METHODS OF PORTFOLIO MANAGEMENT FOR LISTED SHARES. SOME FEATURES FOR THE ROMANIAN PRIVATE PENSION FUNDS[1]

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Abstract: *Recently, Romania put into practice the private pension system, which includes compulsory pensions and voluntary ones, as alternatives to statutory (public) pension scheme. According to the Romanian laws, private pension funds can invest in securities issued on regulated and supervised market from Romania, EU Member States, European Economic Space, and third countries a percentage ranging between 10% and 50% of the total pension fund assets. This study should be viewed in the current global financial context whereas, currently, the most powerful and stable financial markets are experiencing problems with the sudden drop in financial asset prices, low liquidity and a reduction in investment on the capital market. The administrators of these funds for the fundamental analysis applied on securities should consider the social component of their activity, since the public pension system is undercapitalized and encountered many problems arising from the influence of economic, social, demographic, political factors.*
In this article, for the selection of listed stocks to be included in a portfolio, we propose a score function. Using this method we determine which of the companies analyzed previously had the best performance in terms of an investor with risk aversion, and the final goal will be identify the best three companies included in BET index in terms of return and risk. The weights of each indicator were the results of the use of Likert scale.

Key words: *private pension system; portfolio management; investments; score function; Likert scale*

1. Private pension system in the European Union. The case of Romania

In the year 2008, Romania put into practice the private pension system, which includes compulsory pensions and voluntary ones, as alternatives to statutory (public) pension scheme, regarded as inadequate for social protection of the active populations, became further pensioners. The public pension system had significant problems, not only in Romania, but in the entire European Union. This is the reason why all the states tried to find alternative solutions, having both similar strategies and some national specific measures, based on some qualitative and quantitative indicators which ranked the countries from this point of view.

Private pension funds in Romania establish their activities on a well regulated system and their performances will depend on the future private compulsory pensions. Taking into consideration the social component of these types of funds for the active employed population upon 35 years, the investments of insured population contributions are strictly regulated by the Romanian laws.

Private pension system in Romania was built in accordance to World Bank classification for this field, named **pillar of pensions**[2]:

- Pillar I – public pension systems, as type "pay as you go", PAYG, with *defined benefits;*
- Pillar II – privately administrated pension funds, with *defined contribution*, compulsory for young population with age under 35 years and voluntary for active persons with age between 35 and 45 years;
- Pillar III – voluntary pension systems, private administrated, based on individual accounts.

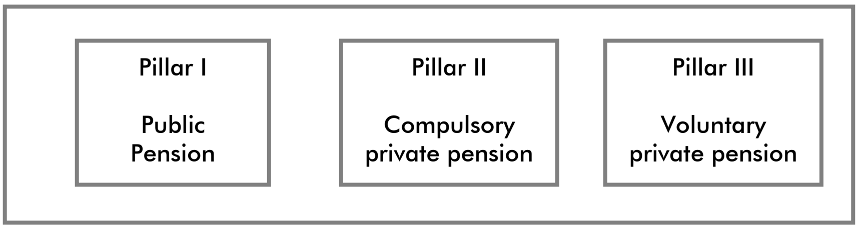

Figure 1. The multi-pillar pension system built and implemented in Romania since 2008

In the European Union, were identified four categories of states, for the implemented pension system point of view, respectively:

1. with less developed private pension systems, with no intentions to change these circumstances: Spain and France;
2. with well developed private pension systems, based constantly on these systems: Denmark, Holland, Great Britain;
3. with public and reformed "pay as you go" systems, with compulsory private pillar pension, supporting the public system with significant difficulties: Bulgaria, Estonia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia, Sweden;
4. with traditional social insurance systems, sometimes together with a minimum level of social insurance, this had implemented a private pension system: Germany, Austria, and Italy.

The multipillar system can be described having some particularities for Central and Eastern Europe countries, compared to more-developed states from European Union, as it can be seen in the following table:

Table 1. The multipillar pension systems from the European Union. Particularities for Central and Eastern Europe

	PILLAR I	**PILLAR II**	**PILLAR III**	**PILLAR IV**
Central and East Europe	Public pension	Compulsory private pension	Voluntary private pension	Occupational pension
UE 15 countries	Public pension	Occupational pension	private pension	

Source: www.csspp.ro

The starting point for multipillar pension systems takes into consideration the demographical characteristics of Europe, a continent which slowly, but surely, gets old. The decrease of live birth per year and the fertility rate, together with improvements in life expectancies in some countries are the most important reasons. Each member state must built an individual pension system, taking into account different previous crises – political and economical – sometimes with armed conflicts, having distinct developing level of the economy.

For instance, Croatia is one of the countries with an eventful recent history, with significant implications on the national pension system. In almost one decade (1991-2001), its population decreased with 3% (in absolute values, approximately 150.000 inhabitants), in the year 2001, getting to 4.300.000 citizens. The demographic structure was changed due to the armed conflict in this geographic region. The number of pensioners was growing, including war invalids and the descendants of the victim of the conflagrations (for example, war widow). Moreover, the deceased persons in this conflict are social contributors for the pay as you go system, which were diminished with more than 30% (for 525.000 to 360.000 persons). This special case sustains the requirement for methods based on socio-economic features for each country[3].

In Romania, the most important reasons for pension reform are: the population ageing, the increasing values of old age dependency ratio, with possible insolvency of the "pay as you go" pension system. In order to improve the current public system, including the case of Romania, were taking into consideration some direct measures such as: increasing of the age for retirement, but together with special measures for those who require early retirement, because the population can choose, for example, advanced or invalidity pension and can work in the same time, based on the cost of opportunity concept. Regarding the age of retirement, there are a lot of public debates in the European Union referring to the gender differences for normal-age public pension, even if the life expectancy are relatively similar for both men and women. In some countries from European Union, the age for retirement has already been equalised or will be progressive equalised in the future (for example, Estonia will equalised the age for retirement until 2016, at 63 years).

In Romania, the multipillar system can be seen as a possible solution to prevent the insolvency of the public pension system. Especially, the pillar III can be an alternative solution, but, for example, in 2008 this sector is still not developed. The annual yield for private pension funds were between 6% and 50.83%. The most important causes for this evolution are the legal provisions, such as the tax deduction of social contribution for voluntary private pension: 250 euro, in real terms means 40 euros (15%·250 euros). In Czech Republic, the level of tax deduction is around 12.000 Czech crowns, which it means about 480 euros (20 November 2008[4]). Moreover, can be mentioned the limit of 15% from gross income for saving placements in pension pillar III.

2. Investment policy for private administrated pension fund in Romania

Private pension system in Romania was elaborated as defined contribution system, which it means that the insured person knows the percent/the level of paid contribution for his entire active life, without knowing the level of benefits as private pension, after the retirement. The opposite system has the definite benefits, the social contributor knowing the level of his future pension, based on his regular payments as social contribution.

According to the Romanian laws, both Pillar II and III guarantee, as a private pension, a sum equal to total paid contribution, less transfer penalties and legal services[5]. In order to multiply the total contribution paid by the social contributors, the pension fund administrator must invest the assets, taking into consideration the social role of this type of institutional investor.

