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Faculty of Engineering Economics and Management

Institute of Production and Entrepreneurship

Department of Finance

Jūlija BISTROVA
(Doctoral Student Identity Card No. 021RIV046)

ACHIEVING SHAREHOLDER VALUE SUSTAINABILITY ON CENTRAL AND EASTERN EUROPEAN EQUITY MARKETS

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The Doctoral Dissertation has been developed at the Department of Finance of the Faculty of Engineering Economics and Management, Riga Technical University (RTU). To be granted the scientific degree of Doctor of Economics, the present Doctoral Dissertation has been submitted for the defense at the open meeting of RTU Promotion Council "RTU P-09" at 14:00 on 27 May, 2014, at the Faculty of Engineering Economics and Management, RTU, Riga, 6 Kalnciema Street, Room 309.

OFFICIAL REVIEWERS

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DECLARATION OF ACADEMIC INTEGRITY

I hereby declare that the Doctoral Dissertation submitted for the review to Riga Technical University for the promotion to the scientific degree of Doctor of Economics, is my own and does not contain any unacknowledged material from any source. I confirm that this Dissertation has not been submitted to any other university for the promotion to other scientific degree.

Julija Bistrova   ………………………….

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The Doctoral Dissertation has been written in English. The Doctoral Dissertation comprises an introduction, five chapters, conclusions and proposals, and bibliography with 253 reference sources; it has been illustrated by 77 figures, 56 tables, and 23 formulae. The volume of the present Dissertation is 203 pages, not including 20 appendices.

The Doctoral Dissertation and Summary are available at the Scientific Library of Riga Technical University, Kipsalas Street 10.

To submit reviews please contact the Secretary of the RTU Promotion Council "P-09" professor, Dr. oec. professor Kārlis Ketners, 6 Kalnciema Street, Riga, LV-1048, Latvia. E-mail: Karlis.Ketners@rtu.lv, Fax: +37167089490, Tel.: +37167089324.

GENERAL DESCRIPTION OF THE RESEARCH

Academics and practitioners came to the conclusion that the ultimate goal of a corporation should not be the satisfaction of the stakeholder interests, but rather shareholder value maximization (Thompson, 2009). However, recently the dogmatic theory that the primary goal of the company should be maximization of shareholder wealth faced strong criticism. The highest credit is given to the agency problem, when the managers are engaged in the short-term thinking and often demonstrate unethical behavior in order to achieve company's maximum market capitalization, disregarding its long-term goals. The negative views of the short-termism were triggered by the corporate scandals in 2000s in the USA and Europe, the financial crisis of 2008 and 2009, and detection of frauds at the Chinese companies by the *Muddy Waters* company (2011). Management of the companies evidently pressed by a number of factors, such as bonuses and financial result expectations, adopt the short-term view to increase company valuation, while neglecting the necessity of the shareholder value maximization in the long run.

The risk that the management would employ short-term approach is evidently higher in the emerging markets, where the information disclosure is weaker compared to the developed markets, which provokes significant information asymmetry and poses greater risk for the investors. Besides, the financial market culture is still underdeveloped in the emerging markets and the management of the listed companies often does not understand the purpose of investor relations. Therefore, local stock exchanges attempt to educate local community on this issue and set up various awards stimulating better investor relations (e.g. Nasdaq OMX Baltic Market Awards). And although recently the quality of the investor relations has significantly improved, the risk of the unethical behavior and, thus, a major loss in share value is still present.

This risk is being reinforced by the absence of the stable local investment community due to the lack of financial resources and the relevant education, and that exposes the companies in the emerging markets to greater losses in the crises times, as foreign investors making a remarkable part of the total investment capital withdraw their funds and cause large cash outflows from the emerging markets. For instance, during the recent financial crisis in 2007-2009 (September 2007 - March 2009) the developed market stock indices lost ca. 40-50% (US index S&P 500 -52.5%, UK index FTSE 100 -41.1%, German Index DAX 30 -51.5%), while the emerging markets were in free fall, losing 60-70% (Baltic index NASDAQ OMX −75.0%, Russian index RTS -73.4%, Chinese index SSE Composite -63.4%).

The issue of shareholder value sustainability is very topical nowadays in the emerging markets context both for the long-term shareholders and the firm's internal stakeholders (management, employees), who should make their utmost effort for the company to prosper and generate maximum value in the long run. The duality of the value sustainability problem is that the shareholders should have enough knowledge, financial and time capacity to identify the companies, which are able to create maximum value in the long term, while the management of the company knowing what the value drivers are should prioritize their action strategy in accordance with these drivers to satisfy the need of the shareholders for the long-term value.

Researching the shareholder value sustainability and its influencing factors within the Central and Eastern European (CEE) stock markets, the author of the Doctoral Thesis provides the answers to the following questions:

- What is shareholder value sustainability?
- What are the main factors influencing shareholder value? What are the tools to increase shareholder value for the CEE equity market investors?
- What elements of the corporate governance structure stimulate value generation the most?

The primary goal of the Doctoral Thesis is to **develop the shareholder value sustainability model, which would allow investors to achieve the maximum return on the invested capital in the long term and provide recommendations on the corporate value management.** The research and the model developed are based on the sample of Central and Eastern European quoted companies.

To achieve the goal of the Doctoral Thesis, the following objectives are set:

1. To discover the factors influencing the long-term concept of the shareholder value.
2. To conduct research on the current CEE equity markets; to determine the problems and opportunities provided by the developing stock markets.
3. To analyze and verify the influence of the factors affecting shareholder value sustainability.
4. To evaluate shareholder value sustainability factors, to verify stability of their influence.
5. To develop the shareholder value sustainability model, based on the combinations of the factors, and approbate it within the CEE equity markets.

The Object, Subject and Limitations of the Research

The Object of the Doctoral Thesis is the largest companies quoted on the Central and Eastern European stock exchanges.

The Subject of the Doctoral Thesis is the factors affecting shareholder value sustainability.

Research Limitations and Constraints. The sample is limited by the quoted CEE companies, which were the components of the local stock exchanges main lists in the financial year 2010. The static sample composition was considered in order to avoid the survivorship bias. The sample list includes 116 companies, the components of the main indices of the CEE stock exchanges located in Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, and the three Baltic States: Estonia, Latvia and Lithuania. The trading data was collected for the period from January 2005 to December 2012, and the financial data – for the period from 2004 to 2012. Factors connected with social responsibility of the company (commitment towards community, environment, etc.) were not considered due to the focus on the fundamental analysis made in the Thesis. Macroeconomic and industry factors were excluded from the analytical scope as the focus of the dissertation is the company and the factors related to its financial health. The qualitative analysis of the business model, which involves the assessment of the company's development strategy and competitive advantage, as well as the capital expenditure strategy were not considered due to the time and volume constraints. Interviews about the factors affecting shareholder value sustainability were conducted among the CEE institutional investors.

Theoretical and Methodological Framework of the Doctoral Thesis

The Thesis is based on the theoretical and practical findings of the world leading authors and scientists (*P. Vernimmen, F. Fabozzi, G. Arnold, T. Koller, A. Damodaran, P. Rose, T. Copeland, J. Collins, J. Welch, M. H. Miller, F. Modigliani, E. F. Fama, K. R. French, S. Myers, M. C. Jensen, H. DeAngelo, S. Bhagat, P. Gompers, B. Hermalin, J. Mahedy, F. Degeorge, P. Dehow, R. Sloan, H. Schilitt)* in the field of the shareholder value assessment and management.

Various sources of information were used to obtain large amount of data: the web-sites and annual reports of the CEE quoted companies, the statistics provided by the local stock exchanges of the CEE countries, information published in the financial portals such as

yahoo.finance, Bloomberg and *google.finance* as well as databases provided by the *Worldbank, FESE, FKTK*.

To conduct the research within the scope of the Doctoral Thesis, qualitative and quantitative methods were used: scientific literature analysis, qualitative content analysis, benchmarking, average and relative ratio analysis, interviews, graphical analysis, quartile analysis, qualitative data processing with the help of text analysis software AQUAD 6.0, TextStat and HAMLET II, correlation, simultaneous concurrent triangulation, linear regression analysis with the help of statistical software SPSS 20.0. To determine the shareholder value drivers, parallel-mixed research method was used.

Main Contributions and Scientific Novelty

1. Based on the financial and management concepts, interviews with the industry professionals, and the previous scientific research conducted in the developed and developing countries, the model defining the factors influencing shareholder value sustainability has been proposed.

2. The value added of the financial analysis in the CEE equity markets when applied to the stock portfolio building process has been defined.

3. Research of the capital management principles in the CEE companies has been conducted and the proposal on the optimal capital policies to sustain the long-term development has been made.

4. Corporate governance assessment model suitable for the CEE quoted companies has been developed and approbated.

5. Earnings quality methodology to assess the plausibility of financial results of the CEE companies has been developed and approbated, and the recommendations for investors and stock exchanges have been worked out.

6. The ownership type classification to determine under which investor type control the company is able to generate maximum shareholder value has been developed.

7. Shareholder value sustainability model based on the factor combination, which proposes the methodology of the stock selection into the equity portfolio to achieve sustainable performance alpha at the lowered risk, has been developed.

Hypothesis and Thesis Statements to be defended

Hypothesis: Sustainability of the shareholder value in the CEE financial markets is based on the high quality corporate governance, rational capital management policy, plausibility of financial results and high profitability combined with good cash flow generation ability.

Theses:

1. Shareholder value sustainability being the ultimate goal of the company is related to the achievement of the above average long-term return by investors.

2. Risk-return characteristics of the CEE equity markets are more attractive than those of the developed markets, while the commonly accepted portfolio theories in the developed markets do not work completely or partially in the emerging CEE stock markets.

3. Generally accepted fundamental factors in the developed markets combined with the emerging fundamental factors determine sustainability of the CEE equity markets.

The Approbation and Practical Application of Research Results

The research results were discussed at the conferences in Latvia, Croatia, Lithuania, Italy, USA, Estonia, and the Czech Republic, and were further reflected in the relevant scientific publications. They are used within the course curricula at Riga Technical University. They have also been used within the fundamental and applied project Nr. 394/2012 "Enhancing Latvian Citizens' Sustainability through Development of the Financial Literacy".

The research results can be applied in the field of financial market investment and enterprise value management: a) the developed shareholder value sustainability model can be used in the investment process when building equity portfolio within the CEE equity market; b) the recommendations to evaluate quality factors can be used by the CEE investors to improve the stock selection process and by the executives of CEE companies to increase enterprise investment attractiveness; c) corporate governance quality assessment model can be used for evaluation of the quality of the corporate governance of emerging market companies; d) the approbated earnings quality assessment method can be used for evaluation of the quoted companies and the companies preparing for an initial public offering (IPO); e) capital management policy research and the developed recommendations can be used by the CEE company management to increase its market value.

Scientific Publications

The results of the research have been reflected in 32 published articles, among which 21 were published in the **established peer-reviewed scientific issues**:

1. Grigorjeva, J. & Lace, N. (2008). Evaluation of impact of financial result plausibility of Baltic State companies on equity performance. *Economics and Management - 2008*, Lithuania, Kaunas, 115-120.
2. Lace, N. & Grigorjeva, J. (2008). The Liquidity Crunch Impact on Stock Selection: Case from Baltic Equity Market. *The 12th World Multi-Conference on Systemics, Cybernetics and Informatics*, USA, Orlando, 50-54.
3. Bistrova, J. & Lace, N. (2009). Relevance of fundamental analysis on the Baltic equity market. *Journal of Economics and Management, 14,* 132-137.
4. Lace, N. & Bistrova, J. (2009). Capital management during liquidity crunch: Baltic States in the context of CEE equity markets. *8th International Conference Challenges of Europe Proceedings*, Croatia, Split-Bol, 145 – 156.
5. Bistrova, J. & Lace, N. (2010). Ownership Structure in CEE Companies and its Influence on Stock Performance. *Journal of Economics and Management, 15,* 880-886.
6. Bistrova, J. & Lace, N. (2010). Created Value of Fundamental Analysis During Pre and Post Crisis Period on the Baltic Equity Market. *RTU zinātniskie raksti, Ekonomika un uzņēmējdarbība, 3(20)*, 26-32.
7. Bistrova, J. & Lace, N. (2011). Corporate Financial Strength Sustainability Post PO: Evidence from Baltic Equity Market. *Journal of Economics and Management, 16,* 1082-1088.
8. Bistrova, J. & Lace, N. (2011). Evaluation of Corporate Governance Influence on Stock Performance of CEE Companies. *The 15th World Multi-Conference on Systemics, Cybernetics and Informatics Proceedings, 1,* USA, Orlando, 59-64.
9. Bistrova, J. & Lace, N. (2011). The Model of Sustainable Shareholder Value. *Proceedings of the 17th International Business Information Management Association Conference*, Italy, Milano, 1305.-1315.
10. Bistrova, J., Lace, N. & Peleckienė, V. (2011). The Influence of Capital Structure on Baltic Corporate Performance. *Journal of Business Economics and Management, 12(4),* 655.-669.
11. Bistrova, J. & Lace, N. (2012). Quality of Corporate Governance System and Quality of Reported Earnings: Evidence from CEE Equity Market. *Economics and Management, No.17(1),* 55-61.
12. Bistrova, J. & Lace, N. (2012). Corporate governance influence on firms' financial performance in CEE countries. *The 7th International Scientific Conference Business and Management,* Lithuania, Vilnius, 11-16.
13. Bistrova, J. & Lace, N. (2012). Kompromiss starp investora īstermiņa un ilgtermiņa mērķiem. *RTU zinātniskie raksti, Ekonomika un uzņēmējdarbība, 3(22)*, 23-29.
14. Bistrova, J. & Lace, N. (2012). Defining Key Factors to Sustain Maximum Shareholder Value. *Journal of Financial Studies & Research*, 1-14.
15. Bistrova, J. & Lace N. (2012). Corporate Governance Best Practice and Stock Performance: Case of CEE Companies. *Journal on Systemics, Cybernetics and Informatics, 3(10)*, 63-69.
16. Kozlovskis, K., Lace, N., Bistrova, J. & Titko, J. (2012). Two-Period-Ahead Forecasting For Investment Management In The Foreign Exchange. *The 16th World Multi-Conference on Systemics, Cybernetics and Informatics Proceedings*, USA, Orlando, 38-43.

