„LUCIAN BLAGA” UNIVERSITY OF SIBIU
FACULTY OF ECONOMICS

Financial performance analysis of companies
listed and traded on Bucharest Stock Exchange

DOCTORAL THESIS ABSTRACT

Thesis coordinator: Prof. BALTEŞ, Nicolae, PhD
PhD Candidate: MIHUŢ (VASIU) Diana Elena

Sibiu, 2015
Mr. / Mrs,

We are pleased to invite you to the public presentation of the doctoral thesisi entitled "Financial performance analysis of the companies listed and traded on Bucharest Stock Exchange", by PhD student Mihuţ (married Vasiu) Diana Elena, under the supervision of professor Nicolae Balteş, PhD, which will take place on the 30th of January 2015, at 10.00 a.m. at the Academic Centre for Reunions in Sibiu, No. 7, Banatului Street.

We are grateful for any feedback, suggestions and recommendations that we would like you to please send them at the email addresses diana.vasiu@yahoo.com and dep.doctorate@ulbsibiu.ro, until 01/28/2015.

Thank you and you are most welcome!

Thesis coordinator: Aspiring PhD:
Prof. Univ. Dr. Balteş Nicolae Mihuţ (căs.Vasiu) Diana Elena
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The motivation for choosing the theme; novelty, timeliness, importance of the topic

Financial performance is often difficult to achieve by economic entities, especially in the current economic climate marked by persistent financial crisis and recession. Successful models of those who did constitute examples of good practice for the aspirants. Obviously, there is no universal recipe for success and, despite numerous efforts of companies to find out, specific influences are extremely complex, from country to country, from sector to sector, by field of activity and size categories. Based on these considerations, we chose as the theme for his doctoral thesis "Analysis of financial performance of companies listed and traded on the Bucharest Stock Exchange."

The topic is a broad field developed at all levels of academic and professional practice. The reference, both national and international, is very extensive.

The novelty that this thesis wants to highlight is the integrated vision between traditional financial analysis and the analysis performed on the basis of specific indicators of capital market with the search, identification and determination of specific and determinate links between these elements of performance, based on the microanalysis performed at the company level to a macroanalysis, in the capital market. The analysis is carried out on 8 financial, namely the period 2006-2013, highlighting the way in which the crisis has affected most Romanian companies.

In this context, this thesis aims to carry out a blueprint for an economic sector which consists of companies listed on the BSE, a full
diagnosis of their performance, aiming to be a source of models of excellence for maintaining and increasing performance, and last but not least, a guide for investors to assist them in choosing the best companies.

The settlement on the thesis in the context of scientific research in the field and in the inter- and transdisciplinary context

In the specialty economic literature several meanings can be found on performance, the subject being amply developed.

In a general sense, the performance expresses the result of an action, the notion is associated with its positive result or associated to the success and success in a field; also, the performance can be seen as an action that leads to success.

*Performance can be regarded as a place of excellence being the result of a continuous effort, achieved in the competitive framework, commensurated through different methods.*

Performance always comes as a result of a comparison, based either an internal variable or an external one. The typology of the notion of performance is particularly extensive. In the current socio-economic context, taking into account the demands and requirements of Euro-Atlantic integration, the impact of the crisis and the recession that followed, the globalization of markets, we can not only address the holistic concept, integrating financial, social and environmental performance.

From many angles of approach to the concept of performance, this paper focuses on issues of financial performance, addressing elements related to defining and measuring the performance and the study of various factors that influence it, the analysis being custom made for case studies made on companies listed on the Bucharest Stock Exchange in the period 2006-2013.
Understanding the multiple meanings of the concept of financial performance, the factors that contribute to maintaining and most especially improving it are of particular importance in the current context of the global economy. In a free competition in the capital markets, a company that is able to obtain constant financial performance will have a positive development on the stock exchange, easier access to capital and will be more attractive to investors.

**Knowledge stage**

Financial performance is a widely developed subject at all levels of academic and professional practice. Interest in this issue was present in the concerns of Romanian and foreign authors, experts in finance, accounting, financial management, financial management, evaluation, general management, value management. The topic chosen is therefore a particularly complex, versatile, multi, inter and transdisciplinary one.

In theory, aspects of financial performance results in a very extensive bibliography, national, international, printed or electronic. To synthesize the main concepts, models and approaches to financial performance, in writing this paper we have considered some of these landmarks, considered relevant, which represented the theoretical and methodological basis. The study of the latest research in the field, published in specialized journals contributed to updating the knowledge stage, providing a starting point for this thesis, identifying possibilities to extend the investigations or matters that have not been captured in previous studies. Bibliographic elements making up the theoretical support of this thesis are presented in section References presented at the end of the thesis. Academically, financial performance
Formulation of the main objectives of the thesis; presentation of research methodology and justification of the chosen methods

Objectives of the thesis

The main objective of the thesis is to determine clear and updated picture of the financial performance achieved by the companies listed and traded on stock exchanges in Romania and to identify the main factors that determine the achievement and maintenance of performance, the links between micro-performance and macro-performance.

Secondary objectives, detached from the main objective are: financial performance analysis of companies listed on BSE, in its various angles of approach: based on income statement based on rates of return, in terms of third parties and based on modern indicators; the comparative analysis, coupled with SWOT analysis of the main methods for assessing financial performance and proposing a set of key indicators for assessing financial performance; identifying the links between maintaining and enhancing financial performance and the company's listing on the capital market; synthetic assessment of financial performance by building score models and ranking the companies analyzed.

Methodology of research

Analysis of financial performance of companies listed and traded on the Bucharest Stock Exchange is a complex process, based on the empirical, selective research, transposing theoretical aspects and specific concepts related to performance into concrete space of economic and financial life.

To achieve the objectives, the scientific approach involved the use of
complementary methods common to the economic disciplines and those specific to finance.

Among the methods and techniques used in developing the thesis there are:

*Documentation and literature review*, reflected in references / web references; theoretical documentation (books, national and international studies), documentation of the applied process and the processing and interpretation of information from documentation.

*Mathematical and statistical methods*, such as: classification, synthesis, static and dynamic comparative analysis, factor analysis, analysis of variance and correlation, trend analysis, time series analysis based on individual indices, of the average rate of change, analysis of central tendency, the representativeness of the mean, graphical representation of events and phenomena investigated.

*Interdisciplinary research method*: research is based on knowledge from the fields of finance and accounting, mathematics, computer science.

*Investigation*, represented by the collection, systematization, analysis and interpretation of data, the study of specific financial reports and publications, and also recommendations.

*Logics*, reflected in inductive, deductive or abductive reasoning used in outlining conclusions.

The main structural and functional elements of BSE and performance criteria that companies must meet for listing and maintaining on the regulated market are presented in the first chapter and its Annexes. Given these performance standards, we considered that the companies listed and traded on BSE meet the highest criteria of financial performance and as a result,
based on the analysis performed at this level, examples of excellence to be applied at a national level will be provided.

Given the share of the total market capitalization sectors, the number of companies, the performance criteria that must be met, the criteria of homogeneity on the work done, we have chosen for the case study, the analysis of the financial performance of the companies listed and traded on the BSE, which are operating in industry and construction, in a total number of 51, hereinafter „industry and construction companies, listed and traded on BSE in the period 2006-2013”. According to the NACE classification Revision 2, the industry includes mining and quarrying, manufacturing, production and supply of electricity, gas, steam and air conditioning (sections B, C, and D).

Financial performance indicators are calculated by the author based on the information provided by the individual financial statements of these types of companies, developed for the years 2006-2013, published on www.bvb.ro and on the website of each of the listed companies in the special sections dedicated to investors. To the extent necessary, additional information was obtained from the statutory audit reports, reports of the Board of administration and other publications devoted to investors, available on the website of each listed company.

For capital market specific indicators the existing data on the site www.bvb.ro and www.tradevile.eu were used, accessed from October 2011 to November 2014.

Calculations, graphs, tables and annexes are the processing performed by the author. Specific analytical methodologies are detailed for each study in the thesis.
Due to the unavailability of data (both on the BSE site and the companies’ websites), for S.N.G.N. ROMGAZ S.A., in 2006 and for S.N.NUCLEARELECTRICA S.A., during 2006-2008, the financial performance analysis for these companies was conducted from 2007 for S.N.G.N. ROMGAZ S.A., 2009 for S.N.NUCLEARELECTRICA S.A. respectively, the share of companies according to various criteria in the total of companies analyzed being calculated in accordance with these situations. Therefore, for the year 2006, the financial performance analysis indicators of 49 companies were calculated, in the year 2007 for 50 companies and since 2009, for 51 companies.

For the companies analyzed the most important financial performance indicators were calculated, according to the methodologies presented by the specialized literature and practice. For each company, each year there were calculated, liquidity, solvency, debt indicators, rates of return, rates of rotation of assets and liabilities that affect the financial rates (shown in profitability approach in terms of Du-Pont system) and the specific indicators of the capital market and of listed entities.

Each indicator has been presented and analyzed at the 51 companies listed and traded (with the exceptions shown) and the conclusions considered the recommended values of the indicators, i.e. the minimum and maximum thresholds against which performance is assessed. Companies were categorized nominally, depending on the values set, analyzing the evolution of the share of companies in one category or another, during 2006-2013.

Where individual-level variation was reduced, the level of variation coefficients confirming the representativeness of the average level, the average annual levels were calculated based on the annual indicators of each
company. If the variation was very high, average annual levels were calculated based on aggregate data.

In the analysis of indicators calculated on the basis of the outturn account, given the existence of losses, we applied two methodologies:

a) In the analysis of some indicators’ increase or decrease over the period of two consecutive years, the indicator’ variation for each subsequent period of two years was calculated, \( t_0 \) and \( t_1 \), in the period 2006-2013, for the companies which, in both years analyzed (\( t_0 \) și \( t_1 \)), registered profit;

b) When the variation was greater at the level of individual indicators calculated based on the income statement, the data on the analysed population aggregated only for the companies that made profit, considering that, in its absence, we cannot assess profitability and hence, the financial performance.

