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# OVERVIEW ON ROMANIAN CAPITAL MARKET TRANSACTIONS: 1995 TO PRESENT

Empirical  
study

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Market capitalization  
Financial crisis

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## JEL Classification

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## Abstract

*The financial shifts encountered on last decade, increase the importance of capital markets in developing countries, such that capital market become an important source of long-term financing. During the time, economic literature and also practitioners recognized the important role of the banking system as a supplier of liquidity in an economy. Despite this, in the last year, the capital market tries to help in diffusing the stresses on the banking system because, it is able to match long-term investments with long-term capital.*

*Through this paper we want to analyze all transactions made on Romanian capital market from 1995 until present. Even if, it is hard to capture all aspects and particularities of all transaction, we want to identify the main patterns encountered on it: person who invest (residents vs non- residents), volume, value, transaction type (sell or buy), market capitalization, financial crisis and other macroeconomic events.*

*In our opinion these are just several variables which can reveal us the real developing stage of Romanian capital market, and future trend, so this is a topic which worth to be deeply analyzed.*

## Introduction

The history of Bucharest Stock Exchange (BSE) goes back to year 1882, when on December 2<sup>nd</sup>, was opened the BSE in the building of Trade Chamber. The new institution operated until 1948, when due to changes in the political regime and nationalization process, the Bucharest Stock Exchange was closed. After almost 47 years, in 1995, the Bucharest Stock Exchange restarted the activity and from a market capitalization of 25 million RON in 1995, reached almost 134 billion RON in 2013.

The main moments of BSE evolution after the decay of communism regime are stated by Anghelache (2007), namely: the first law of the capital market (Law no. 52/1994), opening the Bucharest Stock Exchange in 1995, setting-up the RASDAQ market in 1996. In 2002 there were several major changes in the legislative frame regarding the capital market by adopting 4 laws:

1. Equities, financial investment services and markets;
2. Organisms of collective placements;
3. Goods market and derivatives market;
4. Statute of National Commission for Equities;

Due to the importance of stock market in our modern economy, we want through this paper to analyze the main moments of evolution in Romanian capital market from 1995 to present.

### 1. Capital market importance

A stock exchange has a huge importance in our modern economy, in which finding financing sources at the lowest price can be vital in many cases for a business. For this reason, the stock exchange, through its' functions facilitates the capital allocation, being a channel through which the companies who are seeking capital will obtain it from companies who are recording profit or have a surplus of capital.

But the importance of a stock market does not rely only in this attribute, because on overall a stock market can be considered an economic barometer, because any important and significant change in a country's economy will affect the stocks' prices. Following this rule, a boom period will be reflected by an increase in stock prices, while a recession period will be reflected by a decrease in stock prices.

Moreover, due to demand and supply factor, the stock market helps us to find the correct value of a share. Based on information provided by companies, the shares of profitable companies are valued higher, while the other stocks will record a decrease in their prices.

Investors want to gain money in a short period time, and the stock exchange market can help them to achieve this, because capital market offer them an assurance that they will be able to convert their investments in cash, any time they want. Due to

this function, any investor can invest money in all financial products, both on short run time or long run time, and can change this investments in cash any time.

### 2. Romanian capital market transactions evolution

In this paper we are interested to point out the main evolution of Romanian capital market transactions. The most important characteristics for a capital market is represented by market capitalization. In our case, the market capitalization evolution is presented in figure 1. At a first glance, we are able to see that before year 2000, it is very hard to speak about an "active" capital market in Romania, because until 2000 the market capitalization was under 1 billion RON.

During the period 2000-2007, which can be considered as EU pre-accession period, the market capitalization increased more than 85 times, from a capitalization of 1 billion in 2000, to more than 85 billion in 2007. During this period there were applied several regulation regarding the financial markets, because Romania had to implement the European norms. This legislative framework changes can be consider a cause for the huge increase recorded by Romanian capital market, being considered by investors more certain and with huge potential of increase.