17. Bistrova, J. & Lace, N. (2012). Dividend Policy Determinants in CEE Countries. *Contemporary Issues in Business, Management and Education*, Lithuania, Vilnius, 69-78.
18. Bistrova, J. & Lace, N. (2012). Dividend Stability and Sustainability in CEE Region. *Proceedings of the 2nd World Sustainability Forum, Sciforum Electronic Conferences Series*, 8 pages.
19. Bistrova, J. & Lace, N. (2013). The Role of Dividends for Achieving Shareholder Value Sustainability: Case of CEE Countries. *International Conference on Management Innovation and Business Innovation, Singapore*, 64-70.
20. Bistrova, J., Lace, N. & Titko, J. (2013). CEE Companies: Economic vs. Market Performance. *The 17th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2013,* USA, Orlando, 1-6.
21. Lace, N., Bistrova, J. & Kozlovskis K. (2013). Ownership Type Influence on Dividend Payments in CEE Countries. *Business: Theory and Practice Journal, 14(3),* 259-266.

Other publications:
1. Grigorjeva, J. & Lace, N. (2008). Evaluation of impact of financial result plausibility of Baltic State companies on equity performance. *The 13th International Scientific Conference: Economics and Management 2008*, Kaunas, 10 – 11 April, 58-59.
2. Bistrova, J. & Lace, N. (2009). Relevance of fundamental analysis on the Baltic equity market. *The 14th International Scientific Conference: Economics and Management 2009*, Kaunas, 23 – 24 April, 46.
3. Bistrova, J. & Lace, N. (2010). Ownership Structure in CEE Companies and its Influence on Stock Performance. *The 15th International Scientific Conference: Economics and Management 2010*, Riga, 22-23 April, 61- 62.
4. Bistrova, J. & Lace, N. (2010). Created Value of Fundamental Analysis During Pre and Post Crisis Period on the Baltic Equity Market. *The 51th International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2010)*, Riga, October 15, 18-19.
5. Bistrova, J. & Lace, N. (2011). Corporate Financial Strength Sustainability Post PO: Evidence from Baltic Equity Market. *The 16th International Scientific Conference Economics and Management-2011*, Brno, April 27-29, 352 – 353.
6. Bistrova, J. & Lace, N. (2011). Korporatīvās pārvaldības ietekme uz akciju ienesīgumu. *52. RTU Studentu zinātniskās un tehniskās konferences materiāli*, Riga, 1.-30. aprīlis, 72.
7. Bistrova, J. & Lace, N. (2011). Trade-off between Investor's Short- and Long-term Goals. *The 52nd International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2011)*, Riga, October 7, 27-28.
8. Bistrova, J. & Lace, N. (2012). Quality of Corporate Governance System and Quality of Reported Earnings: Evidence from CEE Equity Market. *The 17th International Scientific Conference Economics and Management-2012*, Tallinn, March 28-30, 27-28.
9. Bistrova, J. & Lace, N. (2012). Kvalitatīvas korporatīvās pārvaldības ietekme uz uzņēmuma finanšu rezultātiem. *53. studentu zinātniskā un tehniskā konference*, Riga, April 20, 50.
10. Bistrova, J. & Lace, N. (2012). Dividend Payment Behaviour in CEE Countries. *The 53rd International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2012),* Riga, October 11-12, 521.

11. Bistrova, J., Lace, N. & Titko, J. (2013). Sustainable Shareholder Value: Analysis of Value Drivers. *International Conference on Economics and Management 2013*, Brno, April 24-26, 167-168.

The results of the research have been presented at the following **international scientific conferences**:

1. The 13th International Scientific Conference: Economics and Management 2008, Kaunas, Lithuania, April 10-11, 2008. Report: *Evaluation of impact of financial result plausibility of Baltic State companies on equity performance.*
2. The 12th World Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, USA, June 29-July 2, 2008. Report: *The Liquidity Crunch Impact on Stock Selection: Case from Baltic Equity Market.*
3. The 14th International Scientific Conference: Economics and Management 2009, Kaunas, Lithuania, April 23-24, 2009. Report: *Relevance of fundamental analysis on the Baltic equity market.*
4. Challenges of Europe: Financial Crisis and Climate Change, 8th International Conference, Split-Bol, Croatia, May 21-23, 2009. Report: *Capital management during liquidity crunch: Baltic States in the context of CEE equity markets.*
5. The 15th International Scientific Conference: Economics and Management 2010, Riga, Latvia, April 22-23, 2010. Report: *Ownership Structure in CEE Companies and its Influence on Stock Performance.*
6. The 51th International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2010), Riga, Latvia, October 15, 2010. Report: *Created Value of Fundamental Analysis During Pre and Post Crisis Period on the Baltic Equity Market.*
7. The 16th International Scientific Conference: Economics and Management 2011, Brno, Czech Republic, April 27-29, 2011. Report: *Corporate Financial Strength Sustainability Post PO: Evidence from Baltic Equity Market.*
8. The 15th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2011, Orlando, USA, July 19-22, 2011. Report: *Evaluation of Corporate Governance Influence on Stock Performance of CEE Companies.*
9. The 52nd International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2011), Riga, Latvia, October 7, 2011. Report: *Trade-off between Investor's Short- and Long-term Goals.*
10. The 17th international conference "IBIMA 2011: Creating Global Competitive Economies: A 360-degree Approach", Milano, Italy, November 14-15. Report: *The Model of Sustainable Shareholder Value.*
11. The 17th International Scientific Conference: Economics and Management 2012, Tallinn, Estonia, March 28-30, 2012. Report: *Quality of Corporate Governance System and Quality of Reported Earnings: Evidence from CEE Equity Market.*
12. The 7th International Scientific Conference: Business and Management 2012, Vilnius, Lithuania, May 10-11, 2012. Report: *Corporate governance influence on firms' financial performance in CEE countries.*
13. The 53rd International Scientific Conference of Riga Technical University: RTU FEEM Scientific Conference on Economics and Entrepreneurship (SCEE'2012), Riga, Latvia, October 11-12, 2012. Report: *Dividend Payment Behaviour in CEE Countries.*

14. The 2nd World Sustainability Forum, November 1-30, 2012, Online. Report: *Dividend Stability and Sustainability in CEE Region.*
15. Contemporary Issues in Business, Management and Education'2012, November 15, 2012, Vilnius, Lithuania. Report: *Dividend Policy Determinants in CEE Countries.*
16. The 18th International Scientific Conference: Economics and Management 2013, Kaunas, Lithuania, April 24-26, 2013. Report: *Sustainable Shareholder Value: Analysis of Value Drivers.*
17. 2013 International Conference on Management Innovation and Business Innovation (ICMIBI 2013), Singapore, April 21-22, 2013. Report: *The Role of Dividends for Achieving Shareholder Value Sustainability: Case of CEE Countries.*
18. The 17th World Multi-Conference on Systemics, Cybernetics and Informatics: WMSCI 2013, Orlando, USA, July 9-12, 2013. Report: *CEE Companies: Economic vs. Market Performance.*

Content

The first chapter **"Development of Shareholder Value Sustainability Concept"** is devoted to the analysis of the concept of shareholder value sustainability and its determining factors. The author explains the term *shareholder value sustainability*, provides an insight into the theoretical 'long-term' approach, and discusses shareholder and stakeholder theories reviewing scientific literature. Based on the results of the qualitative and quantitative content analysis as well as the interviews with the market professionals, the author defines the major factors influencing shareholder value sustainability and proposes the model to achieve the sustainable shareholder value.

In the second chapter **"Properties and Problems of Central and Eastern European Equity Markets"** the problem of shareholder value sustainability in the emerging CEE markets is described and analyzed. Risk and return relation of the CEE emerging market is contrasted to risk and return relationship in the developed markets. The situation of consistently growing shareholder value seems to be hardly achievable whether it is a newly quoted company or a company, which started its quotation since the privatization era. The author of the Doctoral Thesis analyzes corporate long-term performance both in terms of its financial soundness and share value and determines the main reasons of the major setbacks of the CEE companies.

In the third chapter **"Determinants of the Sustainable Shareholder Value Generally Accepted in the Developed Markets"** the author presents the research results on the capital management policies (capital structure and dividend policy), which are pursued by the management of CEE companies. The results of the empirical research determine the influence of the capital structure on the long-term market and economic value creation.

The fourth chapter **"Emerging Determinants of the Sustainable Shareholder Value"** is dedicated to the research of the emerging factors, which promote sustainable value generation, corporate governance and earnings quality. Corporate governance quality assessment model is developed and proposed for evaluating corporate governance in the emerging markets. The author also pays attention to the corporate ethics, the major conveyance of which is the earnings management and financial result plausibility – crucial factors for the long-term equity investments. An efficient method to evaluate earnings of the CEE enterprises is suggested by the author and tested with regard to its influence on the equity performance stability. Besides, particular attention is paid to the corporate ownership type as the value adding element for achieving sustainable performance.

The fifth chapter **"Building and Approbation of Shareholder Value Sustainability Model within Central and Eastern European Equity Stock Markets"** reflects the approbation of the proposed shareholder value sustainability model. The author develops shareholder value sustainability models, according to which the CEE investors are likely to reach consistent market outperformance having lowered risk profile of the built stock portfolio. The proposed stock selection methodology is developed for three equity markets: pan-CEE equity market, Baltic equity market and for the most liquid equity market in CEE, composed of Hungarian, Czech and Polish stock markets.

In the final part of the dissertation the most important **conclusions and proposals** developed during the research work are summarized.

The research tasks set within the Doctoral Thesis have been completed and the goal has been achieved.

The Doctoral Thesis has been developed at the Department of Finance, Institute of Production and Entrepreneurship of the Faculty of Engineering Economics and Management, Riga Technical University, according to the requirements defined in the Law „On Scientific Activity" as of 5 May, 2005, in compliance with the Regulations of the Cabinet of Ministers No. 1001 as of 27 December, 2005, the requirements of the Latvian Council of Science and Regulations on Doctoral Studies of Riga Technical University as of 29 June, 2009. The Doctoral Thesis has been elaborated with the support of the European Social Fund within the project «Support for the Implementation of Doctoral Studies at Riga Technical University».

MAIN RESEARCH RESULTS

1. DEVELOPMENT OF SHAREHOLDER VALUE SUSTAINABILITY CONCEPT

The chapter consists of 31 pages and comprises 6 tables and 12 figures.

Shareholder value creation is viewed by many prominent economists (A. Smith, J. Knight, J. Shumpeter, M. Jensen, W. Meckling, E. Fama) as the main goal of the company. It has been stated that the firm should not bother about the social and philanthropic activities and that the management should act in the best interests of the shareowners to minimize principal-agent problem. To avoid the short-termism view of the shareholder value creation, the theoreticians and practitioners in the field of finance (Helfert, 2003; Jensen, 2001; Olsen et al., 2009; Danielson et al., 2008; Titko&Lace, 2011) assert that the long-term shareholder value maximization should be an integral goal of any company, which leads to the compromise between the complimentary in this case shareholder and stakeholder theories.

Stakeholder theory proponents argue that the company will be able to generate more value if the interests of all parties involved (e.g. customers, employees, communities, government, suppliers) are satisfied, not just the shareholders. The firms face the trade-off of self-interest and altruism (Pfaffer, 2010) and the highest value is only possible to be achieved in the win-win situation. Recently developed "stewardship theory" (Davis, 1997) and "social capital theory" (Ghoshal, 2005) oppose the traditional agency theory and claim that human beings may put the interests of others above their own interests and there is a possibility for cooperation between the owners and the employees to make both parties well-off.

Modern economists (Collins, 2001; Danielson & Press, 2006) by conducting empirical studies prove that the efficient strategy of the long-term corporate successful operations is to bring the two views together: "that the more shareholder value a company creates in an effectively regulated market, the better the company serves all its stakeholders" (Dobbs, 2005).

Bringing the shareholder and stakeholders view together to define the ultimate corporate goal appears to be a plausible approach to the enterprise management. Figure 1 provides a view of the author's opinion on the primary company goal, where the author locates the stakeholder theory under the umbrella of the shareholder view to avoid short-termism approach of the company management.

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┌─────────────────────────────────────────────────┐  ┌──────────┐  ┌─────────────────┐
│ Shareholder Theory                              │  │          │  │ Value           │
│  ┌───────────────────────────────────────────┐  │  │          │  │ sustainability  │
│  │         Economic factors                  │  │  │          │  │ and             │
│  │ (profitability, cash flow generation,     │  │ Long-term   │ maximization:   │
│  │  dividends), based on the quality of      │  │ shareholder │ a)    Economic  │
│  │  customer capital                         │  │ value       │ return    above │
│  └───────────────────────────────────────────┘  │ creation    │ cost of capital;│
│                    +                            │  │          │  │ b) Consistent   │
│  ┌───────────────────────────────────────────┐  │  │          │  │ value growth.   │
│  │   Social and Environmental factors        │  │  │          │  │                 │
│  │          Stakeholder Theory               │  │  │          │  │                 │
│  └───────────────────────────────────────────┘  │  │          │  │                 │
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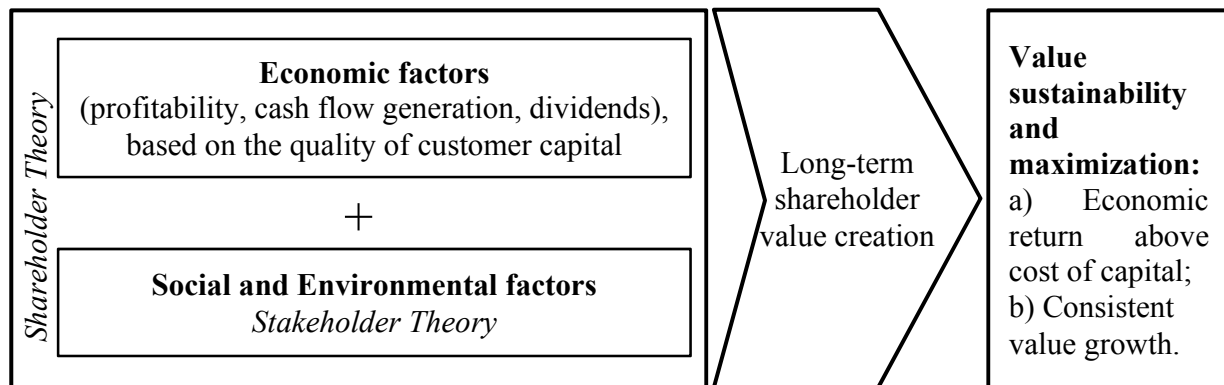
Figure 1. Shareholder Value Theoretical Concept.

Generation of sustainable and growing profits would primarily benefit the shareholder but also all other interested parties. Therefore, the ultimate goal of the company should be shareholder value generation, which can be measured by the TSR (Total Shareholder Return), EVA (Economic Value Added), ROCE (Return on Capital Employed), CFROI (Cash Flow Return on Investments) etc. and which should be supported by the value creation to the stakeholder. Within the scope of the Thesis the measurement of the sustainable shareholder value creation was defined as follows: *delivering above-average returns over the relatively long period of time at the reduced volatility, avoiding the situations of the major setbacks* (which may occur due to the firm's unethical behavior, for instance).