The investments made by an administrator, taking into consideration a medium level for risk, with a less impact of profitability, must comply with some legal limits. The most important financial instruments (with maximum limits of 70% and the minimum percent of 10%) in which a private administrated pension fund can invest are as it follows:

- deposits in rol or hard currency to any credit institution authorized to function in Romania, in European Union or in European Economic Space – maximum 20% in total assets;
- accounts in rol or hard currency to any credit institution authorized to function in Romania, in European Union or in European Economic Space – maximum 5% in total assets;
- T-bonds issued in Romania or in any European Member state or in European Economic Space – maximum 70% in total assets, with the following sub-limits: (1) 50% in T-Bonds with a maturity less than a year; (2) 70% in T-Bonds with a maturity more than a year;
- Bonds and other financial assets issued by the local authorities from Romania or any European Member state or in European Economic Space – maximum 30% in total assets;
- securities traded on regulated and supervised capital markets from Romania, EU Member States or the European Economic Space - maximum 50% in total assets with the following sub-limits;
    - securities traded on regulated markets in Romania - 35%;
    - securities traded on regulated markets from the European Union or European Economic Space, other than Romania - 35%;
    - corporate bonds of the Romanian issuers - 30%;
    - corporate bonds from issuers from the European Union Member States or from the European Economic Area other than Romania, which received from international rating agencies the rating "investment grade" - 30%.

Initially was not taken into account the information concerning the market where the securities are traded - in Romania, any other Member States from the European Union or European Economic Space and the percentage of 50% was considered the maximum for all the assets required. The Regulation no. 3/2009 on the investments from the private administrated pension funds the interpretation was diversified and the emphasis is mainly on ratings given by international rating agencies. We can observe that the regulation did not say anything about the corporate bonds with no rating as "investment grade".

- T-bonds and other financial instruments issued by third countries – maximum 15% from the total assets;
- bonds and other securities issued by local government authorities in third countries, the percentage of up to 10% of the total pension fund assets etc.

In the period 2008-2009, we can not made statistically significant considerations about the yields of the privately managed pension funds from Romania because it would be simple speculation. It can make some observations when we analyze the portfolio-target for Pillar II and III, but it is possible that the deviation is too large, as a factor influencing this observation being also the short time horizon, for which we have no information.

According to official data from Private Pension System Supervisory Commission (PPSSC), at the end of the August 2009, especially due to the financial and economic crisis, the most important destination for investments were government securities (58.37%), about 35% from the total assets were invested in corporate bonds, municipal bonds, supranational bonds and shares and 4.66% in bank deposits[6].

Regarding voluntary pension from Pillar III, at this moment their portfolios are targeted mainly to government bonds, approx. 60% from their total assets. At the end of August 2009, from the total amount of assets of 161.5 million rol, administrated by the voluntary pension funds, 14.28% were placed in corporate bonds, 11.07% in shares, 5.06% in municipal bonds and 3.61% in bank deposits.

Here are two examples of states that have implemented a few years the multipilon pension system and they already have publicly available information about the return of private administrated funds. Thus, at the end of 2008, Czech Republic, with a population of 10,241,000 inhabitants and a GDP of 198.978 billion USD have one of the most powerful markets of private pension funds. Net assets from the Pillar III recorded a remarkable upward trend, coming from a volume of 6.342 million crowns, made in 1995 to 167.196 million crowns in 2007, i.e. an increase in nominal terms by 2636%. Over 40% of the Czech Republic has a private pension account, at June 30, 2008 there are 4,135,169 of participants and the market leader, as in Romania, is the ING company, with a market share of 27.03%.

Hungary is also a reference market for private pension funds. For the third pillar, the number of adherents increased continuously for the period 1998-2007, coming in the last year of that period to 1,385,440 members, a very large number if we think that their population is about 9,981,330 inhabitants. Total assets ranged from 100.41 million forints (in 1998) and 744.37 million forints (value recorded for 2007) [7].

In February 2009, PPSSC came with new regulatory provisions (Regulation no. 3/2009) regarding **the degree of risk associated with privately administrated pension fund**. Depending on the proportion of the low-risk instruments in their portfolios, each of the Romanian private administrated pension funds may be associated with one of the following degrees of risk:

- low risk – with a total holdings of the low-risk instruments varying between 100% -85%;
- medium risk - with a total holdings of the low-risk instruments varying between 85% - 65%;
- high risk - with total holdings of the low-risk instruments varying between 65% - 50%.

In conclusion, we can say that despite some legislative provisions that provide some guarantees regarding the granting of private pensions when the participants of today will meet the retirement age, the uncertainty regarding the level of these pensions is obvious. Supervisory Commission of Private Pension System has a great responsibility from this point of view, the specific legislation being emerging.

3. Methods of portfolio management based on listed shares on Bucharest Stock Exchange

As shown in the previous subsection, private pension funds can invest a percentage ranging **between 10% and 50% of the total pension fund assets in securities** issued on regulated and supervised market from Romania, EU Member States, European Economic Space, and third countries. The percent of 50% of the assets is quite high, which may lead a private pension fund to pass from a medium risk level to one higher. In Romania we can illustrate with such a pension fund that is Generali, which announce the target structure of its portfolio is considering investing 36% of its assets in securities traded.

If we analyse the problem of setting up a portfolio which can contain stocks, in order to assure a certain percentage of growth without excessive increase risk in the global financial crisis, we can say that the portfolio manager of any pension fund is facing a major challenge at least in the short to medium term. For this reason, we consider that this research approach is particularly useful as the capital markets worldwide are in the process of reconfiguring and resizing, being strongly marked by decreases in exchange rates, even for the best of financial investment.

We focused on Romania as a country that is emerging and the Romanian capital market is a market with a significant potential of growth. This fact is demonstrated by the data provided by a report from the agency Standard Poor's. According to this report, during 2002-2006, the Romanian capital market recorded an annualized increase of 69.7% while the S&P/IFCG index has in the same period an increase of 36.2%. The Romanian Stock Exchange recorded higher returns over other emerging markets from Russia, China, Egypt and Brazil. After the EU accession, the Romanian capital market recorded a growth of 15-25% in 2007.

This study should be viewed in the current global financial context whereas, currently, the most powerful and stable financial markets are experiencing problems with the sudden drop in financial asset prices, low liquidity and a reduction in investment on the capital market. This is confirmed by high correlation between the BET index and S& P500 of 0.92, recorded last year. Therefore, the distrust of investors in capital markets is generalized in an international context.

4. Some recent financial trends of the Romanian capital market

In Romania, the first steps regarding capital markets' creation were taken upon the establishment of trade exchanges in 1839 and Bucharest Stock Exchange (BSE) was officially opened on December 1st 1882. Its activity was influenced by social and political events of the time (the uprising of 1907, 1912-1913 Balkan War, World War, when the stock market was closed), and in 1948 the Effects, Shares and Exchange Stock Exchange closed down. Stock Exchange has started again, when BSE was re-established[8].