The evolution of the analyzed indicators was presented in the context of the influences that caused them, going, when extremely high or extremely low values were recorded, to identifying the causes, according to reports of the directors and statutory auditors.

The data on which the calculations were performed were taken from the BSE website, published under reporting rules that listed entities must comply with, and on the websites of each company.

Starting with the financial statements of year 2012, companies listed on a regulated market were required to apply IFRS in preparing separate financial statements, according to Minister of Finance Order no. 1286/2012. In applying these regulations, companies restated financial statements for 2011, according to the law, which led to the recording of value differences between the information provided by the initial and restated financial
statements. The financial statements for 2011 are extracted from the reports for the year 2012 made in accordance with IFRS and presented in the following as „the year 2011r”. Since the analysis of influences due to restatement is one of our future concerns, there were presented both the values for 2011 to better highlight the differences that may arise, and the impact on comparability.

Expression of the research’s limitations / development of the thesis.

This research has some limitations inherent in any scientific approach of this kind, which only open new horizons for future research.

A first assessment of the performance of listed companies limit refers to the number of companies analyzed, and to the time horizon.

An important element impacting the comparability of the information provided by financial statements is represented by the various legislative changes in accounting on the preparation of financial statements: OMPF 1752/2005, 3055/2009 and OMFP OMPF 1286/2012. The different ways of dealing with BSI, avatars of the results’ often make it difficult, or at least subjective, the approach of comparing financial performance, even for the same entity. Moreover, the inability to access data in managerial accounting induce other limitations of this research, though, where possible, additional information was extracted from the statutory audit, board reports, and other publications specific to investors.

Structure of the thesis

The PhD thesis has the following structure: introduction, six chapters that address the theoretical and practical aspects related to financial performance analysis, conclusions and personal contributions and references.
In Chapter I CLASSIC AND MODERN APPROACHES ON THE FINANCIAL PERFORMANCE AND PROFITABILITY OF COMPANIES LISTED AND TRADED ON BUCHAREST STOCK EXCHANGE of the paper summarizes the main concepts related to financial performance and outlines specific area in which those concepts will customize, namely the companies listed and traded on the Bucharest Stock Exchange, operating in the industry and construction. Theoretical concepts regarding performance are highlighted by customizing the theoretical elements related to economic and financial performance addressed temporarily.

This chapter presents some theoretical issues related to assessing financial performance in terms of indicators calculated based on the income statement and in terms of rates of return.

Addressing financial performance can not remain a purely theoretical approach, suspended in the abstract space of definitions, formulas and conceptual interpretations. Continuing the theoretical approach materializes in presenting companies whose financial statements are based on analyzes carried out in chapters II-VI of the thesis and the motivation of this choice.

Capital market is where objective elements, figures and their semantic load interacts with human subjectivity in the stage of analysis, interpretation and decision, generating quotations, speculation, wealth or landslide losses.

Theoretical elements, models proposed by experts in the field should be validated with actual situations of the market, stock exchanges being the final area where performance is recognized and validated.

For these reasons we have chosen for the case study on the financial
performance the companies listed and traded on the BSE. Before moving to the actual, analytical, approach, positioning the chosen field is required especially in the general context of economic life, presenting general and particular aspects that will have an impact on the entities analyzed.

The first stock exchange in Romania emerged in 1881 following the adoption of the Law on stock exchanges, mediators of exchange and mediators of goods, based on the French model. In 1904, a new law of the stock exchange has achieved a better definition of the stock exchange operations, having, as an immediate consequence, increased public interest in investments in securities. The law on stock exchange, from 1929, known as the “Madgearu Law” represented the legislative unification of Romania’s stock exchanges and also a modern approach to the legislative act. After the end of the economic crisis of 1929 - 1933, with the economic recovery, “Bucharest Stock Exchange” experienced, in its turn, an upward trend, 1939 being the culmination of the interwar period.

Political changes and the economic implications of Romania after World War II led to the disappearance of specific products: stocks, bonds, domestic and foreign bonds, reinforced by the process of nationalization, which meant the end of the capital market and stock market. Restoring the capital market in Romania and all its specific institutions resumed after 1989, continuing today.

In Romania, the practical approach to capital market is of Anglo-Saxon optics, the stock market being a component of the financial market. As far as regulations are concerned, there is a clear distinction between the monetary market and foreign exchange market and stock market: for the first, the regulations are issued by the Central Bank, for the second, by the
National Securities Commission (CNVM).

Stock markets are regulated exchanges, supervised by state authorities, all participants having access to market information. Listed securities transactions are carried out under the stock’s terms, by negotiation in the stock exchange room or through information and electronic technology.

For companies listed and traded on the BSE, financial instruments and their issuers must meet specific requirements for admission to trading on a regulated market, many of which are subsequent to performance criteria.

In 2010, Bucharest Stock Exchange managed the following markets: a regulated market, BSE, divided into three sectors (Equities, Debt securities sector, Sector Undertakings for Collective Investments) and Rasdaq Market; a regulated market in time; an alternative trading system (ATS) called CNS (Companies and New Shares).

Companies listed on the BSE are divided into fields, according to NACE revision 2. As shown on Bucharest Stock Exchange website, in terms of market capitalization at the sector level, the evolution of the share of each sector in total capitalization is presented in table 1.
Table 1.

The contribution of each sector in the total market capitalization

<table>
<thead>
<tr>
<th>Sector</th>
<th>Share of sector’s capitalization in total capitalization (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2006</td>
</tr>
<tr>
<td>Agriculture, hunting and forestry</td>
<td>0.06</td>
</tr>
<tr>
<td>Wholesale and retail trade, repair of motor vehicles,</td>
<td>0.43</td>
</tr>
<tr>
<td>motorcycles and personal and household goods</td>
<td>0.64</td>
</tr>
<tr>
<td>Constructions</td>
<td>2.79</td>
</tr>
<tr>
<td>Electricity, gas and water</td>
<td>0.09</td>
</tr>
<tr>
<td>Hotels and restaurants</td>
<td>39.4</td>
</tr>
<tr>
<td>Mining and quarrying</td>
<td>31.94</td>
</tr>
<tr>
<td>Financial brokerage</td>
<td>13.52</td>
</tr>
<tr>
<td>Manufacturing products</td>
<td>0.51</td>
</tr>
</tbody>
</table>

Source: Author’s processing, according to monthly reports, published on www.bvb.ro

Mining and financial intermediation held the largest share of the total market capitalization, with reversals of position in 2007-2009. In 2006 and in 2010-2013, mining was at the top of market capitalization, followed by financial intermediation, the position being reversed in 2007-2009. At a considerable distance stood the shares of manufacturing industry in total market capitalization, transport, storage and communications, other sectors having much lower weights.

As regards the distribution of companies in fields of activity, according to NACE rev. 2 illustrated in figure 1, mining and quarrying, manufacturing, electricity supply and construction accounts for 72% of all companies listed on the BSE.
In November 2013 six of the 57 companies listed and traded on the Bucharest Stock Exchange, operating in industry and construction were suspended from trading since they were in insolvency proceedings, the situation remaining unchanged today.

Given the share of the total market capitalization sectors, the number of companies, the performance criteria that must be met, the trading on the regulated market, we investigated the evolution of financial performance for the 51 companies listed and traded on the BSE, operating in industry and construction. These companies began to be listed on the BSE at different

**Figure 1. The share of companies listed on the Bucharest Stock Exchange, according to field of activity, according to NACE**

Source: Author’s processing, according to the data available on www.bvb.ro
times, some before 2006, considered as basic period in this research, others in the analysed period, 2006-2013. Before being listed on BSE, most companies were listed on the unregulated market.

Chapter II RESEARCH ON FINANCIAL PERFORMANCE ASSESSMENT BASED ON ACCOUNT OF RESULTS AT THE COMPANIES LISTED AND TRADED ON BSE OPERATING IN INDUSTRY AND CONSTRUCTION DURING 2006-2013 presents financial performance in terms of addressing income statement in the form of three studies: analysis of the dynamics and structure of the financial year; sensitivity analysis and leverage and the net profit – cash flow relationship. Studies have followed the evolution of financial performance embodied in obtaining net profit, on how and the extent in which the operating, financial and extraordinary result contribute to the gross income and the proportion in which the variation in operating income influences the net outcome. Special attention was paid to addressing financial performance in a dual conditioning: to achieve net profit and record a positive net cash variation in this context being analyzed the evolution of the cash flow and the causes that have influenced it.

The analyses were based on the following research hypotheses:

1. In the case of companies listed and traded on BSE operating in industry and constructions, the operational result has a significant contribution to achieving net result.

2. Companies’ performance to make profit was strongly affected during the crisis, and soon after, but they have now managed to overcome the difficult moments.
3. Companies are more interested in the performance criteria expressed in terms of net profit, with lesser importance of cash flow generation. Therefore, in most cases, recording net profit is not doubled by obtaining a positive net cash flow.

The main objective of the research presented in this chapter is the analysis of the financial performance of companies listed and traded on the BSE in terms of their ability to get profit in difficult economic context of the period after 2007, coupled with increased economic demands, which Romanian companies must face as a result of integration in the European Union.

Secondary objectives which derive from the primary objective refer to: structural analysis of the result and highlighting the contribution that financial result and extraordinary result have had in obtaining the gross result; analysis of how the financial crisis affected the financial performance of companies listed; responding to the question “Have companies listed and traded on the BSE surpassed the difficult times of the crisis and recession?”; identifying the causes that generate the variation of outcome, and especially, the amplitude of these variations; financial performance analysis of dual perspective, for profit and cash flow release; testing the link between financial performance development and the duration of listing on the Bucharest Stock Exchange.

Analysis of the dynamics and structure of the financial year result

Structuring the profit and loss account as a table allows the determination of return flows as profit margins, on the levels corresponding to the type of activities, operational, financial and extraordinary, explaining
how the result was achieved at different stages and estimating the performance in the preceding financial year. They are designed to perform a specific function for the remuneration of the factors of production and financing of future activity. The results characterize the overall performance of the business, reflecting the increase or decrease of the company’s accumulations during the financial year.