The rigorousness of the CEE companies regarding the shareholder value and its sustainable delivery set in the mission statement was verified by checking the mission statements of 116 companies listed in the Central and Eastern European countries. Content analysis of the companies' mission statements, conducted with the help of *TextStat* software, shows that only a third mentions their commitment to the shareholders. This phenomenon possibly can be explained by the high ownership concentration in this region. To compare, the frequency of mentioning 'shareholder' in the CEE region greatly differs from the corresponding frequency in the developed markets: Canada – 64%, USA – 38%, Sweden – 52% of the analyzed companies (Jorg, et al., 2004). Over the half of the companies seem to be strongly dedicated to the customers to deliver better product quality. The companies, as analysis revealed, overall do care about their stakeholders and employees in particular. Significant number of companies speaks about their leadership goals and high positions in their market niches. Profit is also mentioned relatively often in the mission statement, while the ethical side appears to be neglected.

Relatively much attention is enjoyed by concepts related to the sustainability and long-term, which proves the longevity of the corporate intentions. Putting the findings of the analysis into the context with the stock performance indicates that shareholder value commitment encourages the companies to deliver higher value, which is reflected in the above average performance results. The companies, which are able to deliver highest performance, are also focused on the profitability, which is often considered to be one of the major determinants of the shareholder value level.

To be able to achieve shareholder value sustainability on the financial markets, the investors have to know the influencing factors. The corporate managers aiming to deliver long-term shareholder value and, therefore, increase the market value of the company have to be knowledgeable about the success factors as well. Figure 2 discloses parallel-mixed research designed to determine the factors influencing shareholder value sustainability.

Content Analysis of Shareholder Value Sustainability Influencing Factors
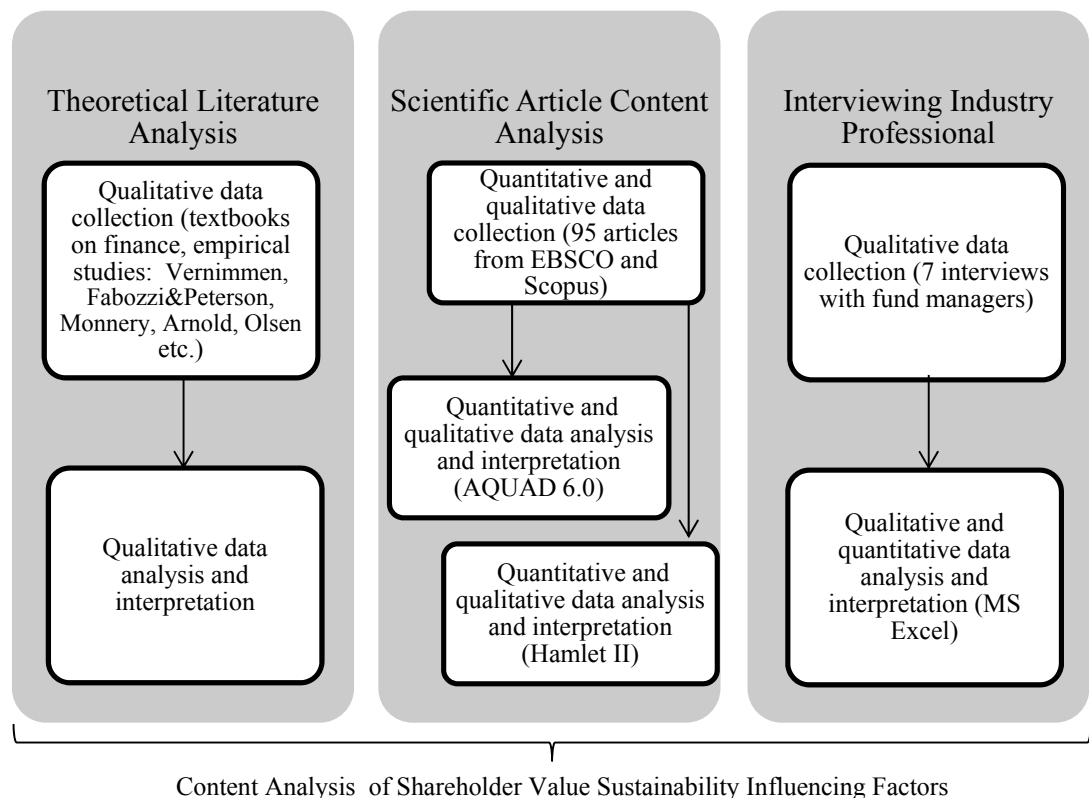
Figure 2. Factors Influencing Shareholder Value Sustainability - parallel-mixed research (Concurrent Triangulation).

The first stage of the research was dedicated to the thorough analysis of the scientific literature on finance by extracting those aspects, which have a significant influence on shareholder value creation, according to the leading financial practitioners and theoreticians.

The second stage of the research dealt with the content analysis of the scientific articles on the sustainable shareholder value. In total, the conclusions of the 95 published scientific papers from Scopus, EBSCO and other databases were collected (complete list in Appendix C). Publishing period covers 40 years (1972-2012). Data processing was done with the help of the text statistical software programs AQUAD 6.0 and Hamlet II 3.0. Using the software AQUAD for data processing, the procedures of both classical and the interpretative content analysis were applied. To support the evidence provided by the AQUAD software the author confirmed the results through the analysis done with the help of text analysis software Hamlet II 3.0. For the research purposes, the wordlist was created based on the code categories prepared for AQUAD analysis. The wordlist consisted of the main entries and the related concepts/synonyms, which were assigned to each main entry. The following outputs on the shareholder value drivers were received: joint frequency analysis, cluster analysis, and hierarchical dendogram.

The third stage of the research consisted of the interviews with the industry professionals; CEE equity markets fund managers. The questionnaire, on which the interviews were based, contained seven focused questions. The interviews were conducted and the results of the responses were compiled in the period from September 2013 to October 2013. 16 investment fund managers (according to the *Citywire* web-portal, UK-domiciled financial publishing and information group, which specializes in tracking the performance of the asset managers) were selected as potential respondents, but overall 7 interviews with the equity managers were conducted.

Triangulation of the research results obtained through the complete qualitative and quantitative analysis, interviewing industry professionals and thorough academic literature review allows making conclusions that the obtained output is plausible and consistent, as the findings of the three types of research appear to be adding and repeating each other. It allows building a shareholder value sustainability model based on the identified factors having the most evident influence on the SHV sustainability.

Conceptual shareholder value sustainability model (Figure 3) has total shareholder return as a measure of the shareholder value. On top of that, the sustainability of the TSR outperformance versus the benchmark and its lowered risk profile as measured by bet and volatility figures become the crucial reference for achieving shareholder sustainability.

Factors determining SHV sustainability were divided into two main groups: the factors being generally accepted in the developed markets and the emerging factors having an influence on the TSR. The first group of the fundamental factors, which includes the profitability and the capital management issues, has already been employed by the equity analysts and investors for more than a century to select the best-performing companies and to generate performance alpha. However, the value added of this factors are relatively weakly researched with regard to the emerging markets due to the unsubstantial history of the corporate and trading data as well as previously weak market efficiency.

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                    ┌─────────────────────────────────────────────────┐
                    │          Shareholder Value Sustainability        │
                    │  Shareholder's Return Measurement: sustainable   │
                    │  market outperformance according to the          │
                    │  total shareholder value return at reduced       │
                    │  volatility and beta                             │
                    └─────────────────────────────────────────────────┘
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Shareholder Value Sustainability
Shareholder's Return Measurement: sustainable market outperformance according to the total shareholder value return at reduced volatility and beta

Generally accepted SHV drivers in the developed markets

Emerging SHV drivers

Profitability measurement ratios: ROE, ROCE, EVA, PM, earnings dynamics

Capital Management measurement ratios: equity ratio

Corporate governance - best practice CG, investor relations and information disclosure quality

Earnings quality - financial results plausibility, accruals ratio, CF toNI comparison

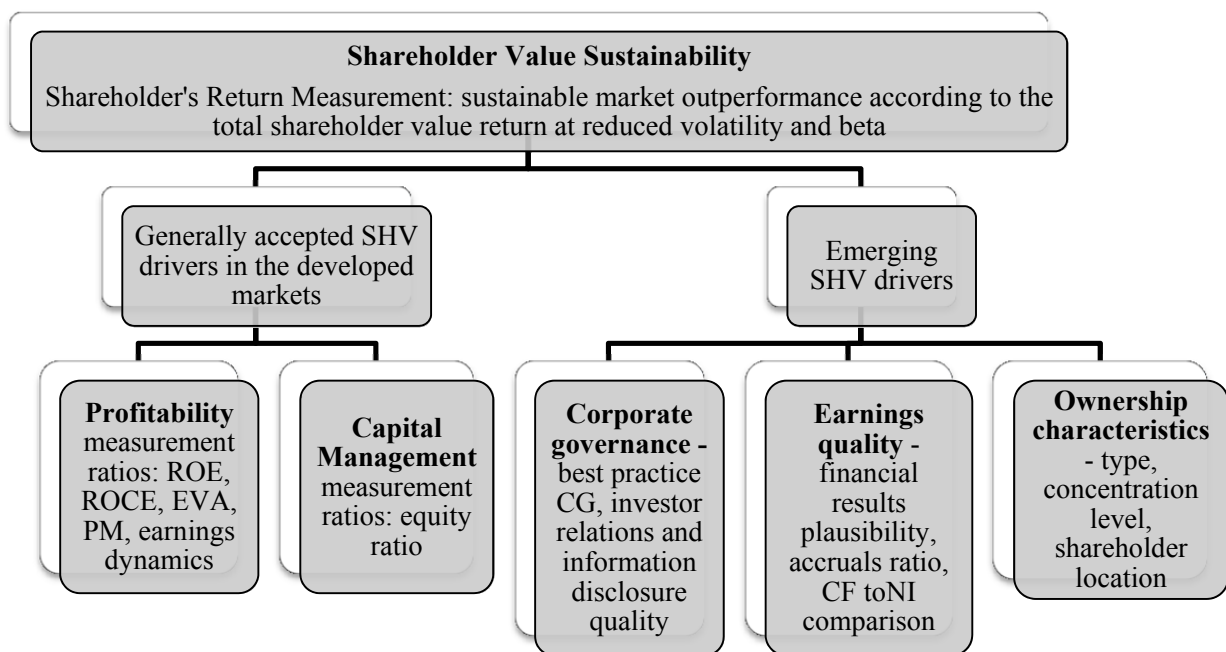**Ownership characteristics** - type, concentration level, shareholder location

Figure 3. Conceptual Model of System of Factors Influencing Shareholder Values.

The second group, consisting, as proposed by the author, of the corporate governance, earnings quality and the ownership type, comprises rather new concepts for both the emerging and the developed markets. The first fundamental researches on the corporate governance appeared in 1960-s, while they were applied to the stock market investments later and still are not applied thoroughly and as extensively as the traditional indicators. Earnings quality concept appeared in 1990-s and increased in significance after the corporate scandals. Ownership is increasing in importance in the family-managed companies

Basically, the group of the traditional fundamental factors determines the levels of the quality of the corporate financial position, while the group of the emerging factors influencing

shareholder value determines the quality of the provided results as such to be able to judge on the sustainability of the current financial position, its possible improvement potential and to exclude the risk of the accounting fraud, which when discovered impacts the stock price adversely.

2. PROPERTIES AND PROBLEMS OF CENTRAL AND EASTERN EUROPEAN EQUITY MARKETS

The chapter consists of 31 pages and comprises 10 tables and 15 figures.

The CEE equity market, although it does not yet have a significant role in the national economies for the capital raising purposes, has a very attractive risk-return profile compared to the Western European stock markets and, therefore, enjoys significant inflows in the growth phases.

The total market capitalization of the CEE stock exchanges is around 292 bn USD, which is relatively small compared to the largest European stock exchanges: London – 3,396 bn USD, Frankfurt – 1,486 bn USD. The combined market capitalization of the Baltic stock markets in the end of 2011 was 7.4 bn USD (Nasdaq OMX Riga – 1.1 bn USD), which is about 3% of the total capitalization of the CEE stock exchanges, according to the World Bank data. However, the growth of the importance of the CEE stock markets is demonstrated by increasing ratios of the market capitalization of the listed companies to GDP as well as by the stock traded turnover ratio, indicating the increasing volumes and more quoted companies on the stock exchanges.

Stock investing in Latvia, as in all other emerging countries, is still in the development phase. More potential investors are becoming able to invest, as indicated by the following: the population welfare increases, thus provoking capital accumulation processes, forming the capital base to be invested in the financial markets; local and foreign brokerage companies are able to decrease transaction fees due to the economies of scope and better IT infrastructure development, which stimulates labour costs decrease; financial literacy level, though yet insufficient, increases; pension and insurance investing gains importance and attracts more liquidity, which is invested in the stock markets.

Institutional Investors are gaining their weight in Latvia owing to the capital inflows in the pension funds and insurance companies. Besides, the people become more conscious about stock investing stimulated by the low rate environment and, thus, lacking professional education

and experience they tend to invest through the investment management companies. Figure 4 shows the value of the stock portfolios managed by the Latvian investment companies. Sharp decrease in the stock value of the investment portfolio happened during the financial crisis of 2008 attributed to the share price declines and to the portfolio managers decreasing their stock positions. Stock value maximum of ca. 80 mn Ls was reached at the end of 2011 and the stock part reached 35% of the investment portfolio.
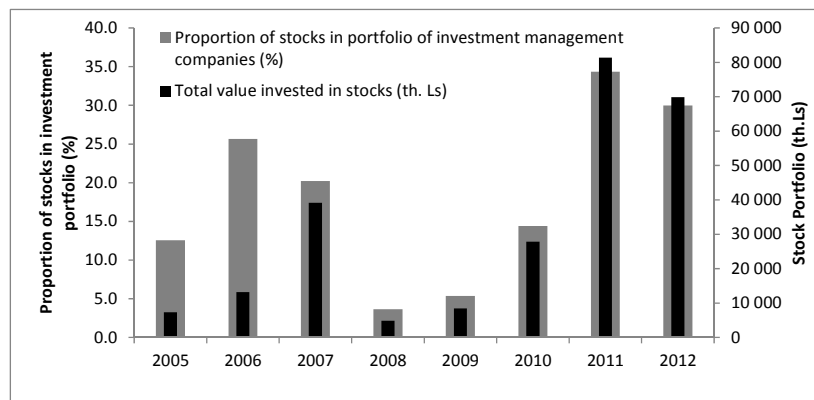

Figure 4. Equity share of the Latvian investment management company portfolios [author's calculations according to FKTK data].

