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**FINANCING DECISION AND
COMPANIES` STOCK
PERFORMANCE**

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KEYWORDS

- Financial Decision
- irrational behavior
- "Expected" return
- Risk and uncertainty
- emotion
- financial risks
- extreme events
- fractal theory
- Behavioral Finance
- expectations theory
- theory of rationality
- decision-making model
- capital market financing
- agent-based modeling
- risk aversion
- Risk appetite
- "homo economicus"
- Traditional funding sources
- game theory

Introduction

The current state of knowledge in financial decision is based on the origin, where one can find the classic finances characterized by strict rationality assumptions in the study of monetary decisions. Over time, the emergence of modern finance was closely linked to elements of perception and expectations of people involved in financial decision making and accountability. Analyzing and defining notions of modern finances is related to uncertainty of economic transactions and their associated default risk.

This paper examines the corporate financing decision from the perspective of companies listed on the stock exchange. The paper also examines the financial risk undertaken by the decision of selecting a particular funding source taking into account the nature of the company financed, whether it is a listed company on the stock exchange or not.

The risk associated with specific form of financing is analyzed and quantified according to the type of the nature of project developed and its objective. This paper examines the defining characteristics of the financing decision of listed companies and also of those not listed on the stock market, both in terms of return and risk associated.

Research objectives deal with decision-making mechanism of an individual involved in a profitable and risk bearing activity. In this regard there were considered novelties brought by the new economic theories such as the theory of fractal theory and agent-based modeling, and their impact on the research topic addressed. Thus, the present study has a dual purpose, namely developing a model of economic decision-making under risk and uncertainty and also empirical testing of an econometric model of corporate financing decision on the capital market.

Usefulness is another concept used in economic theory to quantify the human decision making process used as decision trigger. And also the notion of 'expected return' captures the subjective factors of financial decision. The chosen alternative is the one that brings maximum utility to the decision maker which is known as "homo economicus". The fundamental assumption of conventional finance is the "homo economicus" and this is characterized by a rational behavior aimed at maximizing its profits.

People make decisions based on the context and on the basis of marginal value. Perceived value is thus subject only by comparison and similarity (Tversky, 2004). Differences in perceived value to psychological causes people to act. Value is the one that produce satisfaction mobilizing subject (McFadden, 2000). These assumptions described above characterizes the concept of economic value or profitability as it is used in the economic theories addressed in the present research.

Modern economic theories, such as portfolio theory developed by Markovitz (1956) models to estimate the cost of equity (Sharpe 1964, Jensen 1978, 1981; Fama & French, 2003; Estrada 2000), agency theory, the signal theory pecking or balancing premiums capital theory, theories or expectations agents aggregate prospectuses, game theory into question factors affecting human behavior and decision making will be analyzed in the present research to analyze factors consistent to profitability financial decisions at the enterprise level, from the perspective of the decisional subject.

Subjective elements pertaining to the definition of risk is based on how its perception by the subject decision. The difference between the "expected" that projected the subject before any financial decision and the market value of any financial decisions taken is close to zero according to traditional financial theory (A. Todea, 2005) and this situation of financial balance describes the characteristics of the financial market effective. Identify the difference between the economic market and the market price "expected" is modern finance is the subject of research.

Why is the difference between market price and intrinsic value of a financial asset? The answer according trying to find paper by analyzing numerous theories and studies in order to find a suitable model for this purpose and the design and empirical testing of specific models of financial market.

So the purpose of this research lies in the analysis of how financial decisions integrates risk subjects to obtain a return "expected" as high as possible.

Why subjects and enterprises are the focus of this analysis? The answer is as follows: agents are those who decide on a company and taking risks in financial decisions. Financing companies` projects decision-making is based on factors such as risk and return on a company's allocated resources in a selected direction. The empirical study of time series on the evolution of exchange rates over time constituted a rich source of information for research interested in studying the phenomenon of financial decision under risk and uncertainty. This paper examines factors such as risk and return related financial decisions based on data collected from financial market using a statistical and econometric methodology adapted to this purpose.

The means by which the author tried to define and measure risk covers both *innovative perspective* to address the risk associated with the financing decision of projects managed by companies listed on the stock exchange as well as those listed on the stock market. This paper presents a conceptual model of the decision to finance the project companies listed on the stock exchange by addressing both its factual circumstances related to the financial indicators of the company. Also, the paper presents an empirical model of the decision to finance the companies listed on the stock market and hence their projects through the analysis of subjective factors that influence risk perception of financial market analysis in econometric model tested empirically on the international market of American stock exchange.

