

## Financial Crisis from the Trust and Loss Aversion Perspective in Emerging Romanian Capital Market

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**Abstract.** *In this paper we synthesized a study of financial crisis from the trust and loss aversion perspective on a particular case, Romanian emerging capital market. In a relative recent study we stopped with our data series at the level of 2008, November, but in this paper we continue our research until 2009, December. In a world-wide financial crisis and a global financial depreciation of stocks the emergent markets are much more affected that the lack of money and investors aversion. We study, based on efficient market theory, the evolution of portfolio structure in balanced funds. We are interesting to make an evaluation of present sentiment of investing money in capital markets and especially in stocks. Also, is necessary to determine which are the most important problems in this situation and seek an adequate stimulus for future development of direct investment.*

**Keywords:** market capitalization; portfolio structure; balanced funds; loss aversion.

**JEL Codes:** G01, G11, G12, G14.

**REL Codes:** 10A, 10B, 10I, 11B.

## Introduction

Trust is defined by Guiso, Sapienza and Zingales (2008) “as the subjective probability individuals attribute to the possibility of being cheated”. The subjective probability is partly based on objective characteristics of the financial system: the quality of information, the investor protection, stability of direct or indirect tax on revenue and also the law enforcement.

Loss aversion is possible to be financed by a higher profit, but the impact of trust on portfolio decisions is definitely one of the causes for lack participation of individuals on capital markets and especially on stocks.

In this paper we present an important set of data about evolution of Bucharest Stock Exchange Index (BET-C) like an expression of loss-aversion generated by depreciation of the stock price. BET-C index include all listed companies on stock exchange. Also, we show the number fluctuation of investors in balanced funds and total net assets hold by institutional investors.

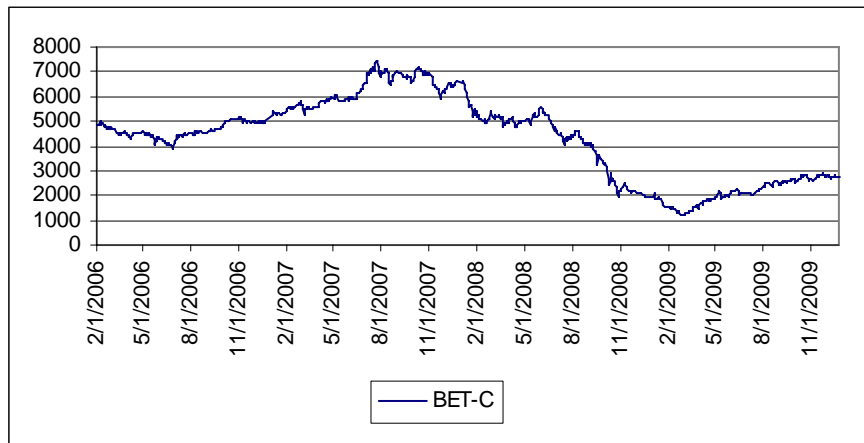
A representative image about the dynamics of investor behavior, loss-aversion and trusting sentiment is evolution of balanced funds regarding portfolio structure. For a better overview of the situation we choose a period that includes bullish and bearish market, from February, 2006 to December, 2009.

## Romanian capital market overview

The Romanian capital market, in spite of the fourth teen years from its establishment, has not yet been able to accomplish one of its main tasks, namely that of attracting available investment funds for economy. After four years of strong appreciation of stocks, between 2003 and 2007, the global recession of the capital market, from 2008, show that the emergent capital market is more vulnerable to a big capital flow.

The investors that have not sell their stocks in the beginning of the crisis, in general, are blocked until the price is up again. So the capital market needs the new money, a fresh influx of capital from new investors or from institutional investors.

The highest value of BET-C index was 7,432.63 points, in July, 24 2007. To the November, 30, 2008 the value of the index was only 2,177.39 points, with 70.70% depreciation (Figure 1).