Private Investors in Latvia are not yet active on the stock market as concluded by several surveys by Latvian institutions. The questionnaire conducted by SEB Bank in 2010 indicates that every sixth Latvian saves in cash, 3% invest in life insurance products and 1% invests in securities.

Stock markets of Central and Eastern Europe are associated with the escalated risk when the signs of recession are seen in the developed economies, as it was evidenced during the recent liquidity crunch, which caused significant market decline in the developing Europe. But CEE market investors are rewarded for the high risk: all CEE benchmarks (exc. Croatian index CROBEX) returned more than the global stock market over the analyzed period. The volatility results, demonstrated in Table 1, indicate increased risk in the emerging markets – on average it is twice as big as in the developed markets.

In the pre-crisis period, emerging market companies obviously enjoyed sky-rocketing trends and managed to significantly exceed the performance of the developed market indices. Stoxx Eastern Europe, which includes also Russia domiciled companies, posted huge growth, which was later replaced by a steep decline. Also other Eastern European markets recorded substantial decline, which exceeded the decrease in the developed markets.

Table 1

Stock Indices Performance and Volatility [author's calculations according to MSCI, Stoxx, Nasdaq OMX, Prague Stock Exchange, Warsaw Stock Exchange, Budapest Stock Exchange, Zagreb Stock Exchange data]

Countries	Price Performance 2005-2012				Volatility
	Overall return	Pre-crisis	Crisis	Post-crisis	
Estonia	245.55%	323.57%	-70.09%	172.75%	8.71%
Latvia	101.89%	281.11%	-71.30%	84.59%	6.36%
Lithuania	318.83%	571.20%	-71.56%	119.37%	8.48%
Czech Republic	125.46%	294.25%	-64.71%	62.07%	6.70%
Hungary	134.84%	264.65%	-63.89%	78.34%	7.22%
Croatia	48.29%	332.07%	-72.69%	25.67%	8.01%
Poland	119.71%	209.08%	-62.23%	88.20%	6.80%
MSCI EE	181.27%	373.45%	-70.82%	103.60%	9.38%
Stoxx EE	201.58%	444.85%	-71.87%	96.79%	8.86%
Stoxx Global	68.71%	81.62%	-46.67%	74.17%	4.18%
Germany	163.17%	171.51%	-51.06%	98.05%	5.83%
Great Britain	51.91%	66.29%	-40.95%	54.71%	4.00%
Europe	38.20%	87.37%	-54.25%	61.22%	4.35%
USA	59.48%	74.14%	-52.00%	90.78%	4.30%

Note 1 to Table 1: Timing - Overall return, Volatility: January 2003-December 2012, Pre-crisis: January 2003-September 2007, Crisis: October 2007-Feruary 2009, Post-crisis: March 2009 - December 2012.
Note 2 to Table 1: Stock indices – Estonia – OMXT, Latvia – OMXR, Lithuania – OMXV, the Czech Republic – PX, Hungary – BUX, Croatia - CROBEX , Poland - WIG 20, MSCI EE – MSCI EM Eastern Europe ex Russia TR (Poland, the Czech Republic, Hungary), Stoxx EE - The STOXX Eastern Europe Total Market Index (TMI) represents the Eastern European region as a whole. With a variable number of components, it covers approximately 95 percent of the free float market capitalization of 18 Eastern European countries: Bulgaria, Croatia, Cyprus, the Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia (FYROM), Poland, Romania, Russia, Serbia, the Slovak Republic, Slovenia, Turkey and Ukraine.

Obviously hoping for the high growth, emerging market investors were actively investing in the CEE region, while due to the liquidity constraints during the financial crisis, the emerging equity markets were the first and the most seriously affected when panicking investors were withdrawing the money. In the post-crisis period, the growth in the emerging markets is comparable to the growth in the developed markets. Excellent results are posted by the Baltic equity markets, Lithuania and Estonia, while the majority of other CEE markets could not beat the market growth observed in the USA and Germany. The possible explanation lies in the still uncertain macroeconomic environment and unclear CEE region crisis outcome.

The increased risk of investing in the CEE equity markets is explained by the following problems:

1. It has been proved that the **distribution of the returns** in the emerging markets is **non-normal**. Extreme returns, both positive and negative, result in the positive and negative skew of the return distribution and, therefore, generally accepted theories of portfolio management cannot be applied to the emerging markets.

2. **Limited information flow**, which can restrain investors from equity investing, as none is willing to buy „a pig in a poke". Poor information disclosure on the company may help it hide possible frauds, unethical behavior, etc. Having unsubstantial information on the stock, analysts may hardly estimate business model quality, market position, financial state of the company, and ultimately the intrinsic value of the stock and its potential return.

3. Quite often the legislation and the stock exchange rules regulating **investor rights** are rather loose, which frequently turns into the repellent factor for the emerging market investors.

4. **Lack of liquidity** both in the buying and in the selling phase can distort market prices and negatively influence the ultimate portfolio value. Insufficient number of traders and low level of the local and foreign capital lead to thin market volumes, which become the cause of the abrupt stock price movement.

5. **Contagion**, when the small shock in one country swiftly spreads over to other stock markets in the region, can be considered to be a typical problem of the developing stock markets as well.

6. Emerging market investors obviously have to face unstable **political situation** and possible social unrest, which are common in the developing countries and may adversely influence the returns of the portfolio. To avoid the excess risk, investors must carefully assess the level of political risk and relevant legislation.

7. Another issue relevant to the EM investors is the **value added of the fundamental analysis**, which is considered to be an "investment compass" in the equity market investing, but might not be completely relevant to the emerging markets investing. The author conducted a research on the relevance of the classical fundamental analysis within the CEE equity markets with the main aim to discover the importance of the financial analysis in the pre-crisis, crisis, and post-crisis periods. Financial crisis, which occurred in FY 2008, was the most severe downturn ever happened on the Central and Eastern European stock exchanges, so the empirical findings of the research gain importance for developing the stock selection model to achieve SHV sustainability, to minimize the investment risks and to be able to generate higher alpha. The main

finding of the study is that the financial analysis starts to be employed more often by the investors in CEE equities, what is especially well-seen during and after the liquidity crunch period. It has been found out that the CEE companies of higher quality are generating higher value, although not in all the periods covered.

Ability of the financial analysis to create performance alpha for the CEE stock market investors was tested during the three market phases based on the key fundamental ratios: ROE, profit margin, equity ratio, activity ratio as well as PE and PB. Realizing the existence of the liquidity problems on the emerging markets and, thus, higher risk associated with the non-liquid companies, ability of market capitalization to positively influence the share price of the companies in the above-mentioned market periods was tested additionally.

According to the obtained results, the best value adding ratios in the CEE stock markets are capital and sales profitability (Table 2), which assisted in achieving superior performance in the post-crisis period (primarily in 2011-2012).

Table 2

Performance of the portfolios modeled based on ROE and Profit Margin

Type of period	Post-crisis				Crisis	Pre-Crisis		
Year	2012	2011	2010	28.02.2009-31.12.2009	30.09.2007-28.02.2009	31.12.2006-30.09.2007	2006	2005
ROE above median	14.8%	-13.3%	30.0%	87.2%	-69.3%	36.9%	56.2%	64.3%
Profit margin above median	5.8%	-11.7%	27.9%	91.0%	-63.9%	37.6%	35.9%	64.3%
CEE Equal weighted	-0.9%	-25.5%	30.4%	85.4%	-71.2%	35.3%	35.1%	61.8%
MSCI EE	24.5%	-30.0%	4.4%	123.6%	-70.8%	23.0%	32.6%	23.6%

The results correspond to the interview responses of the CEE fund managers, who mention profitability as the key factor in the stock selection process.

Table 3

Performance of the portfolios modeled based on Equity Ratio and Activity Ratio

Type of period	Post-crisis				Crisis	Pre-Crisis		
Year	2012	2011	2010	28.02.2009-31.12.2009	30.09.2007-28.02.2009	31.12.2006-30.09.2007	2006	2005
Equity Ratio above median	-0.6%	-16.3%	41.2%	92.3%	-69.4%	28.2%	23.7%	66.5%
Asset turnover above median	4.7%	-20.5%	45.1%	83.9%	-70.7%	34.9%	37.0%	58.5%
CEE Equal weighted	-0.9%	-25.5%	30.4%	85.4%	-71.2%	35.3%	35.1%	61.8%
MSCI EE	24.5%	-30.0%	4.4%	123.6%	-70.8%	23.0%	32.6%	23.6%

The companies with stable balance sheets (above average equity ratio) become safe harbours in the market decline phases, losing less than the overall market (Table 3). However, these companies could not keep pace of the market in the pre-crisis period as investors cherished

more the companies with more risky balance sheets. The significance of the balance sheet stability obviously grew lately.

Table 4

Performance of the portfolios modeled based on PE and PB ratios

Type of period	Post-crisis				Crisis	Pre-Crisis		
Year	2012	2011	2010	28.02.2009-31.12.2009	30.09.2007-28.02.2009	31.12.2006-30.09.2007	2006	2005
PE Below median	14.8%	-20.8%	30.0%	81.2%	-74.6%	12.7%	30.3%	58.7%
PB below median	-10.4%	-34.1%	22.7%	87.5%	-77.8%	18.4%	22.0%	51.5%
CEE Equal weighted	-0.9%	-25.5%	30.4%	85.4%	-71.2%	35.3%	35.1%	61.8%
MSCI EE	24.5%	-30.0%	4.4%	123.6%	-70.8%	23.0%	32.6%	23.6%

The valuation ratios within the scope of the analyzed period could not provide equity investors with the performance alphas (Table 4). Solely after the crisis it was possible to beat the market with cheap companies as defined by the PE ratio.

The analysis of market capitalization providing corporate performance with the tailwind did not show the superiority of the large caps over the small caps in the performance alpha. The results though demonstrated the higher risk profile of the small caps as contrasted to the large cap companies.

The main findings of the research indicated the value added of the financial ratios and market ratios analysis and emphasized the necessity of spending resources on analyzing companies to be able to achieve superior price performance.

8. **IPO failures** in the emerging markets can be often faced by the investors. According to the research on the Initial Public Offering/Public Offering (IPO/PO) failures, the companies analyzed were not able to sustain the quality of the financials at the same level after the public offering as they were before the company raised the capital on the stock exchange. The findings of the study on the 13 IPO/PO (launched during the period from 2004 to 2008) cases support the evidence of the deteriorating financials after the public offering on a number of the developing and developed markets. Besides, the company as a system has to adapt to severe changes in its structure and only after a certain period it is able to post good results, as it has also been demonstrated. It was found out that the adaptation period might last for two years post the offering, after which there is a strong improvement in the results.

The range of financial ratios, which were considered in the analysis, covered enterprise profitability, solvency, earnings growth dynamics, as well as market valuation. It was discovered that during the first two years after the public offering the majority of companies post reduction

in their earnings (exception – operating income during the second year) regardless of the macroeconomic situation. Capital efficiency and profitability ratios provide a clear picture of a strong declining trend for two years after the public offering. It is interesting, however, that in two years after the PO the profitability improved, which seems to be a bit shorter period than documented for other equity markets, where the recovery period may reach three to five years.

The declining valuation ratios (PE, PB) after the offering demonstrate overstated expectations at the time when the company started to be quoted. However, lower earnings should raise PE, the underperformance of the stocks offset the effect of lower earnings.

Definitely, the solvency of the companies after fund raising improved, but in Year 2 after the PO the companies again increased their interest bearing debt and lowered equity in the total asset structure, which can point at too ambitious projects undertaken after the POs.

The reasons for the financial underperformance after PO is weak earnings quality of the companies listed on the Baltic exchange, it is proved by high accruals in the year before capital raise, as well as low motivation of the management to make the company as efficient as possible. Low motivation, even if the managers retain significant part of the company's ownership as a reason for deterioration in financials is very well explained on the emerging markets: some of the causes are insubstantial experience regarding the equity markets and investor relations, lack of interest in receiving additional goodwill through reputation improvement provided by the stock exchange, because the latter yet plays insignificant role, and the absence of another fund raising event through the stock exchange in the nearest future.

3. DETERMINANTS OF THE SUSTAINABLE SHAREHOLDER VALUE GENERALLY ACCEPTED IN THE DEVELOPED MARKETS

The chapter consists of 37 pages and comprises 8 tables and 18 figures.

Taking into account the problems of investing in the emerging stock markets disclosed before, the approach to the stock selection on the CEE equity markets to achieve SHV sustainability should be developed focusing on the factors, which were determined in the course of the content analysis. Chapter 3 of the Doctoral Thesis focuses on the generally accepted in the developed markets determinants of the sustainable SHV. Figure 5 provides an overview on the framework of the research on the classical fundamental analysis factors, which are being widely

researched and applied in the investment process within the developed markets but which lack profound research ground on the developing markets.
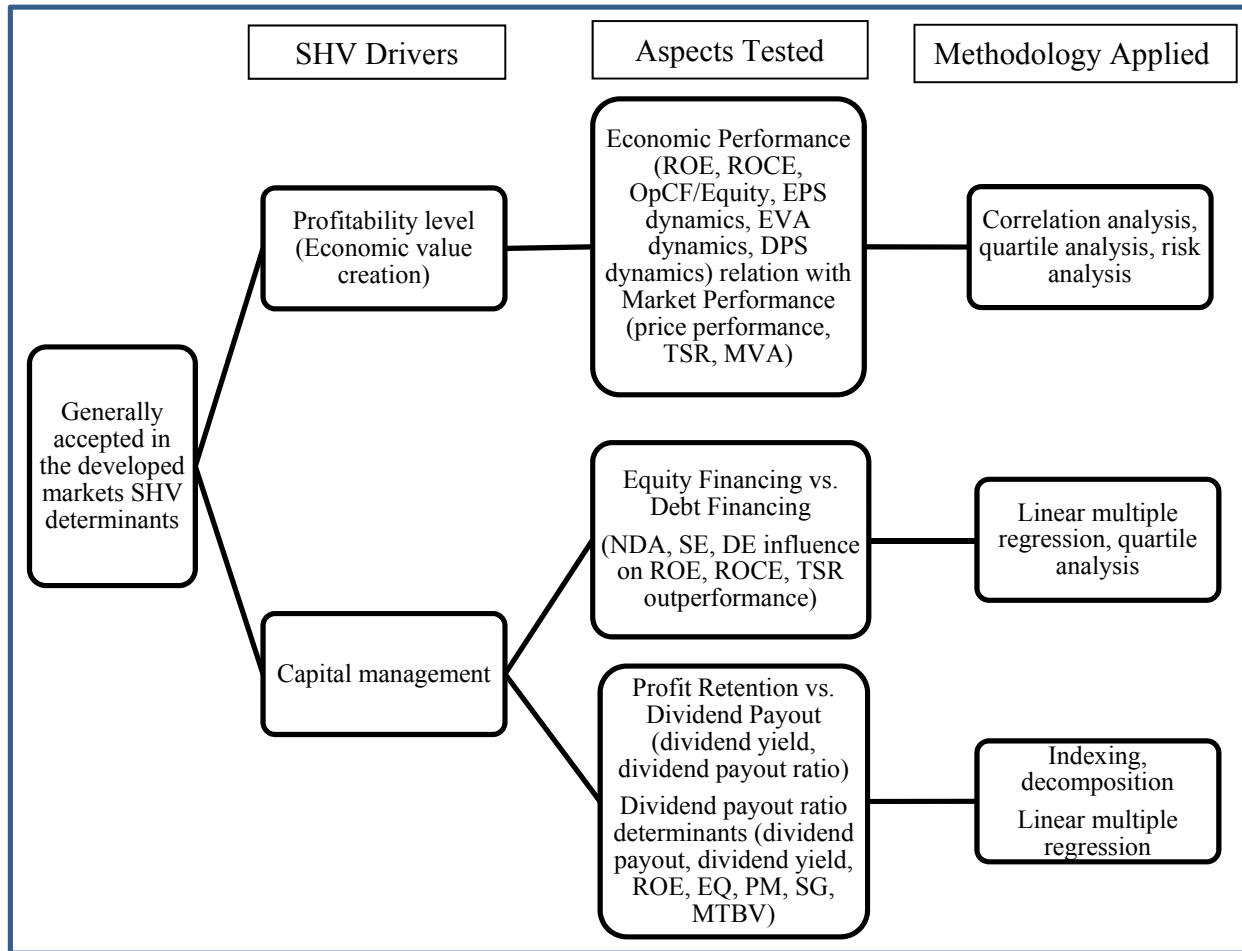

Figure 5. Research Framework of the SHV Determinants Generally Accepted in the Developed Markets, Application to the Investing Process in CEE Markets.