However, the prospect about managing risks associated with financing for projects present a **different approach** to analyzing risk factors as impact on global decision subject, in terms of macroeconomic, institutional and microeconomic level, in terms of managing enterprise projects but and the project and the subject decision.

The *novelty* brought by this research concerns the definition of a set of quantitative risk measurement financing projects managed by companies such as cost or the speed with

acceleration income risk. These indicators are used as selection criteria decision-making model of funding sources. Post decision will decide what funding source to drive back the project implemented according to the degree of risk determined based on the indicators listed above.

However, the decision model described in the paragraph above is one illustration that is meant to contribute to understanding the phenomenon rigorous risk associated with funding projects managed by companies looking traditional funding sources.

This paper presents the analysis of the risk associated with traditional sources of funding and study associated risk capital market financing. Why is this subject treated in a separate chapter in this paper? Since finance capital market presents a complex mechanism, specific and different financial risk measurement to traditional sources of corporate financing. Any organization that wishes to fund projects developed using funding from the capital market is bound to know how it is perceived and quantify the financial risk associated.

Also, the present value of the work lies in the econometric model tested on the international market share of 50 American. The database used contains values of the statistical indicators used are rigorously quantified and recorded. It is very important to the quality of data collected and used in empirical research for models tested to provide a high degree of confidence. From the above considerations, this paper uses database to finance.yahoo.com. Econometric methodology used in testing statistical econometric model selected is appropriate fashions to quantify the financial risk associated with financial decisions in the capital market.

The potential impact of scientific research conducted and presented in this paper refers to both its practical results obtained through empirical testing of the econometric model that shows its viability in detecting existing risk capital market analyzed and the performance expected investors in transactions. Practical utility of empirically tested model refers to its ability to be used in other markets for funding decision making of enterprises listed on the stock market.

Value of the empirically tested model of capital market refers to its ability to quantify the risk and performance of companies listed on the stock exchange so that any manager whose company is listed on the stock market can make the decision to finance new projects development company its under performance and minimum risk. The reason is that any new development

project undertaken by the company will directly impact the actual performance of the company listed on the stock exchange

And thence, research conducted presents a theoretical contribution to knowledge and understanding of project financing mechanism managed by enterprises and used in addition to traditional sources of financing and capital market financing.

Research limitations

First, no econometric model will not accurately capture all of the real phenomena because the methods used are theoretical abstractions hypothetical models to study and compare different real phenomena. A phenomenon like eg share prices on the stock market development is a complex process due to many objective and subjective factors. Multiple theories of evolutionary models of capital markets bring more knowledge and understanding of this phenomenon. That is the charm of this uncertainty study of how capital markets and pricing in this market. If I get it at the exact explanation of the phenomenon would have written many papers on the subject?

Motivation and importance of research

Motivation of this research is to analyze the mechanism of financial decision makers in projects managed by enterprises in conditions of risk and uncertainty. Individual decisions give form and structure of the current economy. It imposbil to separate the concept of "decision" of the "economy" of the objective of understanding the phenomenon of risk management in the decisions that are taken for this purpose at individual, project or organizational level.

Also, investors and decision agents in the economy are primarily humans. Risks that may arise in the financial decisions of individuals relate to their unpredictable nature and will be analyzed in this work.

The econometric model used in the regression conducted risk premium related to a studied action against market risk premium relative to the risk-free asset rate. Objective of the analysis sample

used consists in studying the formation mechanism of capital markets investor sentiment on return transactions made on the basis of risk associated gain or loss.

Research Methodology

The **main research methodology** refers to the empirical analysis of an econometric model built to test it on the international market. The purpose of the model is to study the impact of risk factors and profitability on financial decision and uncertainty conditions and sustainability.

Secondary research methods used refers to direct observation, critical comparisons made with the goal of identifying similar or different aspects of the concepts studied and the description of the dominant impact on the research topic addressed, the case study done by a comparative approach by identify common elements or differentiation of theoretical and practical aspects analyzed in order to identify research hypotheses. Economic analysis is classified in the literature - positive and normative analysis - depending on the purpose and the method used. The first type of analysis refers to the study of economic phenomena to uncover the mechanisms and processes to describe phenomena and to reveal new meanings. The second form of analysis is the use of the results of the first methods to substantiate conclusions or value judgments on certain directions to be followed. Research methods used in this paper refers to the use of positive analysis to understand and to explain the phenomena analyzed by presenting options and the costs and benefits involved as well.

The paper is structured in **three parts over six chapters**. The first part refers to the presentation of the current state of knowledge on the subject of decision-making mechanism reflected both in terms of finances and in terms of classic modern. In the second part presents the theories that have impact on the risk approach in the orientation process of the financing decision of the enterprise or project level but also in terms of the individual. The third part presents the model construction and testing of the financing decision. Throughout this work will be presented the main results, the resulting conceptual design of a decision of "homo economicus" in terms of risk and uncertain returns. In the last chapter will be presented related findings and future research perspectives.

Chapter 1

Chapter objective

Chapter 1 captures optimal resource allocation problem in economic theory and international economic context. It is the place and role of financial policy in the financing decision of firms in the current international context.

The company viewed as a portfolio of projects

"Homo economicus" participating in economic exchange with a purpose, which is flexible, and it touches and has a range of tools. He is "limited" to "inputs" and its resources also faces the "outputs" to reach the goal.

Thus, any human activity can be defined as a project. Economy as a whole is summing the results of all projects individuals influence each other so that the economy appears as a portfolio of projects.

The concept of the project relate to any type of financing because financing is structured according to the purpose for which it is designed so that any objective to fulfill the consumption needs of human, material, financial or otherwise. So any lens fits a certain financial structure to ensure the performance objective.

Individuals are organized in groups, united by a common purpose. Depending on the complexity of the objective pursued by individuals forming groups that confer regulated legal entities some time durability and safety of individuals that make it up. Their goal is to minimize the "loss of value" as well as to maximize the gains of the partners involved in a transaction in a market characterized by private information, asymmetric and heterogeneous distributed among participants.

Organizing human activity in general has a complex structure as a "fabric" that resembles "Sierpinski's triangle," a geometrical figure present in the fractal theory. This is a geometric shape that has a fractal structure because, as you look more closely you see "children" of all the same components thereof are actually just their size is the one that is the only difference. The

figure closer look fractal object can be seen in the composition of an infinity of identical copies of the whole in terms of structure but different in size.

Similar shows the structure and organization in terms of organizing human activity directed towards achieving a goal. The company is made up of projects that correspond to human activities and achieve the objectives of individuals interconnected to each other through a network of projects.

Corporate financial policy and scope

Financial policy aspects of firms includes optimal allocation of capital towards the objectives and business development projects. This is realized in practice in three directions: financing policy, investment and dividend. Each type of policy in part contains a set of decisions to ensure the strategic direction of each enterprise.

This paper deals with the subject of the financing decision in terms of selecting the most appropriate forms of finance to projects managed by the company. Financing decision is analyzed from the perspective of rational decision-making agent but also of the irrational. The paper also deals with the subject of the decision to grant a perfect market and imperfect market on.

The manager of a company may decide to finance the stock market by issuing shares or to seek funding sources provided by the banking sector and other donors, public or private, and domestic sources through reinvested earnings (Halpern et al., 1998) .

This paper deals with the subject of the financing decision and capital cost criteria mainly grounding or otherwise return on capital and the risk involved.

For unlisted enterprises financing, financing decision is based on criteria of profitability and risk assessed according to historical work that întreprinderii. In other words, the return and risk of a new enterprise investment project to be funded will be evaluated according to the performance of other projects implemented by the company in the present or past (Stancu, 2007).

In case of listed companies, the risk and profitability of the company's new investment project that will be evaluated taking into account both past performance of the company and the performance of other listed companies implementing projects in similar areas (Halpern et al., 1998).

In both cases, the risk and return is quantified by a specific mechanism of each case, both listed companies and those listed. These criteria are necessary financing decision because according to them to choose the right mix of financing the projects developed by the company.

Chapter 2

Chapter objective

Chapter 2 presents theoretical and practical foundation funding decision listed and unlisted companies in the capital market. Chapter discusses in detail the scope of theories on the subject, both classical and modern, such as the theory of behavioral finance.

Funding sources

Firms use a mix of funding sources to support projects implemented by them. Each project implemented by the enterprise will pursue a distinct objective that involves a separation of its implementation of other activities of the company. But not all business objectives to be implemented by different projects but major ones involving achieving their long-term, multi-rule, and requires a specific design objective independent financial and implemented by the project.

Offers financing for businesses are very different today. Bank loans, government grants, self-financing sources of reinvested earnings are already established in the literature as traditional sources of financing of enterprises (Tulai, 2003). Market development funding sources led to larger scale use of funding from the stock market, venture financing through public-deprivation or financing projects supported by public financial institutions (European Union, World Bank) or by funds investment and private donors.

"Arbitration" between the interests of project managers and owners of enterprises

Arbitration conducted by consumers and producers are in a market with flexible prices, everyone is motivated by maximized surplus, that is the difference between effort and reward obtained from an economic transaction. How the real market prices fluctuate depending on supply and demand developments, information is neither complete nor perfect truthful divergent interests of consumers and producers are guided by "signals" received from each other.

Trends managers "dressing" the company's image in order to enhance investor confidence in the business have been studied by S. Grossman and J. Stiglitz in 1976 and S. Ross in 1979 giving rise to the theory of "signals" (Stancu, 2007). Also JF Nash (1950, "The Bargaining problem") examines the results that may be obtained through negotiation by two or more players in the market in terms of information asymmetry existing signals that they transmit.

Game theory, whose founder is John von Neumann (1928), is based on his theory on the notion of "minimax" (Rasmusen, 2000), referring to minimize losses in simultaneous games between two or more participants whose stake is the sum of zero. In view of game theory, economics is a "game" between different actors fulfill different roles depending on who establish their "individual lines" that is to say action strategies to meet the interests of the parties involved in the game. Game theory focus on studying the behavior of individuals in their interaction and provides a different view on the notion of the economy as opposed to the classic.

Prospects of behavioral finance theory in explaining decision-making mechanism

The theory of behavioral finance examines how economic value is created in the context of people's irrational decisions on the spur of emotions, beliefs, intuitions, asymmetry of information and specific risks. (Talpa et al., 2006, Varian, 1992) also is looking for and explaining how people manage economic risk to use in order to achieve a level of profitability as high (Elvin, 2004). In this respect, Kahneman states that people evaluate the profitability of a decision in terms of how he wins or loses the transaction and not in terms of the final value (Kahneman & Tversky, 1979).

Chapter 3

Chapter objective

Chapter 3 captures the many "faces" of risk by providing global perspectives on the individual and present risk factors associated finance companies, macroeconomic, institutional to project level or enterprise-level decision-making agent.

The chapter introduces the concept of risk in corporate finance. It also defines the risk according to the criterion of "expected value" of subjects in any economic transaction made. It defines the concept of "expected value" depending on context, be it monetary loss or gain. In financial theory, risk is related to the hoped for or expected. In this context, risk is defined as the probability that there may be a change in the values obtained from the expected value.

Markovitz was first proposed in his "The Utility of Wealth" in 1952, changing assumptions underlying the expected utility theory translatând focus from the calculation of the final values towards the edge like how lose or gain from a transaction .

What is the marginal value? It is precisely the difference between two successive states, two goods substitutes or two similar investments. Comparison of the difference and the people decide the difference between them. People choose the option that provides the highest marginal value.

The concept of "expected utility" comes to characterize investors' preferences in the decision to fund a project. Utility theory as a model of rational decision-making behavior was mainly used by traditional economic theory. Expectations theory of Kahnemann and Tversky (1979) is an alternative to the utility and refers to the fact that the preferences of the subject related to the selection values are convex for losses and concave for gains and generally steeper for losses than gains.

The authors identified a number of effects that shape behavior and decision that have been made by other authors such as Maurice Allais (1988). The latter is related to the notion of subjective probability as perceived probability targets by human nature. This phenomenon was also described by Benoit Mandelbrot, father of fractals, and Nassim Taleb theory advocate extreme

events. This phenomenon is the fact that people undervalued events that are estimated to have a low probability of appearance as opposed to those that are safe. When it comes to the decision maker would be tilted toward loss to assume additional risks as opposed to secure gains when the subject rejects any risk.

Regarding this, Maurice Allais (1988) states that people given different meanings of equal variations of statistical probabilities so that 1 percent difference between a 99% and 100% has a greater value for the individual and determine the specific attitude towards risk difference compared with 1 percent to between 10% and 11%. It can be seen as individual preferences, purely because of the perception and subjective value judgments that are representative of human nature does not vary linearly with the variation of statistical probabilities. So a 1% variation of probabilities people because perception and judgment may be granted a significance of 10% or even 30% the same statistical variations deterministic. In this respect, Maurice Allais (1988) speaks of psychological probability that given different values of the statistical probability of the same event by different context and also semnificații same percentage changes so that we can speak of psychological probability as a function that assigns each statistical probability value p 'depending on the context and perception.

Perspective on risk is the overall individual builds and presents the risk factors associated finance companies, macroeconomic, institutional project level, firm up the decision-making agent. The main sources of risk at the enterprise level economic activity resulting from its interaction with the external environment (owners, shareholders, suppliers, customers, creditors, partners, associates) and the internal (employees, processes and internal structures). Also, the institutional framework: legal environment, political stability, fiscal burden, the degree of market segmentation-integration are factors beyond a firm but represent potential sources of risk at an enterprise level.

Study level quantitative risk models and identify it as valid measurement has been the subject of numerous scientific studies over time. One of the most quoted authors of this is William Sharpe who in 1964 published an article about finding a model to estimate the equilibrium prices of financial decisions under risk, whether the capital market or at enterprise, his model was taken and used in many aspects of business and known as the CAPM (Capital Asset Price Model). In developing their model, Sharpe is influenced by the ideas of Levy (1978), Merton (1987), Markovitz (1987) as he himself says (Sharpe, 1991). Also researchers interested in the usefulness of his model have filled with other factors impact and led to its widespread application.

The theory of fractals to quantify the risk associated with the economic and financial decision

Financial models are based on the method of calculating the standard deviation and variance to estimate possible biases associated probability values by performance indicators tracked by a certain average value expected. The aim relates to minimize negative effects major price deviations from the mean by what is called "portfolio diversification."

Risk - financial theory approach is related to the hoped or expected. In this context, risk is defined as the probability that there may be a change in the values obtained from the estimated value. To this end use measurement tools that deviations by calculating the standard deviation, variance and correlation coefficients. Also, risk measurement by fractal analysis can bring more financial knowledge and understanding of more complex phenomena as the methodology used by this device can quantify multifractalitatea time series and presents techniques to study distributions leptocurtice (Todea et. Al., 2012).

According to B. Mandelbrot, the "father of fractals" stock market stock prices do not vary following line graph of a continuous function but vary "spotan" and variations can be 10 times higher than average, calculated by dispersion (Mandelbrot, 2003). Taleb argues Mandelbrot's ideas when he talks about the fact that economic reality markets are characterized by "concentration". This is due to technical progress and due to the economy evolves in "leaps" and not "For kids steps" (Taleb, 2005). Thus the operation of the current economy implies that events such crises could be addressed in the context of economic reality "normal".

Chapter 4

Chapter objective

Chapter 4 presents a personal approach to the financing decision of a firm. In this chapter include the assumptions of the ideal model of a project financing decision under risk and uncertainty. Decision model described in this paper is to provide a tool for the substantiation of decisions related to an investment project financing for companies listed on the stock exchange. The model uses elements of fractal theory, agent-based modeling and dynamic principles of econophysics.

Develop a decision analysis model of financing for implementing projects

Capturing changes due to cost and funding form accessible on the structure and distribution of the value of project costs and revenues achieved involves identifying potential sources of risk. When the schedule of development cost and income appears an area whose size is a warning to the manager or owner of the project, detecting the possibility of occurrence of a risk of not recovering the cost of financing the project revenues. Economic model thus supports the decision mechanism of a project managed by the company, in order to select the most appropriate funding sources.

Objectives and Methodology

This paper captures a personal approach to the financing decision of a firm. In this chapter include the assumptions of the ideal model of a project financing decision under risk and uncertainty. The so constructed describes the hierarchy of funding bids for projects by enterprises based on selection criteria such as the degree of risk assumed or desired profitability by financing decision taken by the subject. The role of decision model described in this paper is to provide a tool for the substantiation of decisions related to an investment project financing for companies listed on the stock exchange.

The decision is based on the principles described theory and agent-based modeling the economy as consisting of many decision-making agents interact with each other.

Establishing decision model assumptions

In this work, the economy is seen as a playing field, the players represented by agents makers adopt different strategies according to its objectives (Camerer et al., 2001). Some want to gain profit from transactions with others and these are the individuals that economic theory he calls "homo economicus". They adopt behavior to mitigate risk aversion desired profit. Another category of economic agents are what game theory calls them "homo ludens" (Bătrâncea, 2009), who prefer to take some risks in transactions with other partners as they play the "love of it". The third category are those agents that permanently changes its strategy depending on the situation, whether it is a financial loss or a gain, constantly adapting its objectives to the environment in which it is located.

Form which reflected the interactions between economic agents is the decision. This connects real and hypothetical effects of economic, legal or social. Economic decision is subject-based modeling agents and define the decision-making mechanism for financing the projects managed by enterprises.

Indicators used in the dynamic analysis of the risk of financial imbalances

First, the dynamic analysis model to accomplish a diagnostic indicators of risk of financial imbalances in the revenue and expenditure of the project budget.

The motivation for using the concepts of speed and acceleration in risk characterization financial imbalance

To assess the risk of financial imbalances and its size will numeracy. To identify areas where there is a risk to be used notion of speed and cost and income to measure the level of risk will be used concept of acceleration in risk (Tulai & Popovici, 2010; Popovici et al., 2010). Speed and acceleration indicators will be applied on income and costs of the project analyzed in order to identify imbalances that may occur in the current business of an enterprise during balance of payments with receipts. In this respect, Damodaran 2004 described the goal of any funding mix as to ensure balance of payments financial liabilities and payments generated from operating activities with the proceeds generated by the current activity to reduce the risk of default (translation from lb. English is the risk of being unable repayment of financial liabilities).

Methodology to identify the area where there is a risk refers to the difference between the range determined by the rate schedule costs financing package access and area chart speed generated revenue (Tulai & Popovici, 2010; Popovici et al., 2010). Income generated by the project remain the same along the analyzed scenarios as it relates to the ability to generate revenue from the project and does not depend on the form in which it was funded. Area chart obtained from the difference of these two functions of velocity integrals costs and revenues generated by the project is risk zone area (Tulai & Popovici, 2010; Popovici et al., 2010).

Applications of fractal geometry to estimate the risk of financial imbalances

Risk indicator acceleration gives a warning on the speed with which the decision maker can reach a financial imbalance and its duration depends on whether or not there will be financial collapse of the entire project. This indicator can be used to estimate the probability of financial imbalances in projects managed by enterprises. The amount of time that analyzes the likelihood of a risk may be small, on the order of seconds, days or more, up to several months or years. This is reflected by the concept of scale fractal nature of the phenomena studied (Scarlat, 2006).

Chapter 5

Chapter objective

Chapter 5 presents an empirical model tested on a sample of 50 American companies to study the formation mechanism of capital markets investor sentiment on return transactions made on the basis of risk associated gain or loss.

Premises of econometric model used

The emergence of numerous models for measuring the cost of equity of listed companies on the stock market was driven by the motivation to find optimal model to capture the most correct value. This search has not stopped yet and presents the subject of numerous investigations. The empirical study included in this paper refers to the testing of a model for estimating the cost of equity of companies listed on the American stock market. The purpose of performance analysis stock companies in the sample lies in the decision to grant the right depending on the subject's attitude towards risk and decision criteria followed by the return.

This paper presents testing econometric model developed by Sharpe (1964, 1991) in the international market through the inclusion in the sample of 50 shares belonging to companies resident in the USA. Intended use of the model is to evaluate the performance of the stock of companies included in the sample for optimal decision subjects according to risk and return criteria assumed by them.

Description of the database used

Type of data used in testing the econometric model relates to time-series with a weekly frequency.

The period under review is from 03/01/2000 to 06/09/2014 and includes 39,156 observations included in the sample analyzed time series distributed on 52 subjects.

Data series are built on the closing price of shares of companies included in the sample. Values shown are average weekly closing prices, daily actions. Population statistics from actions that were issued on the 80 companies listed on international markets and whose data were provided by finance.yahoo.com database. Of the population by selected firms that had at least 174 observations per series to provide sufficient data for a more precise analysis of time series