The evolution of the listed shares was moderated in the early trading according to the consolidation and implementation of the mechanisms for trade and investment and due to the lack of investor's confidence in the Romanian capital market, and after that it had an upward trend from 1996 to 2007. Thus, in 1996 there was a decrease in market capitalization, with an upward trend in 1997 through the adoption of program trading for 5 days per week, increasing the number of issuers and financial intermediaries, but more importantly, due to massive foreign investment on the Romanian capital market. In 1998 followed the market capitalization dropped again due to lack of investor confidence determined by the political instability. Since 1999, this indicator has seen an upward trend, moving from 572.5 million rol in 1999 to around 85 billion lei in 2007, registering an increase of about 145.64%.

The year 2007 is the last year in which BSE has increased (see figure no.2), and after that followed a significant decrease for the most important stock indexes and indicators. Thus, BET reported in 2008 the largest annual decrease recorded in its entire existence, approximately 70% decrease, which cancelled the increases from the previous years. Also, in February 2009, BET has the lowest value from October 2003 to date, of 1887.14 points. Market capitalization in 2008 had a reduction of approximately 46% from the previous year and the total turnover decreased by approximately 49% over the same period. Surprising, in September 2009 compared with the previous year, the market capitalization has seen an increase of 76%, but the total turnover decreased with almost 45%. These trends are explained due to the increase of sales from the part of the non-resident investors, but in the last two years their purchases of shares on the Romanian capital market fell. Instead, residents have performed with speculative investments, leading to increased volatility on the exchange market in Romania. The evolution of market capitalization and total turnover are similar to that seen on the emerging markets in the area.

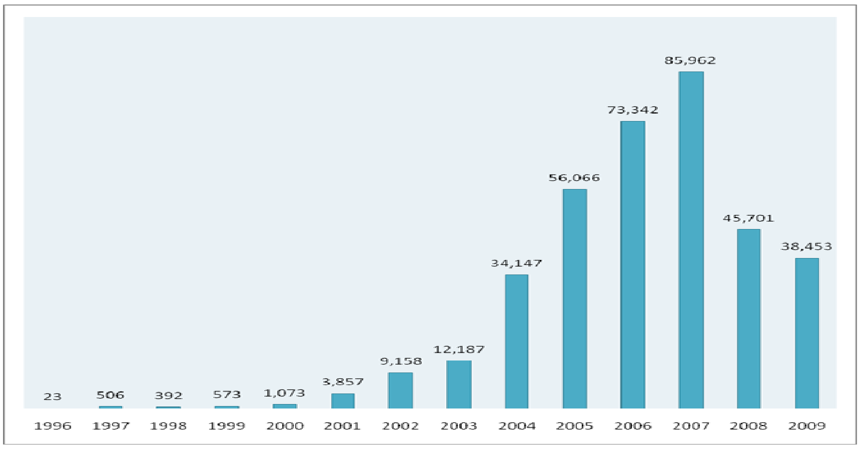

Figure 2. The evolution of the market capitalization on BSE during the period 1996-2009 (mil. Rol)
Source: http://www.bvb.ro

5. Methods of fundamental analysis applied on shares issued by the Romanian listed companies

Fundamental analysis applied on securities has two main components, namely an analysis using both financial, accounting indicators and capital market ones. The two types of analysis are based on specific indicators, but it is recommended to use both methods to obtain a more accurate economic and financial reality for each issuing company.

Private pension funds must make a very careful analysis, both regular and more complex of the portfolios of financial instruments created in order to make the necessary corrections in time when economic reality requires. This type of analysis should consider the social component of the activity of each private pension funds from Romania (and beyond) since they were created as a viable and more profitable alternative than public pension system, undercapitalized and encountered many problems arising from the influence of economic, social, demographic, political factors.

While private pension funds can invest in Romania up 50% of assets in shares, we realized the next study in terms of investor with risk aversion due to the abovementioned arguments. Were used financial information provided by the selected companies for the period 2004-2007, and stock indicators registered by them in 2005-2009. To take into account the important feature of a stock portfolio of a private pension fund, we choose the assessed shares to be those included in the structure of BET index. This selection is relevant because BET index includes ten most liquid shares traded on BSE. In a first phase, will examine the economic and financial situation for the selected companies and, in a second phase, based on the results obtained from the scores' method, will be chosen the top three companies whose shares can be recommended to an investor with risk aversion.

5.1. Analysis of financial ratios for shares add in the BET Index using the fundamental analysis

The most important five financial ratios based on the Balance Sheets of the ten companies included in the BET Index are represented in the Annex 1. There is also included the inflation rate which helps us to evaluate the indicators in real terms.

The figures from Annex 1 show us that the majority of these companies have reported values for return on assets and return on equity lower than the inflation rate in the year 2004. Still, in the next years, the situation has improved and these ratios have overcome the inflation rate. Besides, a common feature of these companies is represented by the higher level of return on equity compared with the level of return on assets, which highlights the fact that debts facilitated to gain due to the leverage effect.

Investors with risk aversion are more likely to give a higher importance to indicators like current liquidity, solvability rate and total debt/total assets because these indicators reflect the companies' ability to cover the current debt, to pay the obligations on long term and they also reflect the proportion of the external financial resources in the stable financial resources[9].

In this context, our study is relying on the evolution of these ratios, as it follows:

- *Azomures*: two weak features of this company are represented by the return on assets and the return on equity. So, the company reported values of these ratios below the value of the inflation rate in 2004 and 2005, in 2006 recorded financial loss, whilst 2007 was the only year when the company presented a level of the return on assets above the level of the inflation rate. Still, the return on equity did not manage to surpass the return on assets, the latter being with 0.32 percentage points lower than the first one. The company capacity to meet the current obligations assumed, reflected by the current liquidity, and had overcome the optimal value in 2004-2007[10]. The extent that the company can meet its obligations on long term, represented by the solvability rate, is a good one because this rate has been above the minimum level of 2[11] in the period 2005-2007. These two indicators, the current liquidity and the solvability rate, could help to strengthen the investors' confidence in this company. The total debt/total assets ratio reported a negative evolution by recording values higher than the maximum level of 0.5[12] in the reported period. Nevertheless, this situation can be positively interpreted because the borrowed capital had been invested in projects which helped the company to record in 2007 the highest return on assets and return on equity rates reported in the analyzed period. Also, in 2007, the company succeeded to report a profit after a year in which it recorded a financial loss. Besides, the total debt/total assets indicator presents a descending trend, in 2007 it had been very close to the level considered optimal, which strengthens once again the previous statement under which the company doesn't need any more external resources in a high proportion because the necessary investments in order to develop the business have already been processed and they have lead to the increase of the companies' profitability.
- *Biofarm*: in the analyzed period, the current liquidity has been greater than the optimal value, which means a low financial risk of the company. The solvability rate has known a positive trend, which emphasize a decrease of the company debt with almost 25 percent in 2007 related to 2004, while the total assets has increased with 162 percent. The total debt/total assets ratio recorded an ascending evolution and it was below the maximum

value in this period, which means a reduction of the external resources borrowed in order to sustain the investments made by the company.