**The research hypothesis**

*Selective research on the dynamics and structure of the financial year starts from the following hypothesis: In industry and construction, the operating result has the largest share in obtaining the gross result, and the influence of the financial result is in most cases negative, due to exchange rate developments from the financial crisis.*

**The research objectives.** The selective empirical research aimed the following objectives: financial performance analysis of companies listed and traded on the BSE in terms of their ability to obtain profit; structural analysis of the result and outlining the contribution that the financial result and the extraordinary result had in obtaining the gross result; analysis of how the financial crisis affected the financial performance of listed companies; identifying companies that consistently registered a poor financial performance.

*Subscribing to most experts, that financial performance can not be accepted without obtaining profit, there should be mentioned the companies that, in this regard, have had a constant lack of performance over the entire analysed period. Discussing the companies listed and traded, we consider very important to obtain a positive net result to remunerate investors.*
Data analysis and presentation of results

Figure 2 presents the share of companies that had a positive result during 2006-2013, depending on the activity this derives from.

![Chart showing the share of companies that had a positive result during 2006-2013, depending on the activity this derives from.]

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 2. The share of companies listed and traded on the BSE, which recorded profit in the period 2006-2013

Although over 65% of the companies analyzed have achieved operating profit during the period analyzed, there is a decrease in the share of companies that have achieved operating profit at an annual average rate of 2.85. The strongest decrease in the number of companies that have achieved
operating profit was recorded in 2011 compared to 2010, the decrease being of 8% (or 15% for the restated situations 2011r); the strongest growth in the share of companies that have achieved operating profit, of 12%, occurred in 2006-2007. The percentage of companies that have achieved financial profit was the lowest, 25%, in 2009 and the highest, 57% in 2006. The share of companies that have achieved financial profit decreased by an average annual rate of 8.79%. The shares of companies that have achieved current income, gross profit and net profit are almost identical. It should be noted that regardless of the economic stage analyzed, over 66% of the companies analyzed recorded net profit. The percentage of companies that have achieved net profit recorded a downward trend, decreasing by an average annual rate of 2.85%, down from 90% in 2007 to 66% in the period 2011 to 2013.

The results of the research confirm the first hypothesis, namely that the operating result has a significant contribution to achieving net earnings, financial results and the extraordinary result influencing the net result in a smaller proportion. It is also confirmed the hypothesis that the performance of companies to get profit was strongly affected by the crisis. The steady decrease in the share of companies that have made a profit for the period under review, does not confirm the hypothesis that companies listed and traded on BSE operating in industry and construction have successfully overcome the negative effects of the crisis and the recession.

Sensitivity analysis and leverage

Hypothesis of the research

Research on sensitivity analysis assumes that in industry and
There is a moderate degree of sensitivity of net income due to changes in turnover, while the change does not affect the operating result as strong as the net income.

The research objectives. The selective research carried out pursued the following objectives: to identify the correlation between various types of result; identify the elements to which the net result has the strongest reactivity, thus indicating some directions for action to increase performance; identify the result’s amplitude variation due to variation of influence factors; identify the companies which have a very high degree of leverage, with a high sensitivity to a minor modification of an influence factor and thus placing themselves in a position of vulnerability.

Data analysis and presentation of results

The assessment of operating result’s sensitivity to changes in sales was based on the operating leverage. The analysis of variability in net profit generated by the company’s financing policy can be traced depending on the variation of the operating result or the change in turnover, based on financial leverage. Global risk, encompassing the economic and the financial risk, was assessed through total leverage "GLT", which shows the change in net income as a result of change of turnover and which indicates the shareholders’ incomes as a result of using operational and financial leverages.

Leverage was analyzed as total net income elasticity to changes in sales, the grouping of companies according to the values obtained being shown in Table 2.
Table 2.

Companies’ classification, based on total leverage coefficient values

(Net result-Turnover)

<table>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>below 0%</td>
<td>26.53</td>
<td>34.00</td>
<td>28.00</td>
<td>35.29</td>
<td>35.29</td>
<td>41.18</td>
<td>45.10</td>
<td>43.14</td>
<td>52.94</td>
</tr>
<tr>
<td>(0%-10%)</td>
<td>53.06</td>
<td>40.00</td>
<td>60.00</td>
<td>41.18</td>
<td>41.18</td>
<td>37.25</td>
<td>29.41</td>
<td>33.33</td>
<td>33.33</td>
</tr>
<tr>
<td>(10%-0%)</td>
<td>12.24</td>
<td>12.00</td>
<td>4.00</td>
<td>7.84</td>
<td>3.92</td>
<td>1.96</td>
<td>11.76</td>
<td>9.80</td>
<td>3.92</td>
</tr>
<tr>
<td>(20%-0%)</td>
<td>0.00</td>
<td>6.00</td>
<td>2.00</td>
<td>3.92</td>
<td>1.96</td>
<td>3.92</td>
<td>3.92</td>
<td>7.84</td>
<td>7.84</td>
</tr>
<tr>
<td>(30%-0%)</td>
<td>2.04</td>
<td>2.00</td>
<td>2.00</td>
<td>0.00</td>
<td>3.92</td>
<td>3.92</td>
<td>1.96</td>
<td>1.96</td>
<td>4.00</td>
</tr>
<tr>
<td>over 40%</td>
<td>6.12</td>
<td>6.00</td>
<td>4.00</td>
<td>11.76</td>
<td>15.69</td>
<td>15.69</td>
<td>7.84</td>
<td>7.84</td>
<td>1.96</td>
</tr>
</tbody>
</table>

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

The values of the coefficient of elasticity for the total leverage, shown in Table 2 indicate that most companies (between 30% and 53%) have a moderate reaction, of the change of up to 10% of results of operations for a variation of 1% of the turnover.

Based on this analysis, we validate the hypothesis that at the companies listed and traded on the BSE operating in industry and construction, there is a moderate degree of sensitivity of net income due to changes in turnover, while the change of operating result does not affect the as strongly the net earnings change. We identified turnover as the factor against which net income has the strongest reaction of sensitivity and companies which have a very strong sensitivity are in a position of vulnerability, among them being Sinteza S.A.,
Electroaparataj S.A., Mefin S.A., Voestalpine Vae Apcarom S.A. Based on these results, we appreciated the magnitude of the result’s changes to the 1% change in turnover as moderate, of up to 10% for most of the companies analysed.

Analysis of profit-cash-flow relationship

Hypothesis of the research

The selective research on analysis of financial performance in terms of net profit-cash-flow relationship assumes that most companies get accounting net profit, achieved without duplicating the performance of a steady cash flow generation. However, the companies listed and traded put more emphasis on liquidity, cash flow generation being a condition and a confirmation of financial performance.

Objectives of the research. The research aimed to achieve the following objectives: to determine the structure of companies based on their ability to achieve net profit and cash flow; identifying the factors and circumstances leading to cash flow in order to provide recommendations and action to improve cash flow.

For the analysis of profit-cash-flow relationship, we determined the cash flow for each period t₁-t₀ (where t₁ and t₀ are two consecutive years during 2006-2013), defined as the variation of net cash-flow (ΔTN) from the beginning to the end of the year, according to the relation: ΔTN = TN₁ - TN₀. There has been studied the manner in which the variation in working capital and of the necessary working capital caused the cash-flow variation.
Data analysis and presentation of results

Depending on the results obtained there were identified four types of behaviour, according to which we grouped the 51 analyzed companies: it profit is obtained and cash is released; cash is released but loss is recorded; profit is obtained but cash is not released; loss is recorded without recording cash.

Figure 3 presents the structure of companies based on the profit-cash-flow relationship for the period 2006-2013.

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 3. Share of companies listed and traded, depending on the profit-cash-flow relationship
Except the periods 2007-2008 and 2012-2013, between 39% and 49% of companies fail to achieve a positive net result, in terms of positive variation of cash, thus confirming the highest performance standards. In 2007-2008, only 31% of companies have managed this, the financial crisis making that the share of companies that have managed to achieve both performance standards declined by 17 percentage points from the previous period. The situation is repeated in 2012-2013, when only 27,45% of the companies managed to simultaneously record cash and profit. For the entire period, the share of companies that have achieved both performance standards decreased by an average annual rate of 9,20%. The greatest variation was recorded among the companies that have experienced loss without releasing cash, whose share increased by an average annual rate of 45,8%.

**Factorial analysis of cash flow, based on the French current approach**

Given the importance of cash flow generation, we considered it important to analyze the causes of variation in cash flow. Factor analysis of cash flow was achieved based on the French current, which involves determining the cash flow as the difference between the change in working capital and changes in working capital requirements, based on the relation: \( \Delta TN = \Delta FR - \Delta NFR \).

Except for periods 2007-2009 and 2012-2013, most companies (49%) achieved a cash-flow. The percentage of companies that have registered a positive variation of the cash decreased by an average annual rate of 4,97%, while the share of companies that have registered a negative change in cash increased by an average annual rate of 5,23%. The biggest increase, of 12
times, was recorded in 2012-2013 as compared to 2011-2012 of the companies that have obtained a negative change in cash due to a negative working capital and a positive necessary working capital. The evolution of companies, depending on obtaining cash flow is illustrated in figure 4.

![Bar chart showing the evolution of companies according to obtaining cash flow between 2006-2013.]