Note to Figure 5: ROE – return on equity, ROCE –return on capital employed, OpCF/Equity – operating cash flow to equity, EPS – earnings per share, EVA – economic value added, DPS – dividend per share; TSR – Total Shareholder Return, MVA – Market Value Added, NDA – net debt to assets, SE – suffieciency of equitycapital, DE – detb to equity, EQ – equity ratio, PM – profit margin, SG – sales growth, MTBV – market to book value.

Enterprise economic value added, which is also closely connected with the corporate profitability, is assumed to be a proxy for the firm's market performance. Profitability of the company is mentioned basically by every fund manager as the basis of the stock selection to the equity portfolio. Capital management is another very important layer of the business management, which assumes making crucial decisions affecting business short- and long-term operations having also the influence on the firm's long-term profitability and value generation.

Traditional measures that represent economic performance of a company are: return on equity (ROE), return on assets (ROA), earnings per share (EPS), return on capital employed (ROCE), return on invested capital (ROIC), dividends per share (DPS). The list can be complemented with a set of more sophisticated metrics—for instance, economic value added (EVA) or cash flow return on investment (CFROI). A number of researchers proved that there is a strong correlation between the range of profitability variables and firms' market performance (Biddle et al., 1999; Lehn & Makhija, 1996; Chen & Dodd, 2001; Biddle et al., 1999). Latest studies focusing on the profitability more highly appreciate economic value added (EVA) for its superior relationship with the stock performance (Stewart, 2013; Milunovich & Tsuei, 1996; O'Byrne, 1996; Biddle et al., 1999). The author conducted a thorough research on the relationship of various profitability measures with the market performance of the companies.

The results of the research on profitability allow stating that selection of fundamentally good companies according to just one economic performance measure would hardly deliver consistent outperformance for the equity investor. Investors should consider a group of indicators as well as pay attention to the relevance of the fundamental analysis, which seems to gain importance in the CEE equity markets right after the crisis as proved by the 4th quartile outperformance in almost every financial measure. It has been discovered that there is no strong relationship between company's economic and market performance in the CEE equity markets.

First, the correlation analysis was conducted to find out if various economic performance measures (ROE, ROCE, OpCF/Equity, EPS, EVA, EPS) have significant correlation with the market performance measures such as price return, total shareholder return and MVA. In the majority of cases correlation was insignificant or even negative. EVA turned out to be the best proxy among the selected economic performance indicators – its correlation with MVA reached 50%. It was found out that MVA also correlates with ROE (average calculation method) and with DPS (bulk market calculation method) ratios.

Second, quartile analysis was employed with a purpose to understand if the economic performance measure can become a stock selection criterion to be able to reach consistent outperformance. Selecting the best stocks according to ROE, EVA growth and operating cash return (OpCF/Equity) would deliver the highest TSR for the equity investors in the long term. However, the delivered performance is not consistent throughout the period and the 4th quartile (the best) index beat the other quartile TSR indices only in the post-crisis period, when,

obviously, CEE market investors started to consider the fundamentals when building equity portfolios. Rather often the best-performing companies were classified in the 2nd or even the 1st quartile.

The framework of the research on the fundamental factors generally accepted in the developed markets includes also the influence of capital management policy on the value creation by the company (Figure 5). The choice of the capital structure has a strong influence on the company's market value, and it becomes crucial during the period of monetary tightening, which occurred during the liquidity crisis. Highly leveraged companies usually have a discount in valuations as they pose a greater chance of incurring significant losses during the downturns.

A well-known theory of Modigliani and Miller (1958, 1963) states that in the tax-free world there should not be any dependence of market value of the company on its capital structure, but when the taxes are deducted there is a positive relation between the value of the company and the level of debt. However, it can hardly be applied to the real world situation.

Gur Huberman (1984) discovered and explained the empirical evidence showing negative correlation between the firm's external financing and its market value. Researchers on the emerging markets, Mesquita & Lara (2003) discovered negative correlation between the corporate and long-term debt, while Chou and Lee research (2010) found out that the relationship between the level of debt and corporate performance is consistent with the trade-off theory: as the debt level increases the profitability increases until it reaches the maximum and then it starts to decrease.

The research of the capital influence on the corporate economic and market performance was conducted also within the CEE equity market. The results of the study demonstrate that the companies operating in the CEE countries on average have relatively more conservative capital management policy compared to the Western peers, however, the results are different for different markets. For example, in Latvia, Romania, Croatia and Lithuania the balance sheets are well-capitalized, while the balance sheets of the Polish and Czech companies possess high leverage characteristics, which can be explained by the increased number of quoted banks there.

The assumption that the investors favour the companies with stronger balance sheets was proved. The choice of financing the entity evidently influences equity performance as significant negative relationship between net debt to assets (NDA) and the relative TSR ($A_t - A_{ave}$) was found (Formula 1).

30

$$A_t - A_{ave} = -0.003 - 1.54 * NDA \tag{1}$$

Figure 6 data provide the picture of the clear dependence of the relative TSR on the quality of the balance sheet in cases of both the net debt to assets and debt to equity. Investors, as proved by the results, are more reluctant to invest in the companies with the unstable financial position.
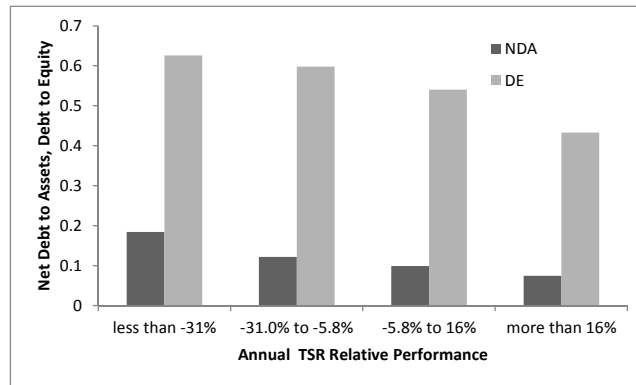

Figure 6. Median debt level according to relative annual TSR.

When testing also the sufficiency of equity as a value adding ratio to earning higher return, the results show that the companies with the substantial equity financing return the most.

The negative relationship between the amount of debt and the firms' profitability was proved as well. The results are supported by two regressions, which explain the influence of the debt level (net debt to assets – NDA, debt to equity – DE) on the return on equity (ROE) and return on capital employed (ROCE). The lower the debt level (net debt to assets, debt to equity), the higher is the profitability of the company.

$$ROE = 0.026 - 2.932 * NDA - 0.258 * DE \tag{2}$$

$$ROCE = 0.125 - 0.228 * NDA \tag{3}$$

The charts in Figures 7 and 8 provide an overview of the debt profile of the CEE companies according to their profitability quartile. The diagrams show that there is a sharp difference in the debt levels for the companies of various profitability levels: highly levered companies have negative or very low level of ROE and ROCE. The pattern appears to be clear for all ROCE quartiles and for the first three quartiles of the capital profitability both in case of debt to equity and net debt total assets.
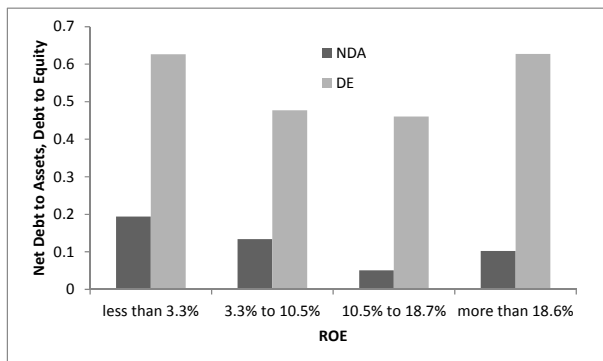
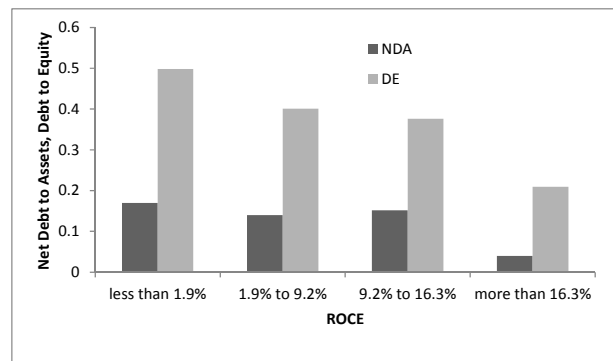Figure 7. Median debt level according to ROE quartiles.

Figure 8. Median debt level according to ROCE quartiles.

The exception in ROE case is the 4th quartile, as the most profitable companies have approximately the same relation of the debt to equity capital as the companies with poorest profitability. This can be explained by the highly efficient usage of the available capital to generate earnings and the fact that this group involves a large number of financial companies, which lift the debt level up.

These results confirm the pecking order theory, which states that companies prioritize their sources of financing according to the *principle of least effort*. Internal funds are the first to be used, then debt is issued and the last way to raise financing is public offering (equity issue) (Myers & Majluf, 1984). Thus, the more profitable is the company, the more internal capital it uses for its financing needs.

Another very important aspect of the capital is the dividend distribution decision, which becomes crucial in the current low rate environment. The findings of the dividend study provide an insight into the dividend payments in the Central and Eastern European market, which can become a lucrative investment target due to the relatively high dividend yields and stable payout ratios. Dividend yields and payout ratios experienced a decline due to the financial crisis, but managed to recover rapidly, so most of the CEE companies can be considered to be reliable dividend payers and, thus, possess high investment attractiveness.

Another aspect researched was the role of dividends in generation of total returns, which was proved in the course of the research. The findings show that after inflation dividends appear to be the most important component of total shareholders wealth. Dividend-paying companies were able to outperform non-payers over the period analyzed, although the difference in end

index values was not significant. Moreover, the dividends were capable of softening the freefall of asset prices experienced by many investors in 2008 and 2009.

To understand what factors influence the dividend payout ratios, in order to know when high yields can be earned, the author additionally conducted a study on the dividend policy determinants. The hypothesis that corporate profitability, capital structure, sales growth and market-to-book of the companies exert substantial influence on the dividend payout ratio was partially proven, when the author tested the sample of 116 enterprises. The obtained results revealed that the factors, which have an influence on the dividend payouts in the CEE region, are mainly strength of the balance sheet as determined by the equity ratio and profitability as determined by the profit margin. Testing the most recent three years (2009-2012) showed that market to book ratio also has a positive influence on the proportion of profits shared with investor – expensive companies according to PB are more willing to share their profits with investors. Neither ROE nor sales growth have a substantial influence on the payouts in the CEE region, which might be explained by the emerging market specifics: high speed of the development is often seen also with the dividend-payers. In a nutshell, the dividend-payer in CEE can be characterized as a company with the stable balance sheet and high profit margin, but it is not necessarily a slow-grower or has a high ROE generation ability. The same as it is in the developed markets, the size and the industry the company operates in do have an influence on the payout ratios: larger companies tend to pay more as well as the telecom and utility companies.

4. EMERGING DETERMINANTS OF THE SUSTAINABLE SHAREHOLDER VALUE

The chapter consists of 47 pages and comprises 15 tables and 18 figures.

Excellent profitability is not yet a guarantee of the sustainable long-term performance, which is reflected in the stock outperformance of the benchmark. A single year of high profitability can be exchanged by the drastic write-downs leading to the huge losses in the next year. Unexpected negative earnings can be a result of the poor earnings plausibility and flaws in the corporate governance system as it was witnessed in 2001-2002, when a string of the corporate scandals (e.g. *Enron, Worldcom, Xerox, Parmalat*) rocked the financial markets, and in 2008-2010 during the financial crisis and the unethical management of the Chinese companies

(e.g. *Sino-Forest, China Media Express Holdings*). In the most extreme cases the companies were forced to file for bankruptcy.