- *BRD- Groupe Societe Generale*: the current liquidity had values over the optimal level, which means a lower financial risk. The solvability rate had an important fluctuation in 2004-2006, whereas in 2007 became stable at the level of 1.18. This value is sub-optimal, which highlights a growth in firm's leverage. This situation is confirmed by the total debt/total assets rate, which is up to the maximum value in this period of time. This indicator explains the dynamics and the values recorded by the solvability rate, meaning that the company preferred external resources rather than internal ones. From a bank's perspective, this situation is a favourable one because an important percentage of the external resources are represented by the bank deposits, which confirms clients' confidence and its high performances.
- *S.S.I.F. Broker*: the companies' financial risk is very low because, in each year, the current liquidity and the solvability rate were greater than the minimum level. Besides, the total debt/total assets had reported values under the maximum level. Even though these indicators have recorded optimal values, the trend is inadequate: over the years the current liquidity and the solvability rate have decreased and the total debt/total assets have increased.
- *Impact Developer & Contractor*: the current liquidity had a positive trend, with values higher than the minimum level in the period 2004-2007. Instead, in 2006, the solvability rate had a value less than the minimum level, but in 2007 it reached a normal value. A different trend had the ration total debt/total assets, with the highest value in 2006 and the minimum one in 2007.
- *Rompetrol Rafinarie*: the solvability rate presented has grown from 1.08 in 2004, under the minimum value of 2, to levels over the minimum value in 2005 and 2006. In 2007, it reached again a sub-optimal value. Regarding the current liquidity, the company has reported values up to the minimum level in the analyzed period. The leverage exceeded the maximum level in the period 2004-2007, which could signify an unprofitable use of the external resources. This statement is also strengthened by the fact that the company did not succeed to obtain profit in 2006 and 2007.
- *Petrom*: its indicators had acceptable values, although the current liquidity reduced from 4.79 in 2004 to 1.82 in 2007, a situation that could influence negatively the investors' decision. The level of leverage was substandard, while the solvability rate has reported more than satisfactory values.
- *C.N.T.E.E. Transelectrica*: the current liquidity was lower than the minimum value in 2004, but in 2005-2007 it reported a positive change. In the analyzed period, except year 2005, the solvability rate was superior to the minimum level. Although it recorded values greater than the maximum level, the total debt/total assets ratio decreased from 1.65 in year 2005 to 0.68 in 2007. Consequently, we need to focus over these ratios in the following period in order to analyise the companies' ability to pay off the long term debt and its solvability.
- *S.N.T.G.N Transgaz*: the company had some difficulties with its liquidity, with values less than the minimum value for 2005 and 2006. Instead, the company had no problem with its solvability rate because the values were greater than the minimum level for the entire period. The total debt/total assets had been superior to the maximum value, with a decrease in 2007. However, in 2007 this rate is very close to the optimal value. Moreover, in the same

year, the current liquidity had overcome the minimum value, which determined a lower need for the external resources.

- o *Transilvania Bank*: regarding the solvability rate in 2004-2006, the company could reach some difficulties in paying off its total debt. Another weak point is leverage, up to the standard (maximum) level in the entire period of time, with an ascending trend. Instead, the company had no difficulties as regards both its liquidity and solvability. Similar to BRD, Transilvania Bank had leverage higher than the optimal value. Also, in 2007, this ratio is greater than for BRD in the same year. If we will study the Balance Sheets for both banks, we will discover that even though Transilvania Bank had a higher leverage, it did not manage to made more bank deposits than BRD. So, in the case of Transilvania Bank, the higher level of this ratio is not an advantage.

5.2. Fundamental analysis through the capital market indicators

In Annex 2 we presented six capital market indicators for each of the listed companies from the BET Index and the values of these indicators for the entire market, for the period 2005-2009.

For the entire period, there is a growing trend for market capitalization in 2005-2007 and a decreasing one in 2008 and 2009, similar with the evolution for the total turnover. The analysis must be made in an unfavourable general, international context, including the case of the Romanian capital market, with “bear” markets since the beginning of 2008. The market capitalization is an important indicator for the investors with risk aversion because it shows the market value of a company[13]. The company with the highest value for the market capitalization in 2009 is Petrom and it is followed, like in the years before, by BRD-Groupe Societe Generale.

PER and P/BV ratio had general descending trends, which can be favourable for the investors because stocks with lower values for both PER and P/BV offer greater dividend yields than the ones with higher values for these indicators. Impact and Petrom are two appropriate examples through PER and dividend yield[14]. Thus, even though Impact has recorded in 2007 the highest value for PER, but the dividend yield was zero, while Petrom reported in 2005 an annual value for PER of 106.75 and the dividend yield was only 0.69, and in 2009 PER dropped to 3.53 and dividend yield rose to 9.94.

Generally, the velocity turnover had a descending trend, without significant variations during the period 2004-2007. This relatively stable situation is preferred by the investors with risk aversion because it gives them confidence in those stocks. A stable turnover velocity signifies an important and continuous volume of transactions. This means a minimal fluctuation for the stock prices and, in addition, it allows the investor to make frequent changes in its portfolio. However, in 2008 and 2009, due to the global financial crisis, in Romania the velocity turnover has known an important reduction at the market level as well as for each company from BET index. Certainly, there are a few exceptions like Azomures, BRD, Impact and Transilvania Bank. This means that the investors’ interest in these companies’ stocks is still high.

In the following paragraphs, we will present the particular situations reported in the capital market indicators, classifying the selected companies on economic specific sectors:

- **The manufacturing industry** (chemical products and substances manufacture): in our study includes Azomures and Biofarm. Because Biofarm became a part of the BET index in March 2009 it is obvious that the company’s strength feature is represented by the turnover velocity. While the financial crisis grew deeper, Azomures reported a level of the turnover velocity of 5.56 in 2008 and 4.26 in 2009, while it recorded only a 0.8 value in

2007. Instead, Biofarm presented a continuous decrease of this ratio from 10.42 in 2005 to 2.06 in 2009. In addition, while the companies included in BET index structure had reductions for market capitalization and total turnover ratios in 2008 compared with the previous year, Azomures presented a double increase of the market capitalization and a nearly 14 times increase of the total turnover. Another strong point of this company is represented by PER, which rose from a negative value in 2007 to a positive one in 2008 and 2009, while the PER reported by Biofarm dropped from the maximum of 29.81 reached in 2007 to 5.15 in the current year. None of the two companies had a dividend payout different from zero. Regarding the P/BV ratio, we can see a decline of this ratio for both companies, a trend that is also highlighted by the entire capital market for the entire period.

- **The financial intermediary sector** is represented by BRD, S.S.I.F. Broker and Transilvania Bank. In terms of market capitalization, all three financial institutions had an ascending evolution in 2005-2007. In 2007, they have reported the highest values of market capitalization and total turnover, excepting Transilvania Bank, which presented the highest values of the total turnover in 2005. After 2007, it followed a significant decrease of those ratios, the most important decline being reported by S.S.I.F. Broker with a 91 percent fall of the market capitalization in 2009 compared with 2007 and a 93 percent decrease of the total turnover in the same period.

Regarding the turnover velocity, it had a significant decrease for Transilvania Bank, from 4.56 in 2005 to 1.95 in 2007. After this year, it followed an ascending trend by reaching 4.63 in 2009. Due to face value's consolidation, its stocks were suspended from trading on the capital market between 15th September 2008 and 7th January 2009, which can be considered as a possible explanation for this financial trend[15]. So, the company avoided the major reductions that characterized the capital market in October 2008[16] and it tried to slow down the decrease of its own shares price by buying them back in a maximum 5 percent value of its equity[17].