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 4. Evolution of companies according to obtaining cash-flow

Analyzing how the change in working capital and changes in working capital needs caused variation of cash-flow, there were six cases, presented in table 3.
Table 3.
Structure of companies listed and traded on BSE during 2007-2013, depending on the cash-flow relationship (\(\Delta TN\)), variation of working capital (\(\Delta FR\)) and the variation of necessary working capital (\(\Delta NFR\))

<table>
<thead>
<tr>
<th>Situation</th>
<th>Share of companies, according to the variation in FR; NFR; CF</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR&lt;0, NFR&lt;0, TN&gt;0</td>
<td>11,76% 11,76% 17,65% 9,80% 15,69% 7,84% 9,80% 5,88% 15,69% 7,84% 9,80% 5,88%</td>
</tr>
<tr>
<td>FR&gt;0, NFR&gt;0, TN&gt;0</td>
<td>35,29% 21,57% 27,45% 29,41% 31,37% 23,53% 15,69% 13,73% 15,69% 27,45% 29,41%</td>
</tr>
<tr>
<td>FR&gt;0, NFR&lt;0, TN&gt;0</td>
<td>11,76% 11,76% 15,69% 7,84% 5,88% 7,84% 19,6% 9,80% 8,0% 5,88%</td>
</tr>
<tr>
<td>FR&lt;0, NFR&gt;0, TN&lt;0</td>
<td>7,84% 21,57% 15,69% 13,73% 13,73% 27,45% 27,45% 29,41%</td>
</tr>
<tr>
<td>FR&gt;0, NFR&gt;0, TN&lt;0</td>
<td>17,65% 27,45% 31,37% 19,61% 23,53% 27,45% 21,57% 19,61% 17,65%</td>
</tr>
<tr>
<td>FR&lt;0, NFR&lt;0, TN&lt;0</td>
<td>15,69% 9,80% 0,00% 9,80% 5,88% 1,96% 0,00% 1,96% 11,76%</td>
</tr>
</tbody>
</table>

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Most of the times, the group in which most companies are included gather the criteria \(\Delta FR>0\), \(\Delta NFR>0\), \(\Delta FR>\Delta NFR\), \(\Delta TN>0\), the share of companies in this category varying between 35,29% and 27,45%.

Construction of a scoring model for assessing performance in terms of securing the cash-flow and profit

Since net profit is not simultaneously collected due to accrual
accounting, often leaving an accounting possibility, in the scoring model there was given a higher score to companies that obtained cash flow. Based on these scores, an average score for each company was calculated, as an annual average of the scores awarded. Figure 5 presents the annual scores for assessing the performance in terms of cash-flow-net profit relationship.

Figure 5 Evolution of annual scores for assessing performance in terms of cash-flow-net profit relationship

The annual average score to assess performance in terms of cash-flow-net profit relationship recorded a slightly oscillating trend for the whole period under review, with a decrease to an average annual rate of 5%.

Confirmation of the proposed research hypotheses and objectives allows us to conclude that between 39% and 49% of the companies analyzed obtain financial performance materialized in obtaining a
positive net result in terms of positive change of cash. The financial crisis and ensuing recession have eroded the financial performance of the companies analyzed, and therefore, we do not believe that they will soon reach the levels recorded in 2006.

Chapter III RESEARCH ON FINANCIAL PERFORMANCE ASSESSMENT BASED ON RATES OF RETURN AT THE COMPANIES LISTED AND TRADED ON BSE OPERATING IN INDUSTRY AND CONSTRUCTION DURING 2006-2013 approaches financial performance in terms of economic and financial rates of return, indicators mostly used in performance tests. Analyses performed aim the dynamic evolution of rates of return and to identify the factors which influenced the variation of values of indicators. Factorial analysis was performed by decomposing the rates based on Du Pont equations. For the synthetic assessment of financial performance, a score model was created that allowed the ranking of companies based on rates of return and testing the link between financial performance and duration of the company's presence on the regulated market.

The general hypotheses of the thesis, developed in this chapter are:

Studies are based on the following hypothesis: companies listed and traded on the Bucharest Stock Exchange, operating in industry and construction obtain financial performance, assessed in terms of the Economic rate of return and the Financial rate of return, even if this financial performance declined during the period 2006-2013.

Objectives of the research.

The analysis undertaken aimed to achieve the following objectives:
dynamic analysis of economic rate of return (Rre - ERR) and of the financial rate of return (Rrf - FRR); factorial analysis of the variation of economic rate of return (Rre - ERR) and of the financial rate of return (Rrf - FRR); identifying the link between financial performance assessed on the basis of rates of return and the time when a company has been listed on the regulated market; analysis of the financial performance evolution in terms of rates of return based on a scoring model.

**Economic Rate of Return analysis**

Economic rate of return (Rre) highlights the contribution of property items in obtaining final results of the entity, measuring performance of the company's total assets from an economic result.

**Hypothesis of the research**

Dynamic and factorial analysis of the Economic Rate of Return (Rre) assumes that the companies analyzed are facing a decline in economic performance in terms of the Economic rate of return, due to their reduced ability to obtain net profit.

**Objectives of the research**

The main objective of the research is the dynamic analysis of the financial performance evolution in terms of the Economic Rate of Return (Rre) and identifying the factors that had the strongest influence on the variation of this indicator.

Once these factors are identified, the secondary objectives of the research were to: identify the factor with the greatest influence on the Economic rate of return and identify how each influence factor acts differently in various stages of the economic cycle (crisis, recession, boom).

**Data analysis and presentation of results**
The research outlined that during 2006-2013, there has been a steady decline in the number of companies that registered profit in two consecutive years (each $t_1-t_0$ period), registering an average annual rate of decline in their number 5.43% (figure 6).

![Graph showing the evolution of the number of companies that registered profit](image)

*Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro*

Figura 6. Evolution of the number of companies that registered profit in two consecutive years, during 2006-2013

Ranging these companies depending on the variation (increase or decrease) of the Economic rate of return (Rre) during 2006-2013, was outlined in figure 7.
Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 7 Ranging companies depending on the variation of the Economic rate of return

Of all the companies that have made a profit in both years of successive periods analyzed, the share of companies that have registered increases in economic rate of return was up from 38% in 2006-2007, to 53% in the 2011r-2012, followed by a decrease from 40% in 2012-2013. The companies that have experienced decrease in the economic rate of return have decreased from 61% in 2006-2007 to 46% in the 2011r-2012, followed by a further increase in 2012-2013. Most companies have experienced

**Financial Rate of Return analysis**

Financial rate of return (Rrf) expresses equity ability to create a surplus after remuneration of borrowed capitals that will allow remuneration of shareholders and self-financing of the company, being used to assess the effectiveness of capital investments made by owners and analysis of the opportunity to maintain that investment.

**Hypothesis of the research**

*Dynamic and factorial analysis of the Financial Rate of return (Rrf)* assumes that the companies analyzed are experiencing a decrease in performance in terms of the rate of financial return, due to their reduced ability to obtain net profit and the de-capitalization that they faced after 2007.

**Objectives of the research**

The main objective of the research is the *dynamic analysis of the financial performance evolution in terms of Financial Rate of Return and the identification of factors that have had the strongest influence in the increase of this indicator.*

Secondary objectives aim to: *identify the factor with the greatest influence on the Financial Rate of Return and identify how each influence factor acts differently in various stages of the economic cycle (crisis, recession, boom).*

**Data analysis and presentation of results**
The companies that have registered increases in the rate of financial return (Rrf) was increased from 40,48% to 54,55% in 2006-2007 to 2010-2011, followed by a decrease to 40% in the period 2012-2013. The highest proportion of companies that have registered increases in rate of financial return (57,14%) was recorded in 2009-2010 (figure 8).

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 8 Evolution of companies depending on the variation of the Financial Rate of Return
Construction of a scoring model to assess performance based on rates of return.

Starting from the classic scoring models used by banks for customer creditworthiness analysis, we propose grading them according to the values of the economic rate of return (Rre) and the financial rate of return (Rrf).

Given the points awarded to each company, we calculated an annual average score, as the arithmetic mean of the points obtained by each company in that year, the annual progress of scores concerning the Economic rate of return (Rre) and the Financial rate of return (Rrf) (figure 8).

![Figure 8. Evolution of annual scores on the Economic rate of Return and the Financial Rate of Return](image)

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author.
In the period under review, score values obtained for Financial rate of return (Rrf) are higher than the score values obtained for Economic rate of return (Rre), both scores recording a downward trend, more pronounced in the case of annual score of the Rrf, which is reduced by an average annual rate of 8% and slower in the case of Rre annual score, which decreases by an average annual rate of 4%. Also, for the entire period, the score values calculated for the two indicators are quite distant from the average value of 1.75.

Between the financial performance and development time spent on a regulated market, there could not be identified a link, the correlation coefficient between performance score values assessed on the basis of rates of return and the number of years of trading on the regulated market indicating a weak correlation, of only 8% between the two variables.

Based on the analyzes performed we may conclude that companies traded on BSE in industry and construction have experienced, in the period 2006-2013, a constant depreciation of financial performance from the perspective of rates of return, without being able to identify a post-crisis recovery time.

Chapter IV. RESEARCH ON THE FINANCIAL PERFORMANCE IN TERMS OF THIRD PARTIES AT COMPANIES LISTED AND TRADED ON BUCHAREST STOCK EXCHANGE OPERATING IN INDUSTRY AND CONSTRUCTIONS, DURING 2006-2013 proposes an approach of financial performance in terms of third parties, in particular creditors, being analyzed companies' ability to cope with
outstanding debt. This chapter presents the indicators of liquidity, solvency and indebtedness, based on them being carried out three studies aimed to describe the dynamic and structural analysis of the indicators mentioned above and to rank the companies based on scoring models. Given the lack of homogeneity of the individual values of the indicators mentioned, recorded for each company during the period 2006-2013, liquidity and solvency synthetic indicators were calculated on the basis of aggregate values in the companies analyzed.

**Analysis of the liquidity**

Liquidity ratios measure a company's ability to pay short-term obligations, assessing the amount of “money” available to the entity in the short term, or the next twelve months. This is done by comparing the most liquid assets with short-term debt. Various authors take into account different assets to be included in the calculation of liquidity, taking into account the ease with which they are converted into cash.