Despite this period of significant increase in market capitalization, due to financial crisis, there were recorded some variation of this indicator for period 2008-2012, when we are able to see both types of variations: decreases and increases. Based on figure 1, we are able to see that in year 2008 and 2011 there was recorded a decrease in market capitalization of 46% for 2008 and 30% for 2011. Starting from 2012, the market capitalization gain an increasing trend which seems to maintain up to 2014.

In order to see which it is the cause for the market capitalization fluctuation, we present in the figure 2, the evolution for both, number of traded stocks and value of traded stocks. Based on this, we are able to see that after a period of constant increase in traded stocks of 50% per year, we have a huge jump in year 2004 of over 200%, such that in 2004 were traded more than 13,000 million stocks, compared with only 4,000 million stocks in 2003. An explanation for this significant break point in the number of traded stocks can be the adoption of law no. 297/2004, a unique law which regulates the capital market, and implements the EU acquis to the financial sector.

All this structural shift recorded by Romanian capital market during the period 2004-2006, in order to adhere to EU, gave a signal to all investors that our financial market can be considered a more certain market with a huge potential of developing. Because of this, we are able to see a big increase in

both, number of traded stocks and value of traded stock for period 2004-2007.

This positive trend is stopped by financial crisis, which affect mainly the value of traded stocks, due to fact that in two consecutive years 2008 and 2009 were recorded a decrease of 60%, compared to 2007. In the same time the number of traded stock fluctuated in normal ranges. Based on this we see that the function of economic barometer of Romanian capital market is validated, because during the recession period, the stock prices recorded a significant decrease.

When we analyze the evolution of listed companies and financial intermediaries who activates on capital market, we are able to see a reverse evolution. Before 2000, there were recorded more than 170 listed companies and more than 130 financial intermediaries. Implementation of EU regulation regarding the capital market represented for the "players" a qualitative selection (Figure 3). Due to this changes, only the companies and financial intermediaries which had a stable financial situation and development perspectives were able to resist on capital market. In our opinion this is a good think, because having more stable companies listed on the stock exchange, we can prevent the financial instability or at least we can to diminish it.

The same evolution can be seen in the table 1, in which we presented a descriptive statistics for the main indicators of the Romanian capital market.

Due to fact that until 2011, it were applied the individual account, we could presented the evolution of realized transactions for residence and non-residence persons.

This evolution it is captured in the figure 4 and figure 5, from where we are able to see that the average value of buying transactions for non-residence persons is around 30% from the total, while the selling transactions for non-residence persons are around 26% from the total. We presented the evolution up to 2011, because after this year were used the global investments accounts, instead of individual one.

An interesting fact is represented by the proportion of non-residence transactions in 2000 and 2001, when more than 54% from the total buying transactions were done by non-residence persons. This can be explained by the privatization process, when many state's companies were privatized and the permanent process of improving the stock exchange regulation. Due to this many investors saw a potential in Romanian capital market and they started to buy a lot, as it was happened in 2000 and 2001.

### 3. Financial crisis effects on Romanian capital market

Based on the descriptive statistic presented at the point 2, we were able to see the evolution of the

main indicators for the Romanian capital market. Now, we want to go further and to see if financial crisis had a significant impact on capital market. In order to achieve this we will use paired sample t-test, for a period of 5 years before financial crisis (2003-2007) and financial crisis period (2008-2012). In this case the null hypothesis will be as follows:

$$(1) \quad \begin{aligned} H_0 : \sim_{2003-2007} &= \sim_{2008-2012} \\ H_1 : \sim_{2003-2007} &\neq \sim_{2008-2012} \end{aligned}$$

Based on hypothesis presented by relation (1), we want to see if the average for selected variable are different for these two periods.