Having these problems at the background, the financial community started to develop and employ more sophisticated tools in order to be able to achieve long-term market outperformance by having the companies in the portfolio, which could generate sustainable shareholder value. Therefore, chapter 4 of the Doctoral Thesis focuses on the emerging determinants of the sustainable SHV. Figure 9 provides a view on the framework of the research on the novel factors, whose relationship with the company performance is being researched and whose application is being currently developed.
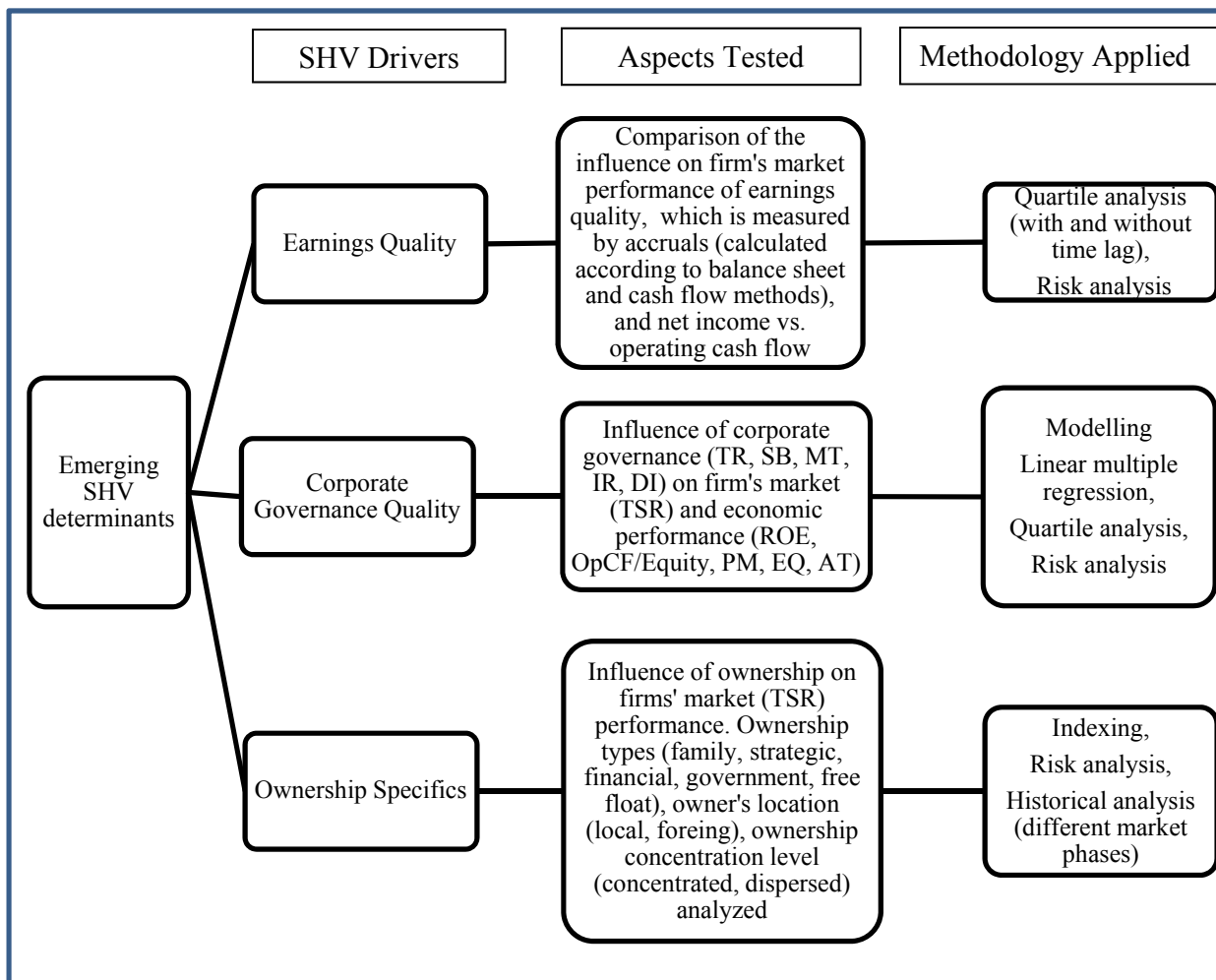

Figure 9. Research Framework of the Application of Emerging SHV Determinants to the Investing Process in the CEE Markets.

Note to Figure 9: TR – total corporate governance rating, SB – Supervisory Board, MT – management team, IR – investor relations quality , DI – disclosure of information, ROE – return on equity, OpCF/Equity – operating cash flow to equity, EQ – equity ratio, PM – profit margin, AT – asset turnover.

Thorough check of the plausibility of the financial results helps to avoid investing in the companies, which might be involved in the accounting fraud, therefore escaping the decline of share price triggered not only by the negative earnings surprise but also by the loss of trust from the shareholders to the management of the company. Evaluation of the corporate governance allows one to choose the companies with trustworthy governance systems and, therefore, expose oneself to the sustainable shareholder value generation. As various empirical and theoretical researches suggest, in the long term the companies definitely benefit, when they establish good corporate governance practice, both in terms of the financial benefit and in terms of the market valuation. Ownership of the company is another very important issue for the equity investors in the CEE companies, which often tend to have very concentrated ownership structure. Additionally, a very clear pattern of the family-owned companies delivering sustainable SHV in the developed markets has to be questioned within the developing market environment.

Empirical findings of Degeorge et al. (1999) and Teoh et al. (1998) demonstrate that the company's management tends to manipulate financial results. In the financial literature several definitions of the earnings quality, which is synonymic to the plausibility of financial results, can be found. US scientists (Teets, 2002; Pratt, 2003) say that the earnings quality is the ability of the company's net income to reflect the real situation. Patricia Dechow and Catherine Schrand (2004) argue that plausible financial result reflect company's current operations, indicate future earnings of the company and demonstrate the real value of the company and its ability to generate profit. Not only creative accounting practices and frauds deteriorate the plausibility of the financial results as it was described by Howard Schilit (2002), it was proved by the US scientists (Dechow & Dichev, 2001; Mahedy, 2005; Sloan, 1996) that the accruals as a measure of earnings plausibility also negatively affect the equity performance.

The methodology of the earnings quality assessment included the calculation of the accrual level to assets according to Formulas 4, 5 and 6, which assume calculation according the balance sheet and the cash flow methods (Richardson & Tuna, 2012):

$$\text{Balance sheet based accruals}_t = (NOA_t - NOA_{t-1})/[(NOA_t + NOA_{t-1})/2] \qquad (4),$$

where NOA is net operating assets, which are calculated in the following way:

$$NOA_t = (\text{Total assets}_t - \text{Cash}_t) - (\text{Total liabilities}_t - \text{Total debt}_t) \qquad (5)$$

$$\text{Cash flow statement based accruals}_t = (\text{Net Income}_t - \text{Cash From Operations}_t - \text{Cash From Investments}_t) / ((NOA_t + NOA_{t-1})/2) \qquad (6)$$

The analysis based on the accruals metrics was primarily conducted with the help of the quartile analysis. The influence of the accruals levels on the share price was analyzed taking 1 year (accruals in 2004 compared to equity performance in 2005 with 2 months delay), 2 years (accruals in 2004 compared to equity performance in 2006 with 2 months delay) and 3 years (accruals in 2004 compared to equity performance in 2007 with 2 months delay) lags. The incentive for doing so was the usual observation that when the accruals do not have a negative influence immediately, but after a certain point of the time, earnings tend to reverse.

The author additionally compared the level of the corporate profit with the level of the operating cash flow. In case the latter exceeds the profit, the company was ranked positively, in the opposite case, the company was punished by the lower ranking. Based on the negative and positive ranking, the companies in the sample were divided into two groups: operating cash flow (CF) exceeds net income (NI) and net income (NI) exceeds operating cash flow (CF). The index values of both portfolios were compared taking into accounts 3 lags: 1, 2 and 3 years.

In the course of the study on the influence of financial result plausibility of the CEE companies on the achieving SHV sustainability, the hypothesis that the companies with more plausible financial results are able to provide higher, more sustainable returns was proved. The impact of the earnings quality on TSR performance was assessed with the help of the quartile analysis considering three time lags.

Financial results of the CEE companies tend to be rather trustworthy as the average level of accrual to net operating assets is on a low level and the cases when the operating cash flow exceeds the net income outnumber the opposite cases.

As it was found out, the effect of poor earnings quality on the TSR performance is positive within one year, however, considering longer period (2 and 3 years lags), the pattern is obvious – the higher is the accruals level, the weaker is the performance. Another metrics of the earnings quality, comparison of cash flow and net income, also provides value added to the stock selection process as in the longer term the companies with the operating cash flow exceeding net income perform better than those companies, which have the opposite situation – higher net income than the operating cash flow. Therefore, an equity investor aiming at achieving high and sustainable return would definitely consider earnings quality to exclude the companies with questionable financial results plausibility.

Sole earnings plausibility consideration is insufficient to ensure smooth sustainable value creation. The principal-agent problem has to be minimized as much as possible. The company is like a state with its own regulations, its supervisory and executive bodies, which obviously need to run the company according to the certain rules and procedures that ensure value-based management (Brigham & Erhard, 2004). Establishment of the quality corporate governance ensures significant limitation of the agency problem and is intended to maximize shareholders' as well as other interested parties' wealth. High quality of the corporate governance (CG) is a guarantee of the long-term trust between the shareholders and the management of the company.

A number of studies conducted on the developed markets state that the corporate governance has strong influence on the stock market returns. Gompers, Ishii and Metrick (2003) modeled the portfolio strategy that would long (buy) companies with strongest rights (lowest decile) and short (sell) companies with weakest rights (highest decile). As a result, the investor could earn 8.5% outperformance. The similar study was done by Drobetz et al. (2003) in Germany showing the monthly difference in performance of well and poorly governed firms of 1.73%. Positive correlation between the firm value and the quality of corporate governance in case of the largest 300 European companies (FTSE Eurotop 300) has been indicated by Dutch scientists Bauer, Guenster, Otten (2004). Some research was conducted by consideration of the separate factors, which determine the quality of corporate governance. The significant relationship was identified between equity performance and board independence (Hermalin & Weisbach, 1998, 2003; Bhagat & Black, 2002), stock ownership of board members (Bhagat et al., 1999), separation of the CEO and Chairman positions (Brickley et al., 1997). The available related literature provides the evidence of the outperformance of well-governed companies also in the emerging markets. Roy Kouwenberg (2006) states that the corporate governance matters with regards to Thai public companies: stock return of the best 20% companies according to the CG score in the period 2003-2005 was by 19% p.a. better than the stock return of the weakest 20% companies. Indian market represented as NIFTY 50 was studied by Samontaray (2010), who found significant relationship between the share price and such independent variable as EPS, sales, net fixed assets as well as corporate governance factors. Pajuste (2002) researching the ownership and the shareholders' rights in the CEE stock markets, discovered the significant controlling shareholder influence on the performance of the company, and that the minority

shareholders' rights are often abused, making the market absolutely inefficient, concluding that the risks are not justified by the returns, which are lower than average.

The findings of the majority of the studies support the evidence on the positive relation between the quality of the corporate governance and the company's market performance, so the logical question arises of whether good governance ensures excellent financial results, which in turn positively influence stock performance. Bhagat and Bolton (2008) discovered that better governance measured by the GIM and BCF indices, stock ownership of board members, and CEO-Chair separation are significantly positively correlated with better contemporaneous and subsequent operating performance. Allan Chang (2004) found that the degree of ownership of shares in a company by institutional investors, the gearing ratio or the level of debts, and the size of the company have significant influence on ROE. However, some authors could not find any significant evidence of the influence of corporate governance on the contemporaneous or subsequent operating performance (Bauer et al., 2003; Brown & Caylor, 2004).

The author studied the effect of the corporate governance on the company's financial and market performance. As no centralized CG assessment for the CEE companies was available at the time the study was done, in order to evaluate the quality of corporate governance of the CEE companies, corporate governance assessment model was created (Table 5).

The framework for the model was developed according to the CG recommendations for the listed companies provided by the local stock exchanges such as Nasdaq OMX Riga (2010) as well as the OECD (2004) principles. Besides, the list of criteria was expanded by adding the most important factors defining CG quality, which are widely recognized and adopted on the mature financial markets.

The model consists of four pillars, where each is dedicated to a certain set of factors (supervisory board, management team, investor relations, information disclosure) defining the quality of corporate governance. The maximum score a company can get is 23, which is obtained by summing up all points in each segment. If the information regarding the management team or the board of directors was not available, then the neutral rating of 0.5 was put. The model describes three possible scenarios: best, neutral and worst.

Table 5

Corporate Governance Assessment Model Framework

Criterion ID	Criterion Description	Scenario Evaluation	Criterion ID	Criterion Description	Scenario Evaluation
Supervisory Board (BoD)			MT_{CG4}	Turnover of management team	Worst (0), Neutral (0.5), Best (1)
SB_{CG1}	Independence of directors	Worst (0), Neutral (0.5), Best (1)	MT_{CG5}	CEO background	
SB_{CG2}	Board Size		Investor Relations Quality		
SB_{CG3}	Diversified skills of directors		IR_{CG1}	Conference calls, web-casts, presentations	Worst (0), Neutral (0.5), Best (1)
SB_{CG4}	Frequency of meetings		IR_{CG2}	Dividend policy	
SB_{CG5}	Performance-based compensation		IR_{CG3}	Information on AGM	
SB_{CG6}	Frequency of elections		Disclosure of Information		
SB_{CG7}	Turnover of Board		DI_{CG1}	Availability of annual reports	Worst (0), Neutral (0.5), Best (1)
SB_{CG8}	Audit committee independence		DI_{CG2}	Availability of quarterly reports	
SB_{CG9}	CEO-Chairman positions separation	Worst (0), Best (1)	DI_{CG3}	Information on management team	
Management team			DI_{CG4}	Information on Board of Directors	
MT_{CG1}	Logics and clarity of organization	Worst (0), Neutral (0.5), Best (1)	DI_{CG5}	Social responsibility report	
MT_{CG2}	Organization corresponds with the reporting structure		DI_{CG6}	Information on ownership structure	Worst (0), Best (1)
MT_{CG3}	Performance-based compensation				

The calculation, which is based on the assessment obtained in accordance to the CG evaluation model, is done according to Formula 7, which assumes summing up all points of every pillar of the corporate governance assessment methodology.

$$TR_{CG} = SB_{CG} + MT_{CG} + IR_{CG} + DI_{CG} \tag{7}$$

$$
\begin{cases}
SB_{CG} = \sum_{i=1}^{9} SB_{CG} = SB_{CG1} + SB_{CG2} + SB_{CG3} + SB_{CG4} + SB_{CG5} + SB_{CG6} + SB_{CG7} + SB_{CG8} + SB_{CG9} \\[2mm]
MT_{CG} = \sum_{i=1}^{5} MT_{CG} = MT_{CG1} + MT_{CG2} + MT_{CG3} + MT_{CG4} + MT_{CG5} \\[2mm]
IR_{CG} = \sum_{i=1}^{3} IR_{CG} = IR_{CG1} + IR_{CG2} + IR_{CG3} \\[2mm]
DI_{CG} = \sum_{i=1}^{5} DI = DI_{CG1} + DI_{CG2} + DI_{CG3} + DI_{CG4} + DI_{CG5} + DI_{CG6}
\end{cases}
$$

Where TR – total corporate governance rating, SB – Supervisory Board, MT – management team, IR – investor relations quality , DI – disclosure of information.

The analysis of the corporate governance quality in the CEE countries has demonstrated that the companies have rather high level of the established corporate governance in quite short time period after the CG concept was invented in the emerging markets. Lots of companies are able to offer investors explicit information on their governance system. In many cases the process of establishing CG system was strongly influenced by the controlling shareholder either positively or negatively. Highest CG ratings have been obtained by Baltic, Czech, as well as Slovenian companies, while Romanian companies are distinguished by very weak corporate governance systems and information disclosure. The majority of companies analyzed provide extensive disclosure; however, it seems that the institute of BoD is not well understood yet: staggered board elections, high degree of BoD involvement in routine business management, compensation is not linked to performance.