Source: Bucharest Stock Exchange (BSE), series of data from web site: <http://www.bvb.ro/>

Figure 1. Bucharest exchange trading-composite index, from february, 2006 to december, 2009

A second important level of BET-C index was recorded at October, 10 2007 with 7,208.96 points, also very close by the maximum number of investors in balanced funds 51,364, in December, 2007 (Figure 4).

The Romanian stock exchange is a heterogeneous market, with a reduced number of issuers, which belong to various sectors. In some fields of activity the number of companies is too reduced for the potential average values calculated to be representative. An example in this respect is the service sector, represented by a single issuer.

Table 1

The number of companies listed on BSE quotation, in the period 1995-february 2010

'95	'96	'97	'98	'99	'00	'01	'02	'03	'04	'05	'06	'07	'08	'09	'10
9	17	76	126	127	114	65	65	62	60	64	58	59	67	71	70

Source: BSE, annual reports, 2000-2009 and public information on [www.bvb.ro](http://www.bvb.ro), feb.2010, [www.bvb.ro](http://www.bvb.ro)

The Bucharest Stock Exchange (BSE) registered a good performance between 2000 and 2007, with an important increase of the capitalization value, from €15 billion in 2005 to over €24 billion in 2007 (Table 2). Practically, the most important years of the stock exchange, since it was set up and until the present, were the years 2004-2007. The financial crisis has brought the values of capitalizations to the years 2004-2005, with a small comeback in 2009.

Table 2

**The evolution of BSE capitalization in the period 2000-2009**

– million Euro –

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BVB Capit.	450	1.361	2.646	2.991	8.819	15.311	21.415	24.601	11.630	19.053
Relative growth	-	202%	94%	13%	195%	74%	40%	15%	- 53%	64%

**Source:** BSE data after the last trading session in the respective years.

During July 2007-February 2009, based on declines in the majority of the shares, globally registered, the BSE capitalization fell by 53% December 2008 months, so in 2009 to recover 64% from year-end 2008.

Similar with the US stock exchange of depreciation for October 2008 is about 40 percent with some company with over 90% from the value registered in November 2007. The average historical decline, on global scale, in equity prices has been 55.9 percent, with the downturn phase of the cycle lasting 3.4 years (Reinhart, 2009, p. 226).

Table 3

**Evolution of BSE capitalization in GDP in the period 2000-2009**

– million RON –

	2000	2001	2002	2003	2004
Capit.BSE	1.101,9	3.857,3	9.158,0	12.186,6	34.147,4
PIB	80.377	116.769	151.475	197.565	246.372
%	1,37%	3,30%	6,05%	6,17%	13,86%

	2005	2006	2007	2008	2009
Capit.BSE	56.065,6	73.341,8	85.962,4	45.701,5	80.074,5
PIB	288.955	344.651	416.007	514.654	491.274
%	19,40%	21,28%	20,66%	8,88%	16,30%

**Source:** BSE data after the last trading session in the respective years.

Although the situation seems to be an optimistic one, the growth of capitalization resulted more from the appreciation of the share price of the already listed companies and less from the entry of new companies on the market.

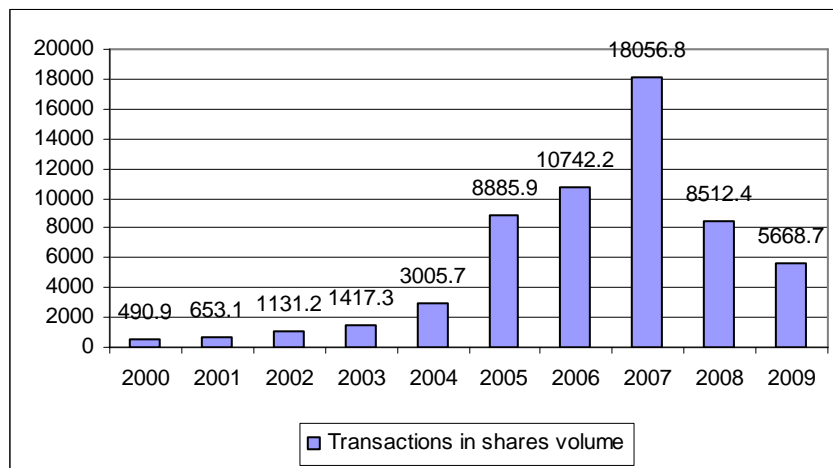
The growth rhythm of capitalization registered a slowing down trend in the years 2005-2006, mainly due to the fact that *individual ownership declined in the favor of companies controlled by groups of persons and firms, and that the level of ownership was limited to 1% of the owners' equity of the five financial investment companies (SIF-Socitate de Investitii Financiare)*. This measure also determined a slowdown of the positive trend of the BET-FI index, which registered at the end of September 2006 an appreciation of just 2.1% compared to February in the same year.