Before to apply the paired sample t-test, we compute the difference series, based on relation (2):

$$(2) \quad X = value_{i+5} - value_i, i = \overline{2003,2007}$$

We know that the expected mean for the difference series is 0 ( $\sim_X = 0$ ), and the number of our sample is 5 (N=5), the paired sample t-test is computed based on formula (3):

$$(3) \quad t = \frac{(\bar{X} - \sim_X)}{s_X} = \frac{(\bar{X} - \sim_X)}{\sqrt{\sum (X - \bar{X})^2}} \cdot \sqrt{\frac{N-1}{N}} = \frac{2 \cdot \bar{X}}{\sqrt{5 \cdot \sum (X - \bar{X})^2}}$$

The results are presented in table 2, from appendix. Based on the paired sample t-test we are able to see that only the number of listed companies is significant different for these two analyzed period at 5% confidence level. For the other variables we see that the changes in the value of traded stocks, the changes in market capitalization, the changes in value of buying transactions for non-residence persons and the percentage of buying transactions for non-residence persons from total are again significant different for period 2003-2007 and period 2008-2012 at 10% confidence level.

Based on this results, we are able to see that the non-resident persons were more sensible to changes in financial markets, and react more quickly and more significant compared to the residence persons. In the same time, we see that only the buying transactions done by the non-resident persons were significant affected by the financial crises, while for selling transactions, there is no significant effect.

### 4. Conclusions and discussions

Romanian capital market is a young market with a huge potential of increasing. Especially after 2000,

when we started to apply several regulation in order to regulate the capital market and to implement the EU recommendations on this aspect, we were able to see an increase in the concern regarding the stock exchange, so many investors started to buy and sell stock more and more often.

Based on the data presented in this paper, we were able to identify two major events which affected the Romanian capital market evolution, namely: joining the EU and financial crisis.

The first event, joining to EU, started to produce effects several years before the real event occurred, due to fact that the Romania had to implement many regulation regarding the financial market, so this made our capital market more attractive for investors. For this reason in 2000 and 2001 more than 54% from the buying transactions were done by the non-residence persons.

All the EU pre-accession period it was characterized by increasing trend in capital market transactions, in both volume and value. Going further, we were able to see that this process affected negative the number of listed companies or financial intermediaries, which in our opinion is a good think. This can be considered as “natural selection” in which only the most stable companies succeed to remain on financial market. Some of this withdrawing from the market are due to shareholders decision, but some of them are due to unconformity with the degree of meeting the listing requirements.

But this rapid increase in capital market, were stopped in 2008-2009 by financial crisis, which had a significant impact on all transactions done on the market. Regarding this we were able to see that the market capitalization decreased with 46% in 2008 and 30% in 2011.

The paired sample t-test highlighted the fact that only the number of listed companies is significant different for these two analyzed period at 5% confidence level. For the other variables we saw that the changes in the value of traded stocks, the changes in market capitalization, the changes in value of buying transactions for non-residence persons and the percentage of buying transactions for non-residence persons from total are significant different for period 2003-2007 and period 2008-2012 at 10% confidence level.

The transaction evolution for residence and non-residence persons were analyzed only up to 2011, due to fact that starting from this year the global account started to be used more widely. We consider that individual account are more appropriate to be use, because based on them we are able not only to do statistics, but we can

monitored more easily the investments made by each investors. This is a very important aspect when we talk about the risk management, because otherwise we are not able to see the case of risk in some investment transactions, but this can be a subject for a future paper.

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### Appendix

Table 1. Descriptive statistics for main indicators for capital market for period 1995-2014

Indicator	1995-1999	2000-2003	2004-2007	2008-2011	2012-2014*
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No of transactions (thousands)	311	495	1,198	1,111	608
No of traded stocks (millions)	527	3,068	14,463	14,310	11,347
Value of traded stocks (mill. RON)	103	570	8,480	6,895	9,328
Daily value of traded stocks (mill. RON)	0.5	2.3	34.1	27.3	42.6
Market capitalization(mill. RON)	303	6,568	62,379	74,750	121,544
Listed companies	71	77	60	73	82
Financial intermediaries	109	95	71	68	46