Although the culture of equity investing is still in its development phase in the Central and Eastern European countries, the value of good corporate governance is recognized by the investors. The findings of the present study prove the hypothesis that there is a significant influence of the corporate governance quality on the stock returns.

The TSR index was calculated for each quartile as seen on the chart (Figure 10). The results show that the CEE companies with the above average quality of the corporate governance outperform their peers with weaker CG ratings.
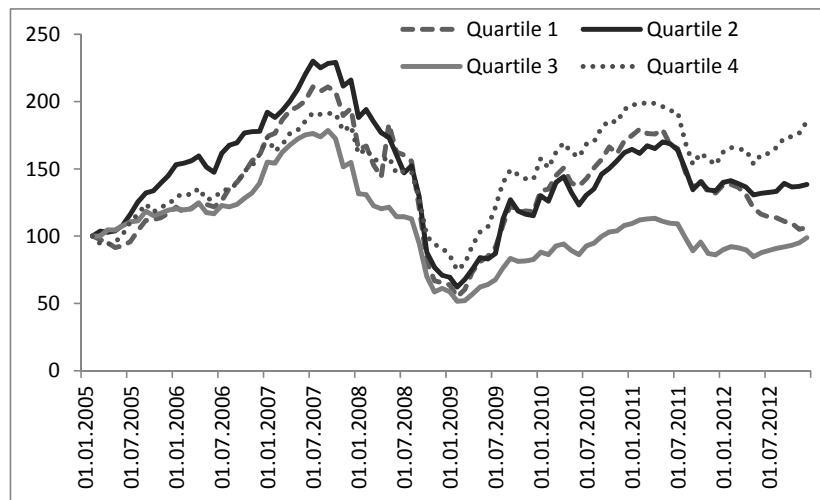
Figure 10. TSR Index based on CG quartiles (1 quartile – companies with worst CG rating, 4 quartile - companies with best CG rating).

As it is seen on the chart, the outperformance starts to be obvious in the recovery phase after the global liquidity crunch. So, most probably during the steep decline on the stock markets and high degree of uncertainty the CEE region investors recognized the value added of the better governed companies and the risk associated with poor information disclosure.

As proved in the study, the corporate governance factor is crucial for the risk management of the portfolio, as the companies having top corporate governance scores decrease the volatility and the beta of the stock portfolio.

The assumption that good corporate governance quality is also able to positively influence the financial performance of the company was not proved entirely in the course of the study. The author based the hypothesis on the research conducted in other geographical regions and also on her own research, which proved firms' market performance dependence on CG quality, speculating that the efficient management, plausible structure of the supervisory board, substantial transparency, minimization of agent-principal problem (Fama, 1980; Grossman & Hart, 1983) should also improve the financial results of the company.

When describing 25% best and 25% worst companies from the CG perspective according to their financial performance, it was discovered that the companies with the best CG ratings deliver above average profitability (return on equity, profit margin, operating cash flow to equity), while below average business efficiency (asset turnover). The difference in the financial stability as measured by the equity ratio was not substantial between the best and the poorly

managed companies. Therefore, the companies having excellent CG systems could not deliver better than average financial ratios in every analyzed case.

Basically similar results were confirmed by the multiple regression statistics calculated for two different periods – the average ratios for 2004-2012 and the annual ratios. The results of the second regression are provided in Table 6 having CG ratings and financial ratios calculated by years for the period of 2004-2012.

The overall corporate governance rating positively influences return on equity and the profit margin, while it has a negative influence on the financial stability and the efficiency of the company. Separate elements of the corporate governance system appeared ambiguous, thus, making it hard to make robust conclusions on their influence on the financial performance.

Table 6

Multiple regressions statistics
(Y variables – financial ratios; annual CG ratings and financial ratios for 2004-2012)

Y	Multiple R	R Square	F-test	Significance F	Significant Independent Variables (T-tests)
ROE	14.6%	2.1%	3.466*	0.004	CG (1.91**), DI (-2.95*)
OpCF/Equity	11.2%	1.2%	1.881	0.095	DI (1.86**)
PM	11.7%	1.4%	2.186**	0.054	SB (-1.82**), IR (-2.0*)
ER	13.8%	1.9%	3.092*	0.009	CG (-1.96**), DI (1.73**)
AT	14.7%	2.2%	3.492*	0.004	CG (-1.91**), MT (2.58*)

*significant at α=5%; **significant at α=10%;

One of the complicated questions faced in the course of the study, also described by a number of researchers (Brown et al., 2011) is the endogeneity problem of the corporate governance related assessment and its relationship to the financial performance of the entity. It might be complicated to understand what the input variable is – whether good corporate governance increases the profitability of the company or good profitability allows making additional investment to improve the corporate governance system to comply with the best practices and to become more attractive for the market participants.

Stock investor might find lots of companies with the excellent earnings plausibility and efficient corporate governance on top of the excellent financial conditions, but the risk might be still associated with the major owners, which often have a decisive role in the company management. In the developed markets, it is a common phenomenon that family-owned

businesses are more profitable and outperform their peers with other type of shareholders (Lee, 2006; Andres, 2008; Desender et al., 2008). Empirical findings regarding the emerging market companies show different results: the most beneficial for the corporate performance is legal-person ownership (institutional holding), while the state ownership might dilute the performance of the listed companies (Qi et al., 2000). The study on the Ukrainian companies discovered that the insider ownership (employees, managers) is found to have a significant non-linear effect on the performance: positive within a lower range, but negative from a threshold close to the majority ownership onwards, while the outside owners do not have a significant effect on performance (Akimova & Schwodiauer, 2004).

The author of the dissertation proposed ownership classification typology for more thorough analysis of the ownership structure of the companies.

1) Type of the owner

In order to be classified as belonging to a certain group, the company should have an investor, which holds not less than 10% of the total share capital, and it should be the major holding. The groups were the following:

- Financial: the major investor holds the company primarily for the financial interest, which is share price appreciation and dividend payments. Usually these are banks, trust accounts, insurance companies, pension funds or investment holdings.

- Strategic: the major stake in the company's capital is held by the company, which operates in the same industry, usually headquartered in Western Europe or the US. This is a very common situation in telecommunications, pharmaceuticals, and financial industry groups.

- Government: the state owns a significant part of the company. In this case the shares as a rule have not changed the hands and the state has kept its controlling stake (common in the industries of strategic importance).

- Family/management: a large stake of the company belongs to the private person, which usually takes active part in the company management, being a member of the board or the management team. Sometimes large stakes belong to several

members of the family, who exert significant influence on the corporate management.

- Free float: companies with the dispersed ownership. The stake of the largest shareholder does not exceed 10%.

2) Location of the owner. The owner was classified as local, in case it domicile coincides with the company domicile and its stake is not less than 10% of total capital, while the foreign type of the owner was assigned in the case, when the domicile of the major investor (not less than 10% of total capital) does not coincide with the domicile of the company.

3) Ownership concentration level. The ownership level was classified into the concentrated (more than 25% of total capital) and dispersed (less than 25% of total capital) categories.

Having assessed the companies according to their ownership type, the author researched the relationship between a certain types of ownership and its corporate performance.

The ultimate aim of the research was to discover the influence of the type of ownership structure on TSR performance in the CEE equity markets. The hypothesis set prior to the study was: the companies with family ownership majority generate the highest performance alpha. Basically, this theory, which is applied in the Western European and US markets, has not proved valid within the Central and Eastern European emerging markets concept.

As study results show, the ownership structure of the CEE companies tends to be very diverse as one can distinguish between several types of the corporate ownership structure. To a certain extent, it resembles the situation in Western Europe, where ownership structures are also very diverse – strong presence of the family, financial and governmental holdings. The US market is characterized by the much diffused ownership. It is a rare case that a US company has a majority ownership, whether it is family or strategic holding.

Comparing the shareholding of the EU companies and CEE companies according to the industries, one can find some similarities such as: significant governmental presence in utilities and communications sector, while the strategic investors are active in the financial sector.

When checking the performance of the companies with different shareholding structure types, it was discovered that the companies with domination of the financial investors outperform all other groups. This is the major discrepancy with the author's hypothesis as well as with the situation in the Western equity markets. Family ownership adds substantially to the total

shareholder value with the strong trend seen after the crisis, however, in the down-phase the family-managed companies were not a good investment option being among the major losers. Stable government owned companies played the role of safe harbours during the liquidity crunch. Difference in the investment approach, when considering the origin of the investor as the input factor should be taken into account in various market phases: local ownership contributes the most during the growing equity market and the majority foreign ownership makes the company more resistant during the down-market. Obviously, the companies with local ownership (foreign investors having minority) saw significant outflows, when Western investors were cashing out in panic due to the liquidity constraints, while foreigners were less active in case of the majority ownership.

It also advisable to invest in the companies when a particular investor has a controlling stake, i.e. more than 25% of the share capital, which streamlines the decision-making process and the management of the company, obviously required in the dynamic environment of the CEE countries.

The author of the research analyzed the contribution of the ownership structure to the financial performance of the company. High capital profitability was demonstrated by the companies with strategic majority holding as well as the governmental majority holding, which is also adding value to the outperformance of the latter group.

5. BUILDING AND APPROBATION OF SHAREHOLDER VALUE SUSTAINABILITY MODEL WHITHIN CENTRAL AND EASTERN EUROPEAN STOCK MARKETS

The chapter consists of 25 pages and comprises 17 tables and 13 figures.

The companies capable of beating the market index consistently become the main target for the investment traders, fund managers as well as the private investors to achieve superior returns. There are multiple professional and academic discussions, papers and studies to find the *lapis philosophorum*, to discover the attributes of the stocks, which would deliver sustainable shareholder value at the above average speed. Shareholder value sustainability factors within the Thesis were also determined through the prism of the CEE sustainable out- and underperformers, being able to deliver market outperformance or underperformance for the 5 out of 8 annual periods.

It was possible to develop the winning strategy of the CEE investor, taking into account the obtained results on the key attributes of the sustainable above average SHV deliverers. The stock selection would be done according to the following factors:

- To invest in the pharmaceutical and retail sectors, while avoid the financial and media industry sectors;

- Larger companies are more likely to become sustainable outperformers;

- It is preferable to invest in the Polish or Lithuanian stock market (within the main list of the stock exchange), while avoid investment in the Hungarian, Latvian and Slovenian markets;

- To select the companies with the above average profitability as measured by ROCE or operating cash flow over the equity capital;

- Companies with rather conservative balance sheets, having lower debt burden on the accounts, are the ones to deliver sustainable outperformance;

- Higher financial result plausibility (lower level of accruals) also supports the sustainable performance alpha in the longer term;

- To pay attention to the well-managed companies, which provide better information disclosure and are more transparent, therefore more trustworthy;

- Concentrated ownership is preferred, when selecting the companies for the "long" strategy equity portfolio in the emerging CEE market.

The research on the sustainable out- and underperformers on the CEE equity market focused on the difference of a number of the quantitative and qualitative aspects between these two types of companies. In the majority of cases the differences turned out to be rather substantial, therefore, making it possible to develop investment strategy in the CEE equity markets, which would deliver high performance "fruits" in the long term covering various market phases.

Considering all the aforementioned research results and findings, the shareholder value sustainability model was developed for the investment process establishment on the CEE equity market and separately on the Baltic equity market and on the three most liquid CEE equity markets – Poland, the Czech Republic and Hungary. Table 7 enlists the factors, which are considered to achieve the shareholder value sustainability on the CEE equity markets.

Table 7

SHV sustainability influencing factors selected for the equity portfolio selection

Ratio		Measurement concept
SHV sustainability factors generally accepted in the developed markets		
ROE	Return on equity	Equity capital profitability
OpCF/Equity	Operating cash flow return on equity	Equity capital profitability (cash flow)
ROCE	Return on capital employed	Capital employed profitability
DE	Debt to equity	Financial position stability
SE	Sufficiency of equity	Sufficiency of equity financing
NDA	Net debt to assets	Net debt position
Emerging SHV sustainability factors		
CG	Corporate governance	Quality of corporate governance
Accr	Level of accruals	Earnings quality
Own	Ownership concentration	Ownership concentration (major shareholder holds >25% of capital)

Every factor when regarded as a certain criterion for the portfolio construction is tested within certain limits, which are provided and discussed below in the model portfolio-building part. The financial analysis factors (ROE, OpCF/Equity, ROCE, DE, SE, NDA) used for portfolio selection were considered on a quarterly basis having a lag of two months to the equity performance (to make sure the results are published and made known to the market participants). The accruals though changing on a quarterly basis were taken with 2 years lag, which was found to be the most optimal lag length in delivering above average performance. Corporate governance rating and the level of ownership concentration assessment were applied on a yearly basis.

The partial shareholder value sustainability model (for the complete model see Appendix S to the Doctoral Thesis) is disclosed under formulas 8-19 relating the researched concepts to certain criteria, according to which the choice of companies should be made.

TSR of the stock portfolio is sustainable if the companies are selected into portfolio according to the following criteria:

$$\{ROE; DE; CG; Accr; Own\} \in A_1^{(1)}, \tag{8}$$

$$\{ROE; SE; CG; Accr; Own\} \in A_2^{(1)}, \tag{9}$$

$$\{ROE; NDA; CG; Accr; Own\} \in A_3^{(1)}, \tag{10}$$

$$\left\{\frac{OpCF}{Equity}; DE; CG; Accr; Own\right\} \in A_1^{(2)}, \tag{11}$$

$$\left\{\frac{OpCF}{Equity}; SE; CG; Accr; Own\right\} \in A_2^{(2)}, \tag{12}$$

$$\left\{\frac{OpCF}{Equity}; NDA; CG; Accr; Own\right\} \in A_3^{(2)}, \tag{13}$$

$$\{ROCE; DE; CG; Accr; Own\} \in A_1^{(3)}, \tag{14}$$

$$\{ROCE; SE; CG; Accr; Own\} \in A_2^{(3)}, \tag{15}$$

$$\{ROCE; NDA; CG; Accr; Own\} \in A_3^{(3)}, \tag{16}$$

where

$$A_1^{(1)} = \left\{ \begin{matrix} ROE > median(ROE_1, ROE_2, \dots, ROE_N) \\ DE < median(DE_1, DE_2, \dots, DE_N) \\ CG > 8 \\ Accr < median(Accr_1, Accr_2, \dots, Accr_N) \\ Own = concentrated \end{matrix} \right\}, \tag{17}$$

$$A_2^{(1)} = \left\{ \begin{matrix} ROE > median(ROE_1, ROE_2, \dots, ROE_N) \\ SE > median(SE_1, SE_2, \dots, SE_N) \\ CG > 8 \\ Accr < median(Accr_1, Accr_2, \dots, Accr_N) \\ Own = concentrated \end{matrix} \right\}, \tag{18}$$

$$A_3^{(1)} = \left\{ \begin{matrix} ROE > median(ROE_1, ROE_2, \dots, ROE_N) \\ NDA < median(SE_1, SE_2, \dots, SE_N) \\ CG > 8 \\ Accr < median(Accr_1, Accr_2, \dots, Accr_N) \\ Own = concentrated \end{matrix} \right\}, \tag{19}$$

Where

- Capital profitability ratios: ROE – Return on Equity, OpCF/Equity – Operating Cash Flow to Equity, ROCE – Return on Capital Employed;

- Financial stability ratios: DE – Debt to Equity, SE – Sufficiency of Equity, NDA – Net Debt to Assets;

- Corporate Governance quality: CG – corporate governance rating;
- Earnings quality rating: Accr – accruals;
- Ownership type: Own – ownership.