**Hypothesis of the research**

*The analysis of liquidity assumes that companies listed and traded on the BSE have significant difficulties in terms of the capacity to cope with debt maturities.*

**Objectives of the research**

The analysis of liquidity is to achieve the following objectives: performance analysis of companies' ability to honor their debts outstanding; structural analysis of the companies grouped by liquidity indicator values; performance analysis dynamics in terms of liquidity indicators; performance analysis in terms of liquidity, based on scores; achieving a hierarchy of companies analyzed in terms of liquidity.
Data analysis and presentation of results

Annual rates of liquidity were calculated based on the cumulative values of current assets, receivables, cash and cash equivalents and current liabilities in the industry and construction companies, listed and traded on the BSE. The results for the three liquidity indicators and their development are shown in figure 9.

![Graph of annual rates of liquidity]

<table>
<thead>
<tr>
<th>Year</th>
<th>Rata anuală a lichidității la curente</th>
<th>Rata anuală a lichidității imediate</th>
<th>Rata anuală a lichidității la vedere</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1.95</td>
<td>1.45</td>
<td>0.69</td>
</tr>
<tr>
<td>2007</td>
<td>1.72</td>
<td>1.18</td>
<td>0.40</td>
</tr>
<tr>
<td>2008</td>
<td>1.48</td>
<td>0.96</td>
<td>0.21</td>
</tr>
<tr>
<td>2009</td>
<td>1.40</td>
<td>0.81</td>
<td>0.21</td>
</tr>
<tr>
<td>2010</td>
<td>1.24</td>
<td>0.82</td>
<td>0.21</td>
</tr>
<tr>
<td>2011</td>
<td>1.19</td>
<td>0.87</td>
<td>0.17</td>
</tr>
<tr>
<td>2011</td>
<td>1.35</td>
<td>1.05</td>
<td>0.09</td>
</tr>
<tr>
<td>2012</td>
<td>1.39</td>
<td>1.03</td>
<td>0.07</td>
</tr>
<tr>
<td>2013</td>
<td>1.47</td>
<td>1.10</td>
<td>0.11</td>
</tr>
</tbody>
</table>

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 9. Evolution of annual rates of liquidity

Annual rates of current and immediate liquidity decrease in the period 2006-2011 and show a slight recovery in 2012-2013, without reaching the pre-crisis level (2006-2007). These oscillating developments of liquidity
indicators were due mainly to changes in the structure and components of current assets values (figure 10).

![Figure 10. The evolution of elements of current assets to total current assets in the period 2006-2013](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>Stocuri (%)</th>
<th>Creanțe (%)</th>
<th>Investiții (%)</th>
<th>Disponibilități (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>25.66%</td>
<td>38.73%</td>
<td>0.35%</td>
<td>35.26%</td>
</tr>
<tr>
<td>2007</td>
<td>31.40%</td>
<td>23.41%</td>
<td>14.12%</td>
<td>14.74%</td>
</tr>
<tr>
<td>2008</td>
<td>35.18%</td>
<td>44.50%</td>
<td>4.04%</td>
<td>14.02%</td>
</tr>
<tr>
<td>2009</td>
<td>34.40%</td>
<td>42.13%</td>
<td>40.52%</td>
<td>14.02%</td>
</tr>
<tr>
<td>2010</td>
<td>33.40%</td>
<td>44.01%</td>
<td>40.52%</td>
<td>14.02%</td>
</tr>
<tr>
<td>2011</td>
<td>27.33%</td>
<td>47.96%</td>
<td>17.14%</td>
<td>7.56%</td>
</tr>
<tr>
<td>2011r</td>
<td>25.87%</td>
<td>47.67%</td>
<td>18.31%</td>
<td>8.15%</td>
</tr>
<tr>
<td>2012</td>
<td>23.60%</td>
<td>46.75%</td>
<td>16.32%</td>
<td>4.83%</td>
</tr>
<tr>
<td>2013</td>
<td>24.88%</td>
<td>31.42%</td>
<td>25.92%</td>
<td>5.77%</td>
</tr>
</tbody>
</table>

**Source:** author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

In 2006-2007, inventories, receivables and availability occupied similar weights in current assets, financial investments being almost nonexistent. Since 2008, there has been a slight increase in the share of debts and a massive increase in the share of financial investments amid sharp drop
in the share of deposits in total current assets.

**Function score for analyzing the evolution of liquidity**

Given the relatively high variation in the indicators of liquidity, and therefore the arithmetic average non-representativeness to follow the dynamics of liquidity, a score model for liquidity ratios was created similar to the scoring model that banks use to analyze the creditworthiness of clients. Annual values of the scores, calculated as the arithmetic mean of the individual values for each company are presented in figure 11.

![Graph showing annual average score for Liquidity Ratios (2006-2013)](image)

*Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro*

Figure 11. Evolution of annual average score, calculated for Liquidity Ratios during 2006-2013

Evolution of the average score is calculated for liquidity ratios oscillating, recording increases in periods 2006-2007 and 2008-2011, respectively decreases, in 2011-2013, the figures for 2013 being similar to those in 2006.

The analyses performed allow us to validate our research
hypotheses: in the period under review, over 80% of the companies analyzed recorded a corresponding level of general liquidity (1 to 2 or more than 2), indicating that most were able to honor their debts due.

**Analysis of solvency**

Solvency reflects the company's capacity to cope with long and medium-term maturities, especially from own resources. Performance analysis from this perspective was based on the economic indicators – net worth solvency ratio (Rsp), general solvency ratio (Rsg) and global financial autonomy ratio (Rafg).

**Hypothesis of the research:**

*The research hypothesis within the solvency analysis is based on the fact that a significant percentage of the number of companies analyzed has difficulties in ensuring an adequate solvency situation, a situation that occurred during and after the financial crisis, due to the increasing number of companies that have had losses, with direct effects on their capitalization.*

**Objectives of the research**

The analysis of solvency is to achieve the following objectives: companies’ performance analysis to face long and medium-term maturities, and how equity contributes to it; structural analysis of companies according to the values of solvency indicators; analysis of performance dynamics in terms of the debt indicators; performance analysis in terms of solvency, based on the scores; achieving the hierarchy of the companies analyzed in terms of solvency.

**Data analysis and presentation of results**

Unlike the values reported for the analysis of liquidity, net worth solvency values are quite homogeneous, which allows the calculation and use
of annual averages, calculated based on individual values. Annual values, shown in figure 12, is above the minimum recommended threshold of 0.5 every year from 2006-2013 analyzed period. Therefore, we may conclude that globally, the companies taken in research did not have any major problems regarding net worth solvency.

![Graph showing annual average net worth solvency](source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on [www.bvb.ro](http://www.bvb.ro))

**Figure 12. Evolution of annual average net worth solvency during 2006-2013**

Similarly to the banks’ models for assessing solvency, a scoring model for companies analysed was created, whose evolution is shown in figure 13. It can be noticed that the highest annual average value was obtained in 2011, despite difficult financial times, marked by a lack of liquidity and accumulation of receivables and payables. All scores recorded an annual average of over 3.5, which is an above average value.
Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author

Figure 13. Evolution of annual average score of solvency assessed based on the Global financial autonomy ratio over the period 2006-2013

The research hypothesis is validated, whereas only 8% and 17.65% of the companies recorded an overall solvency values below the minimum recommended threshold of 1.66; most of them (80%) recorded values above the recommended threshold, being in a comfortable situation in terms of their ability to cope with debt.

Analysis of the degree of indebtedness

Another perspective to approach financial performance in terms of creditors is the company's financial dependence towards third parties, appreciated based on Indebtedness.
Hypothesis of the research.

Given the diminished value of the equity of companies due to losses, financial dependency of companies to third parties is increasing and therefore high values of the degree of indebtedness were recorded.

Objectives of the research

The analysis of the degree of indebtedness is to achieve the following objectives: analyzing the overall performance of companies in terms of evolution of indebtedness; structural analysis of the companies grouped according to the values of indebtedness; performance dynamics analysis in terms of the degree of indebtedness; performance analysis in terms of indebtedness, based on scores; ranking of the companies analyzed in terms of indebtedness.

Data analysis and presentation of results

Starting from the commercial banks’ model of awarding scores for various indicators for assessing the creditworthiness of customers, a model for assessing the performance in terms of financial leverage was created, the values obtained being shown in figure.
Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author.

Figure 14. Evolution of annual average score of the Financial Leverage, calculated according to the score model

All annual average scores recorded a value over 2 (considering the value of 1.90 obtained in 2006 very close to the average level 2) which is an above average value.

Analyses carried out, based on which set objectives have been achieved allow us to conclude that the companies listed and traded on the BSE, which operate in industry and construction record, from the perspective of third parties, a high financial performance, and thus validate the main hypothesis of the research.
Chapter V. RESEARCH ON THE DEVELOPMENT INDICATORS FOR THE EVALUATION OF FINANCIAL PERFORMANCE SPECIFIC TO THE CAPITAL MARKET FOR THE COMPANIES LISTED AND TRADED ON BUCHAREST STOCK EXCHANGE OPERATING IN INDUSTRY AND CONSTRUCTION DURING 2006-2013. For companies listed and traded, financial performance analysis from the perspective of classical indicators must be accompanied by performance analysis in terms of indicators specific to the capital market to capture the external perception of third parties, sometimes marked by subjectivity, on the financial performance of a company.

The analysis of indicators for assessing the financial performance of the capital market has been achieved in theoretical and practical perspective, the main stock indicators being presented, which adds the market perspective to the internal performance indicators. The research from this chapter looks at how companies under review achieve superior performance or a performance below the general level of the BSE and how economic and financial crisis and ensuing recession have affected this performance. Also in this chapter, there was conducted, based on the scoring model, the combination of financial performance analysis from the perspective of third parties, especially of creditors (based on scores achieved in Chapter IV) with the financial performance analysis from the perspective of investors, to get a uniform overview of the performance perceived by potential providers of capital for a company.
Financial performance analysis based on the indicators specific to companies listed and traded on the capital market

To analyze financial performance in terms of specific indicators of companies listed on the stock market there was considered the comparison of individual indicators obtained by the companies analyzed to the indicators calculated on the Bucharest Stock Exchange, published in the annual reports of the stock exchange, available on the website www.bvb.ro.