The most significant variation of the turnover velocity had also S.S.I.F. Broker. This company has known a reduction of this ratio from 10.74 in 2005 to 6.87 in 2009. BRD reported insignificant variations of the turnover velocity, although it dropped from 0.94 in 2005 to 0.49 in 2006, but in the following years it presented increasing values. So, in 2009 it succeeded to slightly overcome the value reached in 2005 by reporting a value of 0.97. Because of the low variation of this ratio, BRD has an advantage compared with the two other companies in this field from the point of view of an investor with risk aversion. Besides, it reported the highest increase of dividend yield, from 2.12 in 2005 to 11.4 in 2009. This evolution can be explained by the companies' desire to maintain the investors' interest in its stocks, especially during the financial crisis, when the dividend yield increased from 1.41 in 2007 to 3.58 in 2008 and 11.4 in 2009. Another explanation could also be the fact that the dividend yield growth is based on the decline of the stocks price, which is a representative situation in the case of a worldwide financial crisis.

The other two companies had not developed a dividend policy. The dividend payout presents a major concern for the investors with risk aversion, who take decisions on long term and they give an important attention to the income based on dividends distribution.

Similar to the trend reported by the capital market regarding PERs' evolution, the financial institutions that we analyzed presented significant reductions of this ratio. The most important variation had in the case of Transilvania Bank, from a maximum level of 37.49

reached in 2006 to 1.31 in 2009, while BRD has known the lowest decrease (from the maximum 25.20 in 2007 to 2.95 in this year).

- **The energetic field** is represented by companies like Rompetrol, Petrom, Transelectrica and Transgaz. This sector of activity draws investors' attention through the significant variation for capital market indicators. So, it recorded notable decrease for PER, whom reported a fall from a positive value in 2005, 65.87, to a negative one in 2008 and 2009, respectively (-26.27) and (-1.19), in the case of Rompetrol. For Petrom, this ratio decreased from 106.75 in 2005 to 3.53 in the current year. Reported to the other two companies, Transelectrica presented the lowest decrease of this ratio, from the maximum value of 19.32 in 2008 to 4.64 in the current year. Moreover, Rompetrol presents major fluctuations for the turnover velocity and the P/BV ratio and, in addition, it had distributed no dividend. By the contrary, Petrom reported an increase of the dividend yield from 0.69 in 2005 to 5.45 in 2008 and 9.94 in 2009, with a decrease in turnover velocity from 2.29 in 2006 (after it has grown with 1.82 in the previous year) to 0.25 in 2008. Nevertheless, we can see o slight increase of the velocity turnover in the case of both companies in 2009, with 0.05 percentage points in the case of Petrom and with 0.42 percentage points in Rompetrol case. Instead, Transelectrica presented a descending trend in the same period.

In the case of Transgaz, it is too soon to draw some conclusions mostly because this company has been listed on the Romanian Stock Exchange in January 2008. However, our attention is drawn by the fact that the P/BV ratio recorded an upper level in 2008, compared with other three analyzed companies in the same year. Also, the values of PER and the dividend policy represent an advantage against Transelectrica and Rompetrol. Thus, if in the case of Transelectrica, PER presented a 14.68 decrease in 2008-2009, in Transgaz case, it has reduced with 4.47 in the same period, while Rompetrol presented a negative value, as we mentioned earlier. A solid point is represented by the dividend yield, which has increased from 4.36 in 2008 to 6.24 in 2009, while Transelectrica has known an insignificant rise of this indicator with only 0.17 percentage points in the same period and Rompetrol did not develop a dividend policy in the entire period.

According to the turnover velocity, Transgaz presented in 2009 the lowest value and it is followed by Petrom. However, these two companies remain an attractive investment for investors with risk aversion due to the higher levels of the dividend yield recorded.

- In the **construction sector** the only company included in the BET Index is Impact and this is the reason why the specific values for the capital market indicators will be compared with the ones recorded by the capital market, as a whole. This company had significant variations for PER, which rose from 17.46 in 2005 to 77.16 in 2007 and after that it followed a decrease to 33.46 in 2008 and continued up to 4.67 in 2009. The high values of this ratio can be explained through its overvaluation, which became undervalued in 2009. Although, the market value of PER had a similar trend, with low fluctuations, from 24.43 in 2005 to 3.26 in 2009. The turnover velocity had an ascending evolution from 1.9 in 2006 to 5 in the current year, while the same indicator reported by the market has known a decline from 14.03 to 9.56, in the same period. Although, the P/BV ratio emphasizes a face value greater than the market value, up to 0.13 in 2009, which emphasizes an unfavourable feature for the company image. Moreover, the company had no dividend payout. It is necessary to mention the fact that the changes occurred in the case of the turnover velocity and the P/BV ratio are due to the consolidation procedure developed from September 2008 to February 2009[18] and to the process of buying back 4 percent of its own stocks[19]. These measures determined the stocks price's stabilization, which were affected by the real estate' crisis which followed the financial crisis. The real estate' crisis developed especially in the fourth trimester of 2008.

6. Score method for choosing a stock portfolio for a private administrated pension fund

The private administrated pension funds are those entities that will provide, in Romania, in the upcoming years, the private pension system alongside the public pension. The level of pension will depend on the net asset value created and managed by these funds. In this context, the assets will depend significantly on the efficiency of investments in various financial instruments and the final decision, in this context, belong to the fund's administrator. In this article, for the selection of listed stocks to be included in a portfolio, we propose **a score function**. Using this method we determine which of the companies analyzed previously had the best performance in terms of an investor with risk aversion, and the final goal will be identify the best three companies included in BET index in terms of return and risk.

The proposed "score function" will have the following form:

$$Z = \sum_{i=1}^{n} p_i \cdot R_i$$

where:

p_i – the relative weight associated to the indicator (rapport) R_i;

R_i – the rapport taken into consideration;

n – number of the significant rapports for the model.

Depending on the outcome raised from the function score, it will be identified the most attractive stocks from a minority shareholder's point of view, with risk aversion, investing capital market in Romania.

The significant indicators (rapports) to be included in the score function derived on the above indicators analyzed in this article, taking into account the findings of a survey included in the study of Dragota and Serbanescu (2009) about **the behaviour of investors on the capital market in Romania**[20].

Through this study, were obtained information on the investment options of the participants on the stock exchange, their attitude towards risk, how to protect against this risk, their information sources and the frequency at which investors appeal to those data, the foresight about their portfolio's yields, and a series of demographic information on employment status and position occupied, the level and nature studies, their age and "maturity" on the Romanian capital market. Respondents received either directly or by e-mail a questionnaire including 17 questions. The questionnaire was sent to the Romanian individual investors[21].

The study of Dragota and Serbanescu (2009) describe the **selection criteria** taking into consideration by the investors for their investment decision as regards the stocks included in the portfolio. The investors participating in the survey considered that the main criterion to be considered is profitability, 64.86% of them giving it maximum points. The second most important criterion, according to respondents, is liquidity, 51% of respondents giving to liquidity a score of 4/5. On the third place was considered the risk. The previous performances and industry are considered less important by the respondents. In this ranking, it must be identified the switch between liquidity (most important) and risk, which may be a clue to the speculative' behaviour of the investors on the Romanian capital market. It must be point out that the study of Vasilescu and Vatui (2004 a, b, c) identified as benchmark for the investment decision the liquidity of securities.

Regarding **the perception of risk**, approximately 80% of respondents define risk as the variability of the market price. Only 19% believe that the risk means the bankruptcy risk, while 17% associated the risk with the possibility of no cash dividend. From the total number of respondents, 7.43% define risk as the possibility that the securities to be suspended from the transaction on the stock market. Only one respondent consider nationalization as a possible risk, which can be viewed as a confidence of investors in terms of economic development of Romania as a market economy.

The share pi associated with each score rapport R_i recommended to be used to develop stocks portfolio will be based on these findings, the method used for processing the data being the **Likert's scale. The Likert Scale** is a rating device frequently used in marketing research questionnaires in which respondents indicated their level of agreement with a statement by choosing the appropriate response from the scale, e.g. strongly disagree, disagree, undecided, agree, strongly agree.

In the analysis conducted up to this moment for the listed stocks included in BET index, we select those indicators (Ri) that correspond to the preferences of the Romanian investors who have been surveys, namely:

1. the dividend yield (capital market indicator) has a special importance in our score function because the minority shareholders are concerned, firstly, about the dividends and then about the capital gains. In addition, "dividends are seen as an object of consumption, while the shares as an investment, hence the reluctant to sell shares and encouraging earnings from dividends (Dragota V. **Dividend policy. An approach in the context of economic environment from Romania**, 2003);
2. the total turnover (capital market indicator) because the investor is interested to conduct frequent trading in its portfolio to avoid losses from changing in market prices. In addition, a high rate of liquidity guarantees a certain stability in the stock price;
3. the current liquidity ratio (financial indicator) because, as we noted above, minority shareholders are investors with risk aversion;
4. total debt/total assets (financial indicator) have less interest for this class of investors. However, its importance arises from the fact that its grater value shows the volatility of the net income and the increase of the insolvency risk. Since the current liquidity ratio is considered an indicator to quantify risk, we use both indicators in the score function, using their arithmetic average;
5. PER reflects the price that investors are willing to pay for a monetary unit of net income per share or the number of years needed to recover the investment, when the full distribution of net profit as dividends. In general, it is estimated that stocks with a PER value above the average value for the industry are overvalued, while those with a PER value under the average value for the industry are undervalued. However, the trend of PER must be compared with the evolution of the financial indicators, taking into consideration that this coefficient is influenced by the accounting policy used by the company. It is therefore considered that a normal level of PER is within the range 15-25[22].

In the score function, based on the findings from the cited survey, we will consider a rate between each company's PER and the average value of PER for the economic sector in which it belongs.

We calculate the weights related to each indicator considered in the analysis, using Likert scale and the results of the survey carried out among investors on the Romanian capital market, as follows:

a) $p_{profitability} = \frac{1x0 + 2x6 + 3x12 + 4x34 + 5x96}{148} = 4.48$;

b) $p_{liquidity} = \frac{1x0 + 2x11 + 3x29 + 4x75 + 5x33}{148} = 3.88$;

c) $p_{risk} = \frac{1x6 + 2x19 + 3x111 + 4x6 + 5x6}{148} = 2.91$;

d) $p_{previous\_performances} = \frac{1x25 + 2x104 + 3x13 + 4x6 + 5x0}{148} = 2.00$;

e) $p_{sector} = \frac{1x128 + 2x8 + 3x7 + 4x5 + 5x0}{148} = 1.25$.

The score function will be the following:

$$Z = 4.48X_1 + 3.88X_2 + 2.91X_3 + 2X_4 + 1.25X_5$$

where:

X_1 - the current dividend yield;

X_2= the total turnover;

$X_3 = \frac{current\_liquidity\_ratio + total\_debt / total\_assets}{2}$;

X_4 = the dividend yield from the previous year;

$X_5 = \frac{PER_{company}}{PER_{sector}}$.

Table 2. The application of the score method for the stocks included in BET index

Company	**X_1**	**X_2^***	**X_3^{**}**	**X_4**	**X_5^***	**Z**
Azomures S.A.	0	2,52	1,06	0	4,37	18,31
Biofarm S.A.	0	4,98	1,82	0	-2,42	22,15
BRD - Groupe Societe Generale S.A.	11,4	0,7	5,92	3,58	1,06	**79,48**
S.S.I.F. Broker S.A.	0	8,06	3,16	0	0,76	41,42
Impact Developer & Contractor S.A.	0	3,19	2,63	0,16	3,32	24,51
Rompetrol Rafinare S.A.	0	2,3	1,2	0	1,6	14,12
Petrom S.A.	9,94	0,79	1,65	5,45	1,91	**65,70**
C.N.T.E.E. Transelectrica	3,78	1,03	1,03	3,61	2,69	34,51
S.N.T.G.N. Transgaz S.A.	6,24	0,43	0,89	4,36	2,33	**43,85**
Banca Transilvania S.A.	0	3,36	7,04	0	2,35	36,45

* were taking into consideration the average values for the period January 2005 – March 2009;
** were taking into consideration the average values for the period 2004-2007.

According to the results obtained, companies have the best performance are BRD - Groupe Societe Generale, Petrom and SNTGN Transgaz. Except BRD, which gave shareholders dividends in all years examined, Petrom has distributed dividends only in the years 2006-2008, while Transgaz distributed dividends every year but we must take into account the fact that it was listed on BSE in early 2008. It also shows that the three companies have shown no considerable variation in the total turnover, but experienced significant fluctuations in market capitalization, for the coefficient PER, similar to changes from the capital market, as a whole, in the reported period. Instead, BRD offset the significant variability for the PER coefficient offset by obtaining the highest dividend yield for the three selected companies, for the entire period.

7. Conclusions

The study was designed from the perspective of an investor with risk aversion as should be considered the private pension funds. Accordingly, we considered as representative for the fundamental analysis the most ten liquid shares listed on the Bucharest Stock Exchange, included in the BET index. The main indicators used to measure the companies' performances were the dividend yield, total turnover, PER, current liquidity ratio and the leverage. The three stocks considered representative for an investor with risk aversion were selected based on a score function, the weights of each indicator being the result of the use of Likert scale. Since no model was built for the economic environment in Romania, we considered a model that had the coefficients for the score function both financial and capital market indicators. Thus, the best companies in terms of an investor with risk aversion have proved to be BRD - Groupe Societe Generale, Petrom and SNTGN Transgaz.

At this moment, the transactions from Bucharest Stock Exchange are purely speculative. This is due to the international financial crisis generated by sub prime mortgage crisis with upper risk from the United States of America and by the turbulence in international financial markets, with significant effects on the Bucharest Stock Exchange, too. Therefore, it is recommended that investment decisions on the capital market in Romania should be taken with caution.

