at the movements of foreign speculative capital will be significantly reduced (as the Poland's experience clearly shows). The easier way would be to attract more private persons to invest on the local exchange, but the most efficient way remains to convince the institutional investors (mainly the Level II and Level III private managed pension funds) of the long term profitability of investing in companies traded on BSE.

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