Hypothesis of the research

This study has as hypothesis of research that the financial performance of the companies analyzed, assessed by investors, has been affected seriously during the financial crisis, the effects being visible even today.

Objectives of the research

In conducting this scientific approach were considered the following objectives: financial performance analysis from the perspective of investors; comparing the performance of each company analyzed, with average performance at the Bucharest Stock Exchange, valued on the basis of specific synthetic indicators, calculated at this level and structuring companies according to obtaining a higher performance level or below the market average; comparing dividend yield with interest rates on the money market; performance analysis based on the most commonly used indicators of capital market by means of the scores and ranking of companies according to their score; combined assessment of financial performance from the perspective of third parties.

Data analysis and presentation of results

At the BSE, the evolution of the main indicators was variable: there
have been increases in total capitalization, which increased by an average annual rate of 8.97% and the dividend yield, which increased by an average annual rate of 18.93% and decreases of PER, which fell by an average annual rate of 8.69% and price/book value ratio (P/BV), which fell by an average annual rate of 13.57%. The developments of main indicators on the BSE are shown in figure 15.

<table>
<thead>
<tr>
<th>Year</th>
<th>P/BV</th>
<th>PER</th>
<th>DIVY</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>2.72</td>
<td>18.03</td>
<td>1.72</td>
</tr>
<tr>
<td>2007</td>
<td>3.03</td>
<td>19.21</td>
<td>2.18</td>
</tr>
<tr>
<td>2008</td>
<td>0.76</td>
<td>4.11</td>
<td>8.57</td>
</tr>
<tr>
<td>2009</td>
<td>1.04</td>
<td>2.81</td>
<td>2.81</td>
</tr>
<tr>
<td>2010</td>
<td>1.08</td>
<td>1.87</td>
<td>1.87</td>
</tr>
<tr>
<td>2011</td>
<td>0.80</td>
<td>8.39</td>
<td>5.46</td>
</tr>
<tr>
<td>2012</td>
<td>0.94</td>
<td>7.64</td>
<td>6.94</td>
</tr>
<tr>
<td>2013</td>
<td>0.98</td>
<td>9.54</td>
<td>5.79</td>
</tr>
</tbody>
</table>

*Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro*

Figure 15. Evolution of P/BV, PER and DIVY at BSE, during 2006-2013
Score function to assess performance, based on specific indicators of the capital market

Given the criteria for assessing the financial performance based on the specific indicators of the capital market, there was developed a hierarchy of companies based on the record of superior performance of the capital market, giving each year, to each company and each indicator, a point if their performance was higher than the market’s and 0 points if the performance was below the market’s. Figure 16 summarizes the annual average scores of Divy, PER and P/BV evolutions and the average annual general performance score.
Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 16. Scores’ evolution regarding the financial performance assessment from the perspective of investors

Meeting the objectives set allows us to partially validate the study hypothesis and conclude that the performance of companies listed and traded on the BSE, which operate in industry and construction and was strongly affected by the crisis. Obtaining better performance by some companies analyzed in 2007-2009, compared to the level of BSE was due to a stronger decrease of the BSE indicators, the market perceiving strongly the impact of the financial crisis. In terms of the evolution of the financial dividend yield evolution, financial performance of the analysed companies registered significant improvements.

Chapter VI. RESEARCH ON FINANCIAL PERFORMANCE ASSESSMENT FROM THE PERSPECTIVE OF SHAREHOLDERS AT THE COMPANIES LISTED AND TRADED ON BSE OPERATING IN INDUSTRY AND CONSTRUCTION DURING 2006-2013. Indicators for assessing the performance from the shareholders’ perspective presented in the previous chapter are considered in the literature as important, quantifying and summarizing performance of a company in terms of capital market. They provide investor’s the first information that helps him form a scientifically based opinion on the company's value, but this can only happen in the context of efficient capital markets in terms of information, based on actual
and relevant financial accounting information.

Along with the above mentioned indicators, the specialised literature suggests the modern analytical indicators of the listed companies’ potential, in their construction starting from the concept of value creation.

Moving from the financial decision making criteria based on accounting income to their foundation based on criteria that envisage the value created for shareholders is a process that many companies operating in the European Community area go through.

The assessment of financial performance in terms of contemporary indicators, built under the optics of value added, was based on empirical research, for each of the indicators: Economic Value Added (EVA) Market Value Added (MVA), cash value added (CVA), Total Shareholder Return (TSR), Return on investment (ROI).

**Hypothesis of the research:**

*Financial performance of companies, in terms of modern indicators regarding the creation of value added is little addressed and we are facing a reduced lack of performance at the analysed companies.*

**Objectives of the research**

In the financial statements, statutory audit reports, management reports and other publications offered to investors in the reporting obligations of companies listed on the stock market in Romania, modern indicators of financial performance are almost nonexistent. They are little or never used in assessing the financial performance of a company listed and traded on the BSE. Therefore, we decided to research the following objectives: *to present and summarize the main theoretical and methodological issues regarding the*
construction of EVA indicators; MVA, ROI, TSR, VLA; a complex evaluation of performance, in terms of modern indicators, built on value added; dynamic analysis of the performance of listed companies from the perspective of modern indicators; identifying the factors that have influenced the performance assessed by the modern indicators; construction of a scoring model for assessing performance based on modern indicators.

**Analysis of Economic Value Added (EVA)**

**Hypothesis of the research:**

The research hypothesis in the analysis of economic value added (EVA) envisages that companies listed capital market do not get a proper economic value added. Not being able to cover the capital cost from the operating result obtained, they consume the shareholders’ capital, even when there is a positive accounting result.

**Objectives of the research**

The research considers the following objectives: to determine the economic value added for each company analyzed and the dynamic analysis of economic value added during 2006-2013; to identify the causes of Economic Value Added developments; financial performance analysis in terms of: Net Profit - economic value added; building a scoring model for assessing the performance in terms of Economic Value Added.

**Data nalysis and presentation of results**

Starting from the assumption that the positive value of Economic Value Added (EVA) indicates wealth creation for shareholders over the remuneration of capital and the negative one shows that the company does not cover the capital cost of the operating result, losing money even when
there is a positive accounting result, in figure 17, we examined the relationship EVA - Net profit for the companies listed and traded on BSE.

![Figure 17. EVA- Net Profit relationship for the companies listed and traded on BSE, during 2006-2013](image)

<table>
<thead>
<tr>
<th>Year</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2011 r</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Profit net pozitiv, VEA negativ</td>
<td>84.31</td>
<td>86.27</td>
<td>76.47</td>
<td>76.47</td>
<td>68.63</td>
<td>64.71</td>
<td>66.67</td>
<td>64.71</td>
<td>60.78</td>
</tr>
<tr>
<td>Profit net si VEA pozitive</td>
<td>1.96</td>
<td>1.96</td>
<td>1.96</td>
<td>1.96</td>
<td>5.88</td>
<td>7.84</td>
<td>0.00</td>
<td>3.92</td>
<td>5.88</td>
</tr>
<tr>
<td>Profit net negativ, VEA pozitiv</td>
<td>0.00</td>
<td>0.00</td>
<td>1.96</td>
<td>1.96</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Profit net negativ si VEA negativ</td>
<td>13.73</td>
<td>11.76</td>
<td>19.61</td>
<td>19.61</td>
<td>25.49</td>
<td>27.45</td>
<td>33.33</td>
<td>31.37</td>
<td>33.33</td>
</tr>
</tbody>
</table>

*Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro*

Considering the four situations that may arise in relation to the net result - EVA, we proposed building a scoring model, giving with each company, every year, scores against positive values or negative values of the
net result – EVA pair. Based on annual values of the scores for each company, we calculated an annual average score, which allowed the assessment of financial performance progress in terms of Net profit - EVA relationship (figure 18).

Since, in most cases, Economic Value Added values are negative, we created a scoring model, based on the increase or decrease of Economic Value Added for each period of 2 consecutive years \((t_1-t_0)\) in the range from 2006 to 2013. Based on the annual values of the scores for each company, we calculated an annual average score, on which we appreciated the evolution of

![Figure 18. EVA-Net Profit relationship for the companies listed and traded on BSE during 2006-2013](source)
financial performance in terms of Economic Value Added growth (Figure 19).

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author.

Figure 19. Evolution of financial performance in terms of EVA growth during 2006-2013

In 2008-2010, although difficult economically speaking, the companies analyzed showed an improvement of Economic Value Added, namely noticing an upward trend. In the period 2011-2012, there is a decrease in the number of cases in which companies manage to increase the economic value added, followed by a significant recovery in 2012-2013. However, given the negative values of Economic Value Added, one can not speak of a performance, but rather of a reduction of inefficiency in terms of performance expressed by this indicator.
Achieving the objectives of the research allowed us to validate the research hypothesis. We may conclude that companies listed and traded on Bucharest Stock Exchange analyzed, do not provide shareholders an appropriate economic value added. In almost all cases, this indicator has negative values, the capital allocated by shareholders being consumed, even when recording a positive accounting result.

Analysis of Market Value Added (MVA)

Hypothesis of the research:

Given the exchange rate developments of companies’ shares at national level during the crisis and post-crisis, the research hypothesis of this study is that the companies under review show a sharp decrease in market value added.

Objectives of the research

For the analysis of Market Value Added – MVA, the following objectives were considered: dynamic analysis of the Market Value Added (MVA); the analysis of causes that generated the dynamics of Market Value Added (MVA) during the analysed period; building a scoring model to assess the evolution of Market Value Added (MVA).

Data analysis and presentation of results

Given the different ways of calculating the Market Value Added MVA, the calculation of an average level of the indicator was proposed, Market Value Added $MVA_m$. Figure 20 presents the group of companies according to obtaining a positive or negative of Market Value Added $MVA_{average}$ in 2006-2013.
Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 20. Companies’ structure according to obtaining a positive value or a negative value of the \( MVA_m \), during 2006-2013

In the period 2006-2013, the share of companies that have registered positive Market Value Added \( MVA_m \) decreased by an average annual rate of
8.55%, while the share of companies that have registered negative Market Value Added $MVA_m$ increased by an average annual rate of 2.57.