References

1. Alexander, D. and Britton, A. **International financial reporting and analysis**, Thomson Printing House, Padstow, 2003
2. Anghelache, G. **Piata de capital din Romania. Caracteristici, evolutii, tranzactii**, Economica Printing House, Bucharest, 2004
3. Dragota, M. (coord.), Dragota, V., Handoreanu, C., Stoian A., Serbanescu, I.C. and Obreja Brasoveanu, L. **Piete financiare: structura, institutii, instrumente, reglementari**, ASE Printing House, Bucharest, 2009
4. Dragota, V. and Serbanescu, V. **Cateva indicii privind comportamentul investitorilor de pe piata de capital din Romania. Rezultatele unei anchete**, Theoretical and Applied Economics Journal, Bucharest, 2009
5. Dragota, V. **Politica de dividend. O abordare in contextul mediului economic din Romania**, ALL BECK Printing House, Bucharest, 2003
6. Dragota, V., Ciobanu A., Obreja L. and Dragota M. **Management financiar. Vol 1: Analiza financiara si gestiune financiara operationala**, Economica Printing House, Bucharest, 2003
7. Dragota, V., Dragota, M., Damian, O. and Mitrica, E. **Gestiunea portofoliului de valori mobiliare**, Economica Printing House, Bucharest, 2009
8. Halpern, P., Weston J. F. and Brigham, E. F. **Finante manageriale**, Economica Printing House, Bucharest, 1998
9. Roman, M. **Statistica financiar-bancara si bursiera**, ASE Printing House, Bucharest, 2003
10. Sharpe, W. F. and Alexander, G. J. **Investments**, Prentice Hall Printing House, Upper Saddler River, 1999
11. Stancu, I. **Finante**, Economica Printing House, Bucharest, 4th edition, 2007.
12. Serbanescu, C. **Asigurari si protectie sociala. Tendinte europene**, Universitara Printing House, Bucharest, 2008
13. Valceanu, Gh., Robu, V. and Georgescu, N. **Analiza economico-financiara**, Economica Printing House, Bucharest, 2005

14. Vasilescu, C. and Vatui, M. **Informatiile financiar-contabile si bursiere pe piata de capital romaneasca**, Finante, Banci, Asigurari, No. 7 (79), year VII, July 2004, pp. 28-34, [2004 c]
15. Vasilescu, C. and Vatui, M. **Investitorii persoane fizice si comportamentul lor investitional pe piata de capital romaneasca**, Finante, Banci, Asigurari, No. 3 (75), year VII, March 2004, pp. 31-33, [2004 a]
16. Vasilescu, C. and Vatui, M. **Puterea financiara si preferintele investitorilor persoane fizice pe piata de capital romaneasca**, Finante, Banci, Asigurari, No. 4 (76), year VII, April 2004, pp. 17-22, [2004 b]
17. * * * Law 297/2004 regarding the capital market
18. * * * Law 411/2004 regarding privately administrated pension funds
19. www.bvb.ro
20. www.dailybusiness.ro
21. www.csspp.ro
22. www.cnb.cz
23. www.curierulnational.ro
24. www.zf.ro
25. www.ktd.ro
26. www.ssifbroker.ro

Annex 1.

Analysis of economic and financial situation for the companies included in the BET Index[23]

Company	Indicator	2004	2005	2006	2007
The inflation rate		11,9%	9%	4,87%	6,7%
Azomures	Return on assets	10,63%	6.46%	0	16,65%
	Return on equity	11,36%	6.46%	0	16,33%
	Current liquidity	1,17	1,22	1,2	1,64
	Solvability rate	1,85	2,16	2,23	3,02
	Total debt/Total assets	1,11	0,82	0,77	0,51
Biofarm	Return on assets	16,75%	19,32%	17,1%	8,75%
	Return on equity	19,03%	20,45%	18,03%	8,95%
	Current liquidity	2,29	2,57	3,88	4,8
	Solvability rate	3,59	4,19	6,30	12,63
	Total debt/Total assets	0,39	0,31	0,19	0,09
BRD - Groupe Societe Generale	Return on assets	2,47%	3,92%	3,32%	3,77%
	Return on equity	24,31%	22,71%	21,95%	26,53%
	Current liquidity	3,70	3,57	3,27	2,55
	Solvability rate	1,24	4,19	1,18	1,18
	Total debt/Total assets	6,62	7,22	10,7	9,66
S.S.I.F Broker	Return on assets	18,18%	28,18%	22,56%	24,28%
	Return on equity	18,18%	28,19%	22,63%	24,33%
	Current liquidity	11	5,69	4,68	3,25
	Solvability rate	14,69	7,35	4,88	7,44
	Total debt/Total assets	0,07	0,16	0,26	0,16
Impact Developer & Contractor	Return on assets	13,64%	4,51%	5,52%	1,66%
	Return on equity	19,07%	6,98%	10,06%	2,27%
	Current liquidity	2,54	4,25	6,04	4,45
	Solvability rate	2,35	2,11	1,84	2,49
	Total debt/Total assets	0,82	0,98	1,27	0,69
Rompetrol Rafinare	Return on assets	1,23%	7,1%	0%	0%
	Return on equity	10,93%	18,03%	0%	0%
	Current liquidity	1,66	1,53	1,33	1,06
	Solvability rate	1,08	2,56	2,46	1,93
	Total debt/Total assets	1,18	0,94	0,77	1,07
Petrom	Return on assets	0%	9,13%	13,36%	9,62%
	Return on equity	0%	13,2%	12,66%	13,49%
	Current liquidity	4,79	3,2	2,78	1,82
	Solvability rate	6,53	7,83	8,50	8,11

Company	Indicator	2004	2005	2006	2007
	Total debt/Total assets	0,13	0,15	0,13	0,15
C.N.T.E.E. Transelectrica	Return on assets	2,34%	1,92%	8,57%	1,47%
	Return on equity	2,51%	4,37%	12,61%	2,16%
	Current liquidity	0,24	1,11	1,45	1,44
	Solvability rate	2,11	1,67	2,52	2,58
	Total debt/Total assets	0,97	1,65	0,7	0,68
S.N.T.G.N. Transgaz	Return on assets	-	7,87%	18,79%	9,75%
	Return on equity	-	13,4%	19,85%	14,30%
	Current liquidity	-	0,89	0,3	1,84
	Solvability rate	-	2,11	2,38	2,84
	Total debt/Total assets	-	0,94	0,77	0,58
Transilvania Bank	Return on assets	2,97%	2,73%	1,94%	2,47%
	Return on equity	20,16%	21,52%	16,84%	42,93%
	Current liquidity	4,50	3,73	4,16	4,41
	Solvability rate	1,14	1,14	1,15	1,15
	Total debt/Total assets	7,54	9,50	10,16	12,26

Annex 2
Capital market indicators for companies included in the BET Index for the period 2005-2009[24]

Company	Year	Market capitalisation (RON)	Total turnover (RON)	PER	DIVY	Turnover velocity	P/BV
Capital market indicators	2005	56.917.130.000	6.871.900.000	24,43	0,92	19,6	3,33
	2006	73.341.790.000	9.725.890.000	18,03	1,72	14,03	2,72
	2007	85.962.390.000	13.512.880.000	19,37	2,16	16,05	3,05
	2008	45.701.490.000	6.831.840.000	4,11	8,57	4,75	0,76
	2009	38.453.220.000	679.620.000	3,26	10,61	9,56	0,61
Azomures	2005	150.708.349	2.152.661,27	4,83	3,5	1,35	2,87
	2006	102.269.511	668.023,16	9,77	0	0,63	0,39
	2007	100.384.560	847.805,63	-33,02	0	0,8	0,38
	2008	202.654.071	12.453.937,56	2,88	0	5,56	0,62
	2009	100.472.233	4.283.823,67	0,39	0	4,26	0,29
Biofarm	2005	194.007.361	19.358.392	22,34	0	10,42	-
	2006	249.151.902	14.039.961	23,54	0	5,86	4,72
	2007	390,847,733	14.198.089,33	29,81	0	3,7	5,81
	2008	257.403.241	31.109.481,1	18,48	23,3	2,9	2,48
	2009	73.209.739	1.577.729	5,15	0	2,06	0,48
BRD - Groupe Societe Generale	2005	7.572.995.536	44.660.266,85	23,61	2,12	0,94	-
	2006	12.340.964.381	61.017.780,42	24,98	1,67	0,49	6,54
	2007	17.486.420.589	89.869.123,92	25,20	1,41	0,51	7,89
	2008	11.240.440.734	59.366.521,03	12	3,58	0,58	4,69
	2009	3.751.653.171	36.626.310	2,95	11,4	0,97	1,09
S.S.I.F. Broker PLC	2005	80.331.251	9.308.776,4	28,89	0,16	10,74	-
	2006	119.204.537	8.360.801,08	12,88	0,92	6,56	2,94
	2007	302.775.530	27.399.009,42	13,71	0	8,45	4,5
	2008	173.446.942	10.920.444,58	5,33	0	7,68	1,63
	2009	24.836.670	1.861.463	2,77	0	6,87	0,16
Impact Developer & Contractor	2005	306.459.433	9.836.652,58	17,46	2,22	2,89	-
	2006	485.166.753	9.204.108,83	51,77	0,35	1,9	2,82
	2007	924.861.932	19.722.874,92	77,16	0	2,09	5,82
	2008	348.533.333	9.106.916,02	31,36	0,16	4,07	1,5
	2009	43.600.000	1.560.809,33	4,67	0	5,00	0,13
Rompetrol Rafinarie	2005	1.872.456.621	84.703.526,42	65,87	0	4,04	-
	2006	1.892.429.230	45.553.791,75	55,86	0	2,45	2,38
	2007	2.040.835.742	35.724.815,08	-18,04	0	1,69	1,08

Company	Year	Market capitalisation (RON)	Total turnover (RON)	PER	DIVY	Turnover velocity	P/BV
	2008	1.001.566.680	12.726.488,37	-26.27	0	1,26	0,54
	2009	548.581.175	9.237.387	-1,19	0	1,68	0,27
Petrom	2005	19.197.918.837	48.893.270,33	106,75	0,69	0,47	-
	2006	8.477.639.783	27.178.442,92	25,35	2,22	2,29	1,76
	2007	28.175.297.377	67.301.371,75	17,85	2,98	0,67	2,8
	2008	20.840.311.525	4.396.6574,7	10,62	5,45	0,25	1,61
	2009	8.893.125.008	26.754.542,95	3,53	9,94	0,30	0,68
C.N.T.E.E. Transelectrica	2006	2.222.391.297	3.090.5639,2	18,46	0,87	1,44	2,46
	2007	2.885.767.193	25.430.911,08	16,42	2,87	0,93	1,57
	2008	1.578.460.991	15.154.113,98	19,32	3,61	0,94	0,69
	2009	698.823.286	5.651.926,33	4,64	3,78	0,8	0,3
S.N.T.G.N. Transgaz	2008	2.277.717.134	13.907.760,9	9,91	4,36	0,57	2,52
	2009	1.259.408.846	3.680.913,33	5,44	6,24	0,29	0,8
Transilvania Bank	2005	1.902.935.155	86.264.698,17	33,51	0	4,56	-
	2006	3.334.077.644	77.001.484,75	37,49	0	2,58	6,84
	2007	4.132.479.049	77.916.597,33	30,94	0,29	1,95	6,41
	2008	3.243.420.181	61.791.751,81	13,8	0	3,09	4,81
	2009	787.707.495	37.359.092,67	1,31	0	4,63	0,65

[1] **Acknowledgements**
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[2] www.csspp.ro

[3] Serbanescu, C. **Asigurari si protectie sociala. Tendinte europene**, Universitara Printing House, Bucharest, 2008

[4] www.cnb.cz

[5] Law no. 411/2004 regarding privately administrated pension funds.

[6] www.csspp.ro

[7] Dragota, M. (coordinator), Dragota, V.; Handoreanu, C.; Stoian A.; Serbanescu I. C. and Obreja Brasoveanu, L. **Piete financiare: structura, institutii, instrumente, reglementari**, ASE Printing House, Bucharest, 2009

[8] Anghelache, G. **Piata de capital din Romania. Caracteristici, evolutii, tranzactii**, Economica Printing House, Bucharest, 2004

[9] Stancu, I. **Finante**, Economica Publishing House, 4th edition, Bucharest, 2007

[10] Valceanu, Gh., Robu, V. and Georgescu, N. **Analiza economico-financiara**, Economica Publishing House, Bucharest, 2005

[11] Stancu, I. **op.cit,** 2007

[12] Dragota, V., Ciobanu, A., Obreja, L. and Dragota, M., **Management financiar. Vol 1: Analiza financiara si gestiune financiara operationala**, Economica Publishing House, Bucharest, 2003

[13] Stancu, I., **op.cit,** 2007

[14] Stancu, I. **op.cit**, 2007

[15] The official Statements from Transilvania Bank, www.bvb.ro

[16] Daily Business, **Cat de ferite de criza sunt actiunile Bancii Transilvania?**, 29.10.2008, www.dailybusiness.ro

[17] Chirileasa, A. **Banca Transilvania si Impact rascumpara actiuni proprii ca sa le opreasca din scadere**, 28.07.2008, www.zf.ro; Curierul Național Editorial Staff, **Banca Transilvania a rascumparat si vineri actiuni proprii, in valoare de 151.000 lei**, 13.01.2009, www.curierulnational.ro

[18] The official Statements from Impact Developer & Contractor S.A., www.bvb.ro

[19] Ziarul Financiar Editorial Staff, **Impact rascumpara inca un pachet de 550 mii de actiuni**, 12.08.2008, www.zf.ro

[20] Dragota, V. and Serbanescu, V., **Cateva indicii privind comportamentul investitorilor de pe piata de capital din Romania. Rezultatele unei anchete**, Theoretical and Applied Economics Journal, Bucharest, 2009

[21] Most respondents (99.32%) invest in stocks, the most common financial instrument on Bucharest Stock Exchange (in fact, only one respondent had no shares in his portfolio). It can be noted, however, the interest for portfolio diversification, being considered the investments in mutual funds (78.38% of respondents), bank deposits (70.27%), derivatives (63.51%) and bonds (25.68 %) (Dragota and Serbanescu, 2009).

[22] Valceanu, Gh., Robu, V. and Georgescu, N. **Analiza economico-financiara**, Economica Printing House, Bucharest, 2005.

[23] The financial indicators were determined based on the Balance Sheets for the listed companies, from www.bvb.ro.

[24] The capital market indicators were determined based on the Monthly Reports published on the BSE website, www.bvb.ro.