The proposed model has to be applied as the selection criteria for every stock on a monthly basis to build a stock portfolio. The rebalancing of the portfolio, which supposes the market screening, happens every month to achieve sustainable return. The choice of the stocks to the portfolio according to the model in the majority of cases is dependent on the market median, which is not biased by the outliers and which is also dynamic, thus, adapting to the market conditions at a certain point of time. Selection of the stocks on the capital profitability and the balance sheet stability dimensions is to be done according to one of the three proposed ratios, which all proved to provide consistent results for achieving sustainable performance. The best selection can be determined in the process of the testing procedure, when determining the combination being able to deliver the best risk-return characteristics. The criterion on the corporate governance adjusts the portfolio for excluding the poorly managed companies, the ones having corporate governance rating of 8 and below. This provides positive effect on the risk-return relationship. Adding accruals criterion to the stock selection process would minimize the risk of 'earnings manipulators' inclusion in the stock portfolio. The ownership type study proved the value added of portfolio selecting by judging on the ownership type, giving the highest credit to the concentration level of the ownership. Therefore, it was also included as a criterion for the stock portfolio building to enhance the equity portfolio performance and to reduce its systemic risk.

Table 8 proposes various combinations of the selected factors to build the equity portfolio, which would be able to generate sustainable alpha on the CEE equity markets. First, the single criteria representing the traditional factors for the developed markets fundamental analysis were tested. Basically, all of them succeeded in building the portfolio being able to outperform the market on the long-term basis. The best performing portfolio, considering only 1 criterion, is PORT_5 having sufficiency of equity factor as a major determinant of the portfolio composition, but the portfolio is limited with regard to the number of companies. The lowest systematic risk (CEE general market) is provided by PORT_3, when the portfolio was built according to ROCE, which basically means the exclusion of the banking sector.

Table 8

Shareholder Value Sustainability Modeled Portfolios for the CEE Equity Market

Portfolio	Criteria	TSR Index Value	Annualized Performance	Monthly Volatility	Beta	Sharpe Ratio (rf=4%)	Average No. of companies
CEE Market	-	182.29	8.96%	6.7%	1	0.74	116
PORT_1	ROE > median	297.48	16.85%	6.7%	0.98	1.90	48
PORT_2	OpCF/Equity > median	228.03	12.50%	6.3%	0.92	1.34	48
PORT_3	ROCE > median	262.24	14.77%	6.2%	0.89	1.74	37
PORT_4	DE < median	283.88	16.07%	6.7%	0.97	1.80	47
PORT_5	SE > median	343.83	19.29%	7.3%	1.05	2.09	36
PORT_6	NDA < median	217.86	11.77%	6.3%	0.91	1.24	47
PORT_7	ROE > median; DE < median	480.34	25.13%	6.8%	0.92	3.11	20
PORT_8	ROE > median; SE > median	430.20	23.18%	7.6%	1.02	2.54	28
PORT_9	ROE > median; DE < median; CG<8	486.30	25.35%	6.7%	0.90	3.21	23
PORT_10	ROE > median; DE < median; Accr < median	681.85	31.55%	7.8%	0.91	3.55	12
PORT_11	ROE > median; DE < median; Accr < median; Own-concentr.	598.29	29.12%	7.8%	0.85	3.22	10
PORT_12	ROE > median; DE < median; Accr < median; Own-concentr.; CG < 8	750.78	33.37%	7.7%	0.83	3.79	10

ROE and DE work well in tandem, creating the portfolio, which is capable to return more than if the portfolio is built on single criteria. When the portfolio selection was supplemented by the concepts relatively novel for the financial markets such as corporate governance quality rating, level of accruals and the ownership concentration, the portfolio performance increased significantly, while the systematic risk, beta, was lowered. The graphical representation (Figure 11) demonstrates that the combinations involving the emerging concepts deliver excellent results

in tackling the financial crisis sell-off in 2008 by softening the market downturn. Considering the risk of poor earnings quality and adjusting it accordingly, it was possible to reach the long-term outperformance obvious through every market phase (PORT_10).

When the factor combination chosen for PORT_10 was added to the corporate governance and the ownership concentration factors, the risk/return characteristics as measured by the Sharpe ratio increased even further (PORT_12).

The chart also demonstrates that the importance of the fundamental qualitative and quantitative analysis increased significantly after the crisis, which proves the sophistication of the market approach and of the stock selection process by the market participants, evidently driven by the increasing level of education and "lessons learned during the crisis".
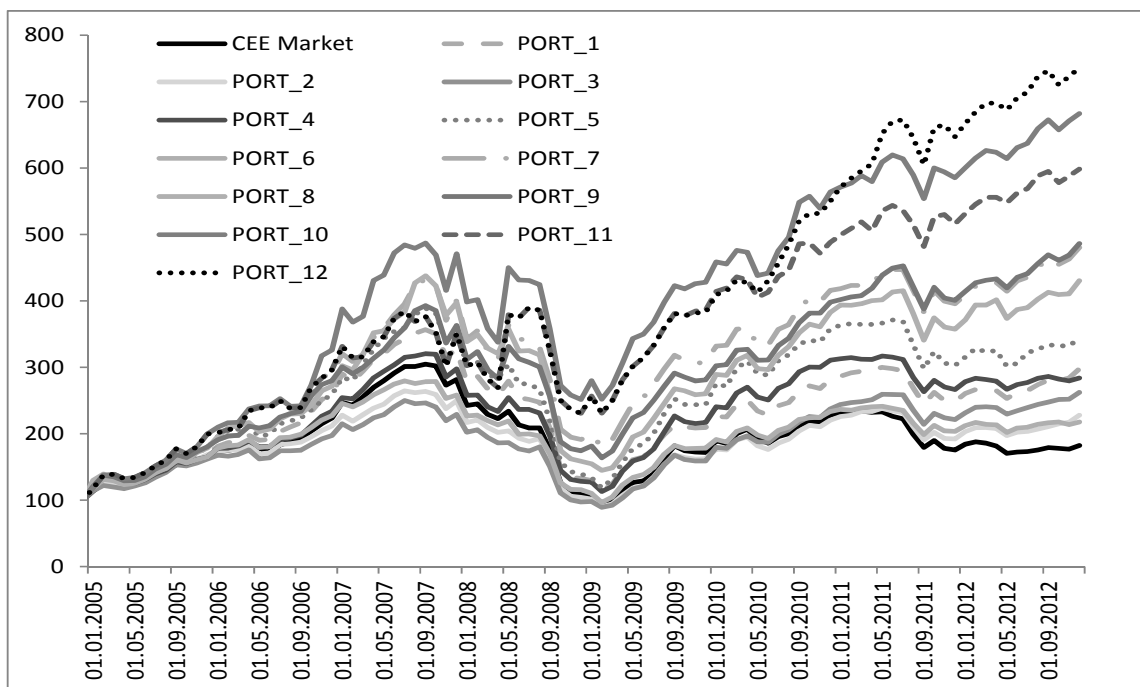

Figure 11. TSR Indices of modeled portfolios based on factor combinations on CEE equity market.

The issues about the inter-correlations between the industries and the countries of the companies selected for the stock portfolio may arise. However, the composition of the portfolio (Appendix T), PORT_12 taken as an example, shows that the versatility of the industries and the countries the companies operate in is relatively high. Besides, the usual requirement in the portfolio management practice is to limit the exposure of one industry or one country to 25% of the portfolio to have the portfolio diversification at the decent level, so the manager can limit portfolio industry and country risk.

CONCLUSIONS AND RECOMMENDATIONS

In the process of development of the Doctoral Thesis the topicality of the shareholder value sustainability issues on the emerging Central and Eastern European equity markets has been confirmed taking into account the active capital accumulation phase and, thus, equity market investment growth seeking for the long-term profit gain. SHV sustainability model developed by the author and the provided recommendations regarding the investing policy applied to the CEE equity market can be used by investment professionals and private investors to increase return having low or moderate risk exposure. The recommendations regarding the corporate value management were discussed in the Thesis. Following these recommendations, corporate managers may substantially increase investment attractiveness of their company and, thus, its ultimate corporate value.

The author makes the following conclusions, based on the research conducted:

1. Analyzing the "never-ending" debate between the proponents of shareholder and the stakeholder theories, the author concludes that the ultimate goal of the corporate entity is shareholder value maximization in the long term, by considering also stakeholder interests; while the mission analysis of the CEE companies proves relatively weak commitment to the shareholder value yet, but the companies, having shareholder value as their primary mission, also demonstrate above average returns.

2. Qualitative and quantitative content analysis of the research papers developed by the academics located in the emerging and developed markets has revealed that the main factors affecting SHV sustainability are as follows: corporate governance, capital management, financial results, strategic investments, earnings quality, CSR, stakeholder interests. It has also been discovered that the significance of the influencing factors changed over time with the corporate governance and earnings quality becoming very important after the corporate scandals at the beginning of 21st century and the recent liquidity crunch. The so-called 'traditional' factors (profitability, financial position stability), though still excessively used by the analysts, became a background for further more thorough analysis involving more qualitative factors.

3. The interviews with the CEE equity fund managers on the factors influencing SHV sustainability have confirmed the results obtained in the content analysis study. Both 'traditional' and emerging factors were mentioned as being important for the portfolio-

building process. Additionally, several fund managers mentioned that they enhanced stock selection process by applying the business model strength factor.

4. Market research in the Central and Eastern European region has demonstrated that the long-term equity investments in CEE are paying off faster than the investments in the developed European equity markets and the risk-return relation according to the Sharpe ratio appears to be more attractive, while the volumes, naturally, are significantly lower compared to the developed markets as the role of the stock exchange in the national economies for the needs of capital raising is still not too significant.

5. CEE equity market research results have emphasized a number of problems, which could be faced by the equity investors in this region: poor information quality (particularly in Romania and Croatia); legislation is not fully developed yet; low liquidity of particular stocks and particular countries; failures of IPO/POs due to window-dressing of the financial results and overestimated bid prices; low value added of the fundamental analysis before the financial crisis and insignificant role of the valuation, especially of the P/B ratio (a number of companies went bankrupt during the period analyzed and, thus, were exhibiting very low P/Bs).

6. EVA dynamics, ROE and OpCF/Equity have been discovered to have a systematic positive influence on the shareholder value and, therefore, can be used as the stock selection criteria, but it is advisable to combine them with other factors to reach outperformance in the long term.

7. Conservative balance sheets, which assume high equity financing and low debt level, exert a positive influence on the company's market and economic performance and therefore cannot be neglected during the selection of the sustainably winning companies.

8. Research of the earnings quality of the CEE companies has revealed that there is a high probability that CEE companies employ "creative accounting" practices and, thus, report unsustainable financial results. Applying the level of accruals and the net income to operating cash flow comparison criteria demonstrated unsustainable stock performance of the possible "manipulators": high growth in the first year, while significant decline in the following years. Moreover, the companies possibly employing accounting gimmicks were overtaken performance-wise by the companies with the previously low manipulation probability.

9. The CEE companies demonstrate excellent results in the field of corporate governance by complying with the recommended corporate governance practices accepted globally and by improving the quality of investor relations and information disclosure. This improvement is positively reflected in the shareholder value generated by the CEE companies – quartile analysis and the linear regression research provide a proof of the positive relation between the TSR and corporate governance. Moreover, well-managed companies are able to improve the risk profile of the stock portfolio.

10. The empirical research on the ownership structure has shown that the family ownership is not beneficial in the CEE region in contrast to the situation in the developed markets. The highest returns were provided by the companies with financial shareholders, while it is preferred that the major owners are of local origin. High level of ownership concentration adds more value to performance compared to the dispersed ownership structure.

11. The research on the sustainable outperformers and sustainable underperformers has made it possible to determine the distinguishing features of every group and, thus, made it possible to develop long-term winning strategy of generating sustainable alpha. The obtained results and the strategy have been confirmed in the process of SHV sustainability model building and approbation based on the fundamental analysis of the emerging and generally accepted in the developed markets value drivers.

Taking into account the results of the research, the author makes the following recommendations:
For the institutional and private investors:

1. To apply the investment strategy and the investing model developed by the author to the stock selection methodology within the CEE equity markets to achieve shareholder value sustainability.

2. To use the results of the studies on the influencing single TSR fundamental factors (generally accepted in the developed and emerging markets) to improve the stock selection process.

3. For detection of financial results manipulation, to use the methodology provided and approbated by the author to evaluate the quality of the financial results and integrate it into the stock selection process to reach sustainable performance.

4. To use the developed corporate governance quality assessment model for evaluating the quality of the corporate governance system of a particular entity to be able to put it

relative to the domestic and international peers on the corporate governance dimension and to exclude the poorly managed companies, in such a way increasing the return and decreasing the risk exposure of the equity portfolio.

For the corporate executives:

5. To adapt capital management policies to the recommended practice of having rather conservative balance sheet and lower than average tax burden in order to have the cash cushion and have more appeal as an investment target for the equity investors. Low debt on the accounts is closely connected to the firms' profitability.

6. Investments in the corporate governance and adapting the system to the CG best practice recommendations pay off in the long term. To increase the value of the company by improving the corporate governance.

For the administration of the study programs:

7. To enrich RTU FEEM Bachelor and Master level program course content and the syllabi of the courses related to the financial markets and investments with the results and the scope of the issues analyzed in the dissertation. To advise RTU FEEM students developing their Bachelor and Master Theses on the obtained results.

For the local CEE financial market regulators:

8. Within the regulator institution of the financial markets, to form the working group responsible for the controlling the earnings management and plausibility of the financial results of the listed companies to ward the risk of the accounting gimmicks, thus protecting the stock market investors and other interested parties from the huge losses and increasing transparency of the financial reporting.