In the companies listed and traded on the BSE, which operate in industry and construction, in the period 2006-2013, MVA calculated based on aggregate market capitalization values, equity, capital invested, accounting net asset, registers a downward trend. Since 2009, the MVA values recorded at market level are negative (figure 21).
To assess financial performance in terms of Market Value Added, we developed a scoring model based on achieving positive, respectively negative Market Value Added. Based on the marks awarded to each company, we calculated an average annual score to assess performance in terms of Market Value Added (figure 22).

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author

Figure 22. Evolution of annual average score to assess performance in terms of MVA
Analysing the score’s evolution, it is noted that the best financial performance of the companies surveyed was obtained in 2007, followed by its sharp decline during the financial crisis, in 2007-2010. Although there is a slight recovery of the average value of the indicator in 2011-2013, it is much lower than that recorded in 2006-2007.

The research validates the research hypothesis that the companies analyzed show a sharp decrease in market value added over the period analyzed.

Analysis of Cash Value Added (CVA)

The analysis of financial performance in terms of cash value added (CVA) is similar to the analysis based on economic value added (EVA), but taking into account only cash flow, not the results of the companies.

Hypothesis of research:

The analysis of Cash Value Added (CVA) aims to validate the research hypothesis: companies listed and traded on the Bucharest Stock Exchange do not have an adequate performance, assessed in terms of Cash Value Added.

Objectives of the research:

For the analysis of Cash Value Added (CVA) the following objectives were established: to determine Cash Value Added (CVA) and dynamic analysis of this indicator; factorial analysis of the evolution of Cash Value Added; building a scoring model to assess performance in terms of Cash Value Added.

Data analysis and presentation of results

In the period 2006-2013, most companies recorded negative Cash
Value Added (figure 23).

It can be noticed a slight increase in the share of analysed companies that have obtained a positive Cash Value Added, from 12.24% in 2006 to 31.37% in 2013, with an average annual rate of increase of 14.39%.

To achieve the scoring model for assessing financial performance in terms of Cash Value Added (CVA) two aspects were considered: obtaining a
positive or negative of the Cash Value Added, and the increase or reduction in Cash Value Added. The annual means of the score calculated according to the increase or decrease of Cash Value Added are shown in Figure 24.

Figure 24. Score’s evolution calculated according to the increase or decrease of CVA

The period 2006-2009 was characterized by increased Cash Value Added, followed by the decrease of the indicator’s in the next 2 years. The last 2 years analyzed show a linear trend of the analysed companies’ performance, approached from the perspective of increased Cash Value Added. Considering a maximum scoring value of 1 and hence, an average

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author
value of 0.5, it should be noted that in each period, the average annual values of the score are significantly closer to the average. We may appreciate that throughout the entire period, the companies listed and traded on the BSE, with activity in industry and construction, record performance in terms of increased Cash Value Added.

In Figure 25 there are shown the average annual values for the second scoring model for assessing the performance of companies based on obtaining a positive or negative Cash Value Added.

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro and the scores given by the author

Figure 25. Score’s evolution on the assessing performance according to obtaining a positive or a negative value of the CVA
The upward trend of performance can be noticed, the best values in terms of obtaining a positive value of the Cash Value Added being recorded in 2011-2013.

The study conducted validates the research hypothesis according to which the companies listed and traded on Bucharest Stock Exchange do not have a proper performance, assessed in terms of the Cash Value Added.

Analysis of Total Shareholders Return (TSR)

It is a synthetic indicator which characterizes enterprise’s value creation for its shareholders over a period of time, showing what value investors actually receive.

Hypothesis of the research

The analysis performed is based on the following hypothesis: the performance of companies listed and traded on the BSE, which operate in industry and construction, viewed based on the Total Shareholders Return, has a similar pattern performance synthetically assessed at the level of BSE, based on the specific indicators.

Objectives of the research:

To analyze the Total Shareholders Return (TSR) we considered the following objectives: calculation and dynamic analysis of Total Shareholders Return (TSR); comparison of Total Shareholders Return (TSR) with the main stock indices.

Data analysis and presentation of results

To analyze the correlation between the evolution of the main BSE
indices and Total Shareholders Return evolution in 2007-2013, we calculated the annual average of Total Shareholders Return, as the simple arithmetic average, and whose values and evolution are shown in figure 26.

![Evolution of annual average values of TSR](image)

*Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro*

Figure 26. Evolution of annual average values of TSR

The evolution of the average annual Total Shareholders Return in the companies listed and traded on the BSE, which operate in industry and construction, follows the general evolution of the stock exchange, in the main events in the financial and economic context of the period 2006-2013.

The conclusions presented allow us to consider the research objectives and validate the research hypothesis.

**Analysis of Cash Flow Return on Investment (CFROI)**

An investment adds value to shareholders if the Cash Flow Return on Investment (CFROI) is higher than the opportunity cost of capitals raised to finance that investment.

**Hypothesis of the research:**

The analysis performed is based on the following hypothesis: the
companies studied, financial performance assessed in terms of Cash Flow Return on Investment follows a downward trend.

**The objectives of the research are:** calculation of Cash Flow Return on Investment and dynamic analysis of its developments; factorial analysis of the causes that generated the Cash Flow Return on Investment trend; building a scoring model to determine the financial performance in terms of the Cash Flow Return on Investment.

**Data analysis and presentation of results**

Figure 27 presents the structure of companies, in 2006-2013, grouped according to obtaining a positive or negative Cash Flow Return on Investment.
In 2006, 87.76% of companies achieved a positive Cash Flow Return on Investment, the proportion of those who achieved this performance reducing to only 68.63% in 2013, decreasing by an average annual rate of 3.45%. In 2006, 12.24% of companies obtained a negative Cash Flow Return on Investment, their share has increasing by an average annual rate of 14.39%, reaching in 2013 that 31.37% of the companies analyzed record a negative Cash Flow Return on Investment.

To assess performance based on the Cash Flow Return on Investment,
we proposed building a scoring model based on achieving a positive or negative Cash Flow Return on Investment. Based on the individual scores for each company, we calculated an average annual score performance was calculated, based on the Cash Flow Return on Investment, whose developments are shown in figure 28.

Source: author’s processing, based on information provided by the annual financial statements in the period 2006-2013 of the companies listed and traded on the BSE, which operate in industry and construction, available on www.bvb.ro

Figure 28. Evolution of annual average score to assess performance, according to the Cash Flow Return on Investment

For the entire period, the score of Cash Flow Return on Investment values are above average. However, the downward trend can be observed regarding the performance of the companies analyzed to obtain positive Cash Flow Return on Investment. Since the Cash Flow Return on Investment shows the internal rate of return on investment, and that an investment adds value to shareholders if Cash Flow return on Investment is higher than the
cost of capital raised to finance that investment, declining share of companies that obtain a Return Liquid Investment positive; the decrease of the share of companies that obtain a positive Cash Flow Return on Investment indicates a loss of value for the shareholders of companies analyzed.

**Achieving the research objectives** allowed us to validate the research hypothesis, namely: financial performance of the companies analyzed, assessed on the basis of Cash Flow Return on Investment, records a downward trend during the period analyzed.

Although classical financial analysis carried out on the basis of the results’ account, the rates of return or third parties, generally indicates obtaining an adequate financial performance by 40% of the companies analyzed, financial analysis based on modern indicators contradicts this evidence, showing that regardless of the chosen indicator, financial performance is inadequate, consuming value. However, one should note the tendency to reduce inefficiency, even if we can not consider this as a performance improvement.

The findings of the research conducted, from the perspective of the author's contributions, have led to **the determination of the clear and updated picture of the financial performance** achieved by the companies listed and traded on the BSE, which operate in industry and construction, during 2006-2013, summarized in the final section of Synthesis of Conclusions and Personal Contributions as follows:

**Performance analysis in terms of the indicators calculated based on income statement** aimed the perspective of their ability to make profit in difficult economic context of the period after 2007, coupled with increased
economic demands, which Romanian companies must face, following the accession of Romania to the European Union structures.

The research results indicated that the operating result has a significant contribution to achieving net earnings, the financial and the extraordinary result influenceing the net result in a much smaller proportion. Moreover, it was revealed that the performance of companies to get profit was strongly affected during the crisis, the steady decrease in the number of companies that reported profit for the period under review, being unable to confirm the successful overcome of the negative effects of the crisis and the recession.

For companies listed and traded on the BSE, with activity in industry and construction, there is a moderate degree of sensitivity of net income due to changes in turnover, while the change does not affect the operating result as strons as the change in the net result. Turnover has been identified as the factor to which the net result has the strongest reaction of sensitivity and companies which have a very strong sensitivity, being thus in a position of vulnerability, among which there are Sinteza S.A., Electroaparataj S.A., Mefin S.A. Voestalpine Vae Apcarom S.A. Based on these results, the amplitude of changes of the result by 1% change in turnover was considered moderate, and by 10% for most companies analyzed.

Except for the periods 2007-2008 and 2012-2013, between 39% and 49% of companies manage to achieve a positive net result in terms of positive changes of cash, confirming the fulfillment of performance standards. These companies provide a sound and sustainable growth, net profit exceeding the stage of “accounting opportunities”. However, between 41% and 60% of companies manage to achieve positive cash flow even if
they recorded net loss. In 2007-2008, only 31% of companies have managed to do this, the financial crisis made it that the number of companies that have managed to achieve both performance standards decreased by 17 percentage points from the previous period. The situation is repeated in 2012-2013, while only 27-45% of the companies manage to simultaneously record cash and profit. Many of the companies analyzed (between 25% and 45%) achieved accounting net profit, without duplicating this performance by generating steady cash flow.

The analysis of financial performance on profitability ratios indicated that during 2006-2013 there was a reduction in the number of companies that registered profit (from 42 in 2006-2007 to 30 in 2012-2013).