\* - For 2014, we have values for period January – August

Table 2. Paired sample t-test results for selected variables

Variable	Average for period 2003-2007	Average for period 2008-2012	t-statistic	p-value
Changes in number of transactions	24.34%	-14.86%	1.796	0.147
Changes in number of traded stocks	46.46%	-0.99%	1.138	0.319
Changes in value of traded stocks	94.26%	-2.82%	2.136	0.099*
Changes in market capitalization	65.09%	12.69%	2.439	0.071*
Number of listed companies	60	74	-4.319	0.012**
Number of financial intermediaries	71	65	1.319	0.258
Changes in value of buying transactions for residence persons	111.82%	-19.38%	2.147	0.121
Changes in value of selling transactions for residence persons	107.71%	-21%	2.288	0.106
Changes in value of buying transactions for non-residence persons	101.86	-22.82%	2.670	0.076*
Changes in value of selling transactions for non-residence persons	112.77%	-12.45%	2.053	0.132
Percentage of buying transactions for non-residence persons from total	32.87%	27.36%	2.350	0.100*
Percentage of selling transactions for non-residence persons from total	25.39%	27.35%	-0.669	0.551

\*\* , \* - the null hypothesis is rejected at 5%, respectively 10% significance level

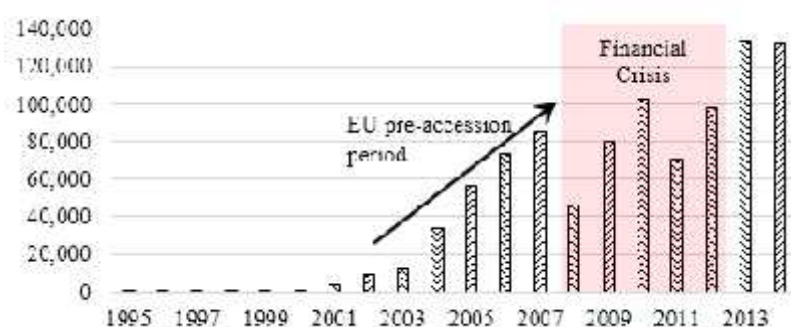


Figure 1. Market capitalization for period 1995 - 2014 (million RON)

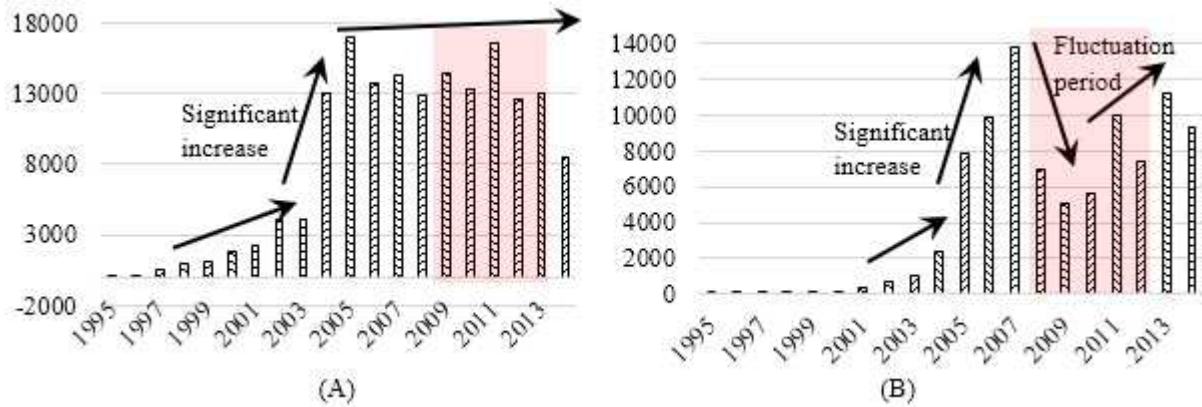


Figure 2. Number of (A) traded stocks (million stocks) and (B) value of traded stocks (million RON) for period 1995 - 2014

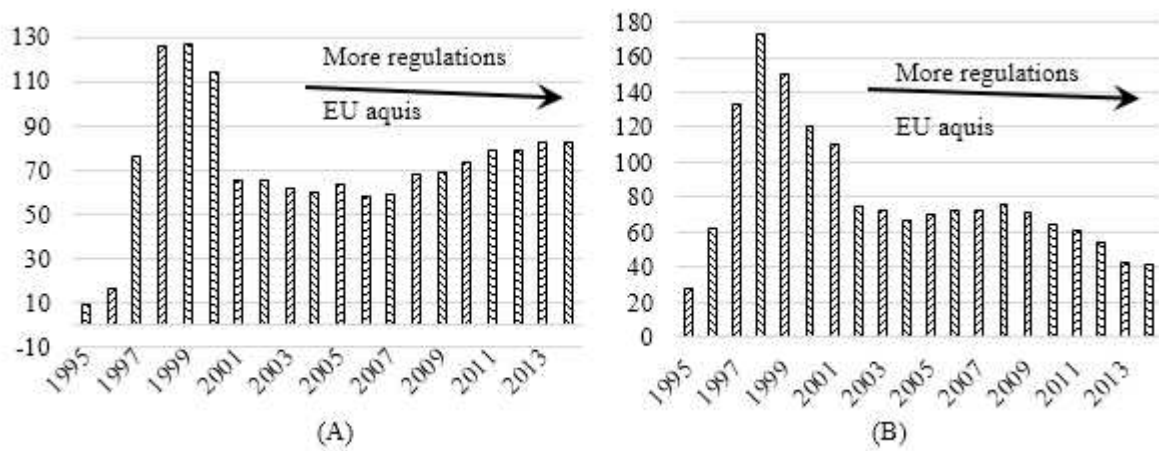


Figure 3. Number of listed companies(A) and number of financial intermediaries (B) for period 1995 - 2014

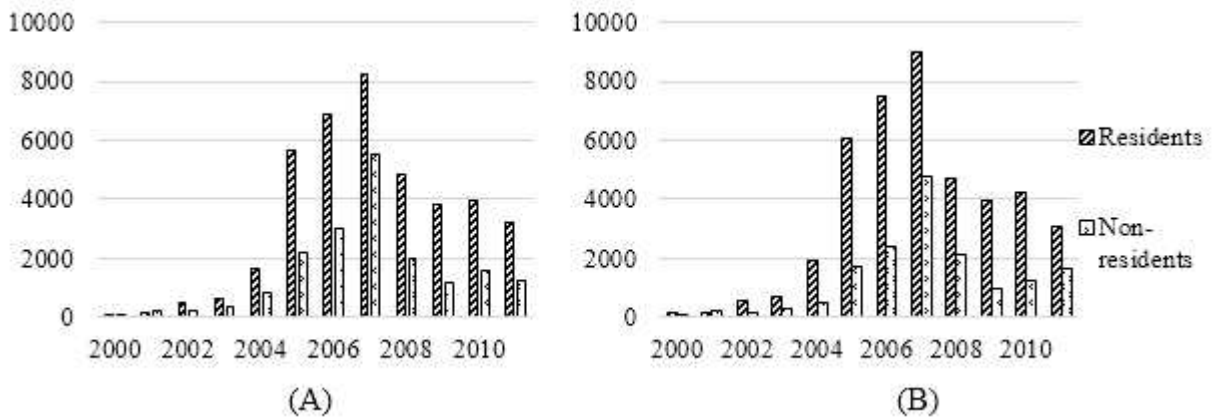


Figure 4. Value of buying transactions (A) and value of selling transactions (B) for period 1995 – 2014 (million RON)



Figure 5. The percentage value of buying and selling transactions of non-residence from the total value of transactions