Another measure which discouraged those investors that focused on speculative trading and capital turnover at short time intervals was represented by the implementation of the provisions of the new fiscal code, which mentions that the taxation rate of incomes obtained from investments and from the transfer of alienated real estate properties in a period shorter than one year after the acquisition date increased to 16%.

The volume of transactions with shares listed on BSE + RASDAQ had a dynamic similar to that of equity market capitalization, registering an increase of 21% in 2006 compared with an increase of 196% in 2005 and a 112% in 2004.

In absolute terms, the value of transactions in shares of listed companies increased from 8.89 billion RON in 2005 to 18.06 billion RON in 2007, that being broadly similar to those dictates price: *lack of new listings to achieve fair prices for many of the "stars" stock exchange*. In 2007 was recorded an increase of 68% of the volume of transactions compared to 2006, cases are few IPOs in November and price appreciation.

2008, against the backdrop of global financial crisis, especially the withdrawal of most foreign investors from BSE was a modest volume of transactions under the 2005 (Figure 2). Also, in 2009 downward trend bring the volume of transactions bellow the 2005 level with 36%.



**Source:** BSE data after the last trading session in the respective years.

**Figure 2.** Evolution of the value of transactions in shares on the BSE during 2000-2009, million RON

Liquidity rate, calculated as the ratio between the amounts transacted annually and capitalization, recorded a decrease from 16.4% at the end of 2007 to 12% for October 2008 and drop at the lowest level by 6.1% in 2009.

$$L = \frac{\text{Turnover value}}{\text{Market capitalization}} (\%)$$

Table 4

**Evolution of capitalization and turnover value in the period 2000-2009**

– million RON –

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Turnover value (TV)	491	653	1,131	1,417	3,006	8,886	10,742	18,057	8,512	5,669
Capitalization (CAP)	3,180	7,226	15,265	20,106	42,141	64,273	84,049	110,372	57,801	92,420
%TV/CAP	15.4%	9.0%	7.4%	7.0%	7.1%	13.8%	12.8%	16.4%	14.7%	6.1%

**Source:** BSE+RASDAQ data series in the respective years.

Romania's admission to the European Union on January 1, 2007 has triggered an ascending trend in the foreign capital influx on the Romanian capital market, as it results from the data of the first quarter of the year 2007.

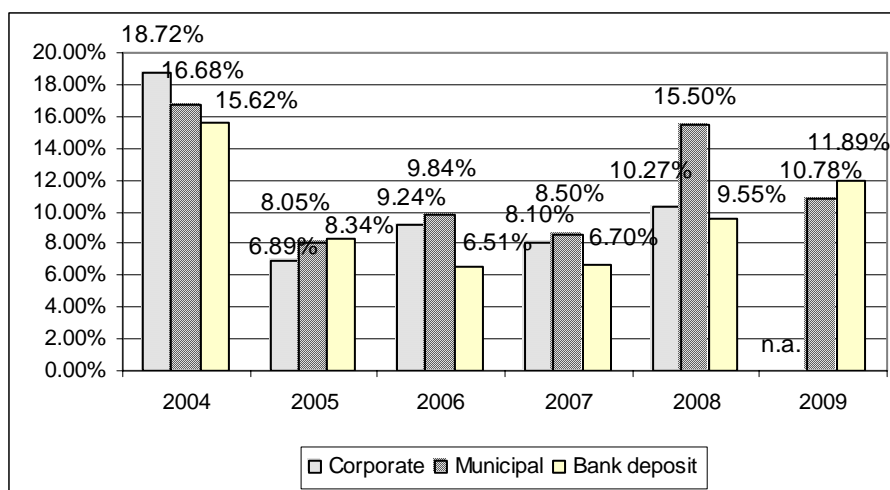
The greatest bulk in the total volume of stock exchange transactions on the capital market performed by non-residents were those for titles issued by authorities and listed on BSE, with solely a small fraction being represented by transactions on RASDAQ.

### Stocks vs. bonds

Before 2004, we could not say much about a bond market within the stock market exchange system because the traded amounts were insignificant. Yet the year 2006 was a very good one for the corporate bonds sector. The International Bank for Reconstruction and Development (IBRD) has certainly contributed to those favorable results by launching in September 2006 an emission of public bonds valuing 525 million RON. This operation is even more important since it is also the first issue of an international financial institution on the Romanian capital market and, further more, the first one performed on such a large scale. Due to the issuer's credibility, the operation was a success and was quoted as AAA during the month of October. Its success is also reflected in the greater number of subscribed bonds 635,948, which show a 21% from the 525,000 allotted. Among the local bonds issues the one performed by the Romanian Commercial Bank (RCB) is an important one given its total value of 200 million lei and the fact that it has super-subscribed about 21.5%.

By the value and the number of those issues, the year of 2006 ranks first on the list of traded bonds from the time the stock exchange has been created till now. The total value of the bond transactions of 281.67 million Euro, was close to the 10% entrance level of the traded shares' turnover.

The average interest rate in RON for the corporate bonds was by the end of 2006 that of 9.24% growing from 6.89% as recorded by the end of 2005. The municipal bonds' average interest was of 9.84%, by the end of the year indicating a growth as compared to 8.05% in 2005. The situation is atypical for the developed capital markets due to the higher interest rates granted for the municipal bonds as compared to the corporate ones, in spite of the fact that the former present a smaller risk than the latter.



**Source:** www.intercapital.ro (values for the month of December), not available interest rates for corporate bonds in 2009

**Figure 3.** Average interest rates for the corporate bonds, municipal bonds and the bank deposit, from 2004 to 2009

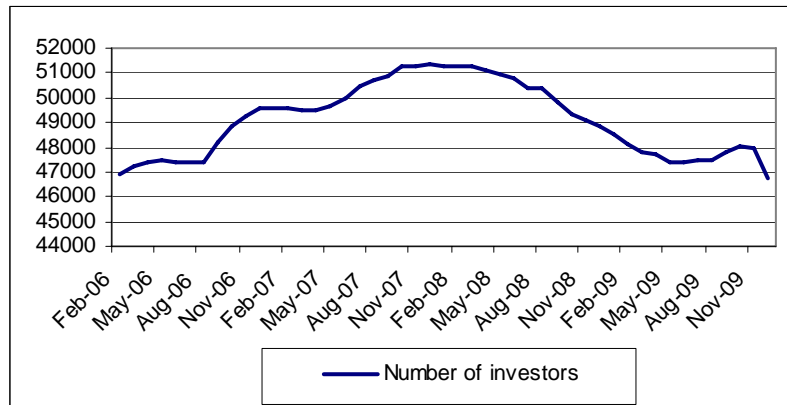
The average corporate interest was at the end of 2007 to 8.1%. The average municipal bond interest was 8.5% (compared to 9.8% in 2008 and 8.1% in 2005).

The connection between the stock exchange figures and the population's savings is not very clear, but can constitute a clue for the drop in the natural persons' interest for shares in 2006, a period of time when the populations' savings, the volume of sales towards population, as well as their real estate investments have registered a slower increase.

### The balanced funds

If loss aversion can explain reducing number of investors, this is not sufficient to explain lack of participation (Barberis, Huang, Thaler, 2006). The decision to invest in stocks requires not only an assessment of the risk-return trade-off given by historical data, but also an act of trust that the current data are reliable and the capital market system is fair.

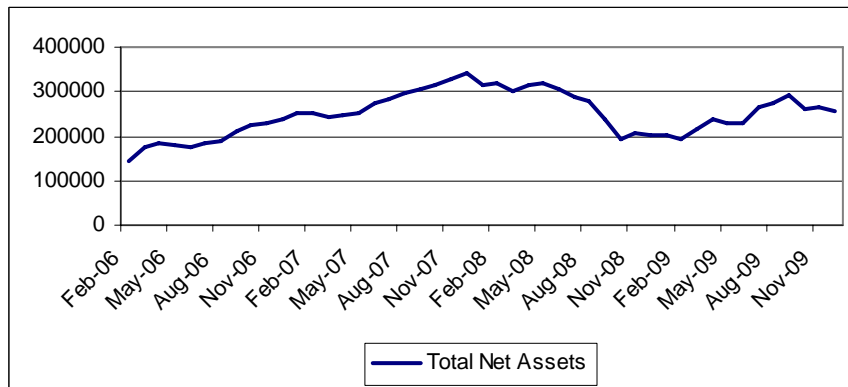
Regarding the maximum number of investors, 51,364, the value from November, 2008 is 46,762, with 8.96% less in December, 2009 (Figure 4).



**Source:** Romanian Association of Asset Managers, series of data from web site: [http://www.aaf.ro/index.php?option=com\\_content&task=section&id=4&Itemid=35](http://www.aaf.ro/index.php?option=com_content&task=section&id=4&Itemid=35)

**Figure 4.** Number of investors in balanced funds, individuals and company, from February, 2006, to December, 2009

The maximum value of total net assets from balanced funds was recorded December, 2007 at 343.57 million RON, about 95.17 million Euro, with 40% higher than February 2006. In that period, the trend of total net assets is correlated with number of investors and evolution of BET-C index and show that loss-aversion is important for investors on BSE (Figure 5).

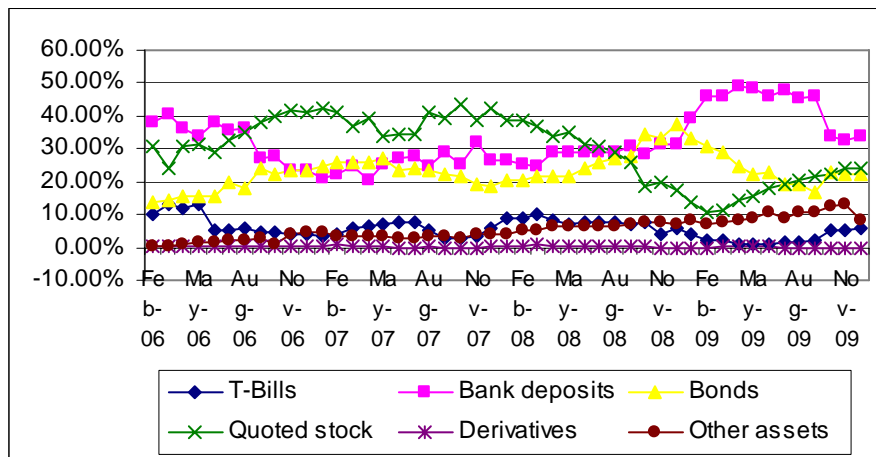


**Source:** Romanian Association of Asset Managers, series of data from web site: [http://www.aaf.ro/index.php?option=com\\_content&task=section&id=4&Itemid=35](http://www.aaf.ro/index.php?option=com_content&task=section&id=4&Itemid=35)

**Figure 5.** Total net assets from balanced funds (thousand RON), from February, 2006, to December, 2009



The dynamics of returns in stocks is reflected in sentiment of investors, as we see from Figure 6. With reducing the bank interest, stability of interest at bonds and good results from stocks, the investment shift in Aug-2006 from bank deposits to quoted stock and a small increasing in bonds. A change in this trend was recorded in July 2008, when the professional investors have returned to bank deposits. Evolutions in other assets and T-Bills were not significant changes.



**Source:** Romanian Association of Asset Managers, series of data from web site: [http://www.aaf.ro/index.php?option=com\\_content&task=section&id=4&Itemid=35](http://www.aaf.ro/index.php?option=com_content&task=section&id=4&Itemid=35)

**Figure 6.** Portfolio structure of balanced funds, from February, 2006, to December, 2009

If the professional investors, like those analyzed in this paper, have loss-aversion and they have “tools” for preserve most part of the profit, the other possible investors are not in faith that capital market could be an alternative for their investments.

Even for professional investor, legislative changes in the tax increase represent a key factor in lowering the attractiveness of investment in the capital. These changes may affect more or less interest to investors in shares, depending on the type of tax increase. Shareholders are directly affected by the increase of tax on dividends, as this diminishes tax earnings expected to end the current financial year. Another tax may affect in a quite categorically earnings expected by investors, and even if not directly affect the shareholders' dividends, net income decreases, and, consequently, the total amount of the dividends distributed.

### Conclusion

The liquidity rate on the Romanian stock exchange is for the moment at the lowest level and is characterized, in general, by low and oscillating levels, which determines an aversion to this market, especially in the case of foreign

investors and portfolio investments strategy. The dominant aspect is the speculative character of the stock exchange and Romanian capital market does not fully fulfill its role in the efficient allocation of the available capital.

The companies and also the population further prefer bank deposits as a form of saving or preserving their money, during the period when the bank interest rates continue decreasing trend and especially in 2008 year, after greatest depreciation of the stock prices in Romanian capital market when interest rates goes up again.

The banking system has been perceived as by far less risky as the placements on the stock exchange markets, even if the returns are clearly superior on the capital market on short term, as compared to the banking system, on long term. The increased interest for the bonds and the deposits, in 2008, may fuel certain hopes for a slight amelioration in the trust for fix income instruments.

Fraud like Enron, Parmalat and FNI (a big fund of investment on Romanian capital market) may change not only the distribution of expected pay-offs, but also the fundamental trust in the system. The surveillance and control institutions must support the trust in capital market system and is necessary to reduce the fraud.

The main objective for the Romanian authorities, at all levels, is to create a trust and secure investment environment, fiscal stable and low tax rates for capital market investments, able to attract the foreign investors and individual investors from inside the borders.

## References

- Alexandru, C., 2008, *Capital market in Romania*, Editura Libra Publisher, București
- Barberis, N., Ming H., Thaler, R.H. „Individual, monetary gambles, and stock market participation: A case for narrow framing”, *American Economic Review*, 96, 2006, pp. 1069-1090
- Guiso, L., Sapienya, P., Zingales, L., „Trusting the Stock Market”, *The Journal of Finance*, 63, 2008, pp. 2557-2600
- Fama, E., „The Behaviour of Stock Prices”, *Journal of Business*, 38, 1965, pp. 34-105
- Pratt, J.W., „Risk Aversion in the Small and in the Large”, *Econometrica*, Vol. 32, 1964, pp. 122-136
- Reinhart, Carmen, Rogoff, K. (2009), *This Time is Different*, Princeton University Press, Princeton
- \*\*\* 2000-2009, Romanian Statistical Yearbook, Bucharest
- \*\*\* 2001-2009, BNR annual reports, Bucharest
- \*\*\* Bucharest Stock Exchange, www.bvb.ro
- \*\*\* SSIF Intercapital Invest, www.intercapital.ro
- \*\*\* World Bank Group, *World Development Indicators database*, 2007