In 2010-2012, the share of companies that have registered increases in the economic rate of return was lower than the share of companies that have experienced reductions in the rate of economic return. The situation was reversed in 2006-2009 and 2012-2013, when the share of companies that have registered increases in economic rate of return was higher than the share of companies that have experienced reductions in the rate of economic return. In most successive periods, \( t_1-t_0 \), the increase of net profit margin was the factor that positively influenced most companies, leading to increased economic rates of return.

The companies that have registered increases in the rate of financial return (Rrf) increased in 2006-2011, followed by a slight decrease in 2012-2013. In most successive periods of during 2006-2013 and for most companies, the change in net profit margin was the factor that positively influenced the economic rate of return.

Companies listed and traded on BSE operating in industry and
construction have experienced in the period 2006-2013 a constant depreciation of financial performance from the perspective of rates of return, without being able to identify a post-crisis recovery time. Between financial performance and development time spent on a regulated market there could not be identified a link, the correlation coefficient between performance score values assessed on the basis of rates of return and the number of years of trading on the regulated market indicating a weak correlation.

The assessment of financial performance in terms of creditors, based on indicators of liquidity, solvency and indebtededness showed that in the period under review, over 80% of the companies analyzed recorded a corresponding general liquidity level (1 to 2 or more than 2), managing to honour debts outstanding. We can identify some difficulties in the immediate liquidity, only in 2008, when over 50% of the companies analyzed showed a quick ratio of 0.8 below the threshold recommended. With regard to current liquidity, there can be noticed the increase of companies which have registered values of the indicator below the recommended limit, reaching a significant percentage of 76.47% of companies in 2013 to record indicator values below 0.2.

Net worth solvency indicates that during 2006-2013, the analyzed companies are well-capitalized, over 90% of them, with a solvency ratio above 0.5. Just fewer than 8% of companies have solvency difficulties, especially since 2012.

The same situation is encountered for general solvency throughout the period analyzed: the majority (over 80%) record values above the threshold recommended, being in a comfortable situation in terms of their ability to cope with debt. Only 8% to 17.65% of the companies recorded
values below the minimum threshold of 1,66 recommended.

Between 56% and 65% of the companies analyzed, recorded a value of financial leverage below 60% maximum, their share increasing by an average annual rate of 4,59%. Although still high, the proportion of companies that recorded a indebtedness ratio of 60% is decreasing during the analyzed period (from 53,06% in the year 2006 to 35,29% in 2013).

The analysis of financial performance based on specific indicators of the companies listed on the stock market has shown that between 13% and 31% of the companies analyzed obtained higher values of P/BV than BSE level, their highest proportion being recorded in 2008, when 63,41% of companies have achieved this performance situation due to the financial crisis impacts on the overall situation of the stock exchange, which decreased the P/BV at BVB by 75%. Over 70% of companies registered increases of PER in each successive interval of 2 years in the period analysed. Oscillations of companies that had a higher PER than BSE level is due to the increase in PER for each company, especially, the evolution of PER at BSE, which during 2007-2008 decresed by 78%, followed by recovery during 2009-2010.

The companies that have obtained a dividend yield (Divy) higher than dividend yield on the BSE (Divy\textsubscript{BSE}), recorded in the period under review, a significant increase from 3,94% to 34%, even when the Divy\textsubscript{BVB} increased by 236% and an average annual rate of increase of 18,93%.

The annual average level of dividend yield was lower than Divy\textsubscript{BVB} and until 2012 it was lower than the NBR's reference interest level. The poor performance on Divy dividend yield was recorded in 2008, when only 17,5% of companies have achieved a higher dividend yield than the market. Since
2012, the dividend yield calculated at the BSE is higher than the reference interest rate of NBR therefore capital market investments became more attractive than that money market.

**Calculation and dynamic analysis of performance of listed companies in terms of modern indicators** show that only for 18 cases, Economic Value Added recorded positive values which means that companies do not cover the cost of capital by operating result, losing money even when recording a positive accounting result. Although most companies show a negative Cash Value Added, there is an increase in the share of companies that obtain a positive value of the indicator. The impact of the financial crisis was strongly felt in 2008-2009, when the share of companies that have achieved a positive Total Shareholders Return (TSR) decreased significantly. The financial performance of analyzed companies follow, in terms of Total Shareholders Return (TSR), the same trend as the performance at BSE, synthetic assessed on the basis of specific indexes. Financial performance assessed by Cash Flow Return on Investment recorded a downward trend, reflected in increasing the share of companies that have registered a negative Cash Flow Return on Investment.

The financial performance analysis from a double perspective: Net Profit – Economic Value Added shows the fact that most of the analyzed companies (over 60%) recorded net profit in the context of negative Economic Value Added.

The comparison of Total Shareholders Return with the main stock exchange indices of the BSE shows that the performance of companies listed and traded on the BSE, operating in industry and constructions has an evolution similar to the performance assessed synthetically, at the level of
BSE, based on the indexes BET and BET – C, given the economic context of the years 2006-2013.

Therefore, even if traditional financial analysis carried out on the basis of the outturn account, the rates of return or third parties generally indicate obtaining adequate financial performance by 40% of the companies analyzed, the financial analysis based on modern indicators contradicts this evidence showing that, regardless of the chosen indicator, financial performance is inadequate, value consuming. However, one should note the tendency to reduce inefficiencies in the period analysed, even if we can not consider this as a performance improvement.

Since in most cases the individual indicators showed a very high variability, the variation coefficients having values of more than 50%, for synthetic analysis of the development of performance average values could not be used, being unrepresentative. In this context we proposed the construction of scoring models similar to those used by commercial banks in the analysis of customer creditworthiness. Scoring models were built for:

a) ranking the companies depending on their ability to obtain profit and positive cash flows;

b) outlining financial performance, in terms of the values recorded by the financial and economic rates of return;

c) analysing financial performance in terms of third parties, based on rates of liquidity, solvency and degree of indebtedness;

d) ranking companies depending on obtaining a higher performance, and a lower performance than the market level, listed on BSE, in terms of the specific capital market indicators;
e) combined analysis of the financial performance in terms of third parties, especially creditors, with the financial analysis from the perspective of investors to have a unitary image of how performance is perceived by potential suppliers of capital for a company;

f) synthetic approach of financial performance, from the perspective of modern indicators.

The purpose of this thesis results in a ranking of companies listed and traded on the BSE, with activity in industry and construction, guided by the financial performance obtained, presented in annexes, bringing to the attention of investors modern ways of assessing performance.

We consider that theoretical and practical approaches related to performance in general and especially financial performance and related matters helped improve scientific knowledge in the field, through the dissemination of the research’s results (32 articles published, according to the papers list).

Future research directions in analyzing financial performance of listed companies will result in:

- Determining the influences of legislative changes, in particular the application of IFRS and accounting restatements on the financial performance indicators of assessment;

- Financial performance analysis in terms of modern indicators: combined analyses of performance in terms of classic and modern indicators; identifying a new regression model; cause-effect analyses.
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6. Proiecte de cercetare-dezvoltare-inovare: a) obținute prin competiție pe bază de contract/grant în țară / străinătate (Pn-naționale, Pi-internaționale); b) alte lucrări de cercetare-dezvoltare (F1, F2 etc.), după caz.

Proiecte naționale – Pn

asigura forța de muncă cu un nivel de calificare ridicat, competitivă, dinamică și flexibilă. Obiectivele specifice conțin în următoarele: elaborarea de studii de cercetare (Studiu privind evoluția forței de muncă pe piața muncii în Regiunea Centru; Studiu privind nivelul de adaptare pe piața muncii a grupurilor vulnerabile în Regiunea Centru) și organizarea de întâlniri (conferințe, workshop-uri regionale), în vederea adaptării, implementării, dezvoltării PRAO; acordarea de consultanță în dezvoltarea organizațională și în elaborarea de cereri de finanțare în parteneriat; facilitarea comunicării și informării membrilor atât în cadrul Pactului, cât și cu structurile similare din alte regiuni și alte țări, precum și cu AMPOSIRU; formarea și informarea actorilor din Regiunea Centru prin organizarea de cursuri, seminarii, acțiuni de publicitate și diseminare a rezultatelor proiectelor etc. În cadrul acestui proiect am calitatea de expert accesare fonduri structurale și de coeziune europene - expert pe termen scurt, obținută printr-un proces de selecție bazat pe competiție. Desfășor activități specifice de consultanță în elaborarea cererilor de finanțare din fonduri europene cu focalizare POS DRU 2007 – 2013 (Membru), www.stpcentru.ro

față de cultura antrepornorială; implementarea de programe și oferirea de servicii inovative pentru încurajarea antreprenoriatului și consolidarea culturii antrepornoriale; furnizarea de instruire în domeniul administrării afacerilor, în special pentru personalul microîntreprinderilor și IMM-urilor; încurajarea antreprenoriatului prin oferirea de servicii suport pentru start-up-uri. Acest proiect contribuie la promovarea antreprenoriatului în România prin dezvoltarea și aplicarea unui set complex de mijloace și metode (analiză, informare, fomare, promovare, sprijin) pentru dezvoltarea competențelor antrepornoriale și manageriale și promovarea culturii antrepornoriale în randul a cel puțin 450 de persoane din regiunile Sud-Vest, Vest, Centru și Nord-Vest. Particip în cadrul acestui proiect în calitate de expert – activități de tutoriat pentru elaborarea planurilor de afaceri și jurizare în cadrul susținerii finale. În cadrul acestui, am avut calitatea de expert pe termen scurt, tutor Regiunea Centru. Am desfășurat activități administrative și activități specifice de training și consiliere în domeniul antreprenoriatului adresate persoanelor dornice să înființeze afaceri sau să deruleze activități independente, angajaților și managerilor din companii; sprijin în elaborarea planurilor de afaceri, implicându-mă în special în modulele de planificare financiară și contabilitate. (Membru)

Lucrări în curs de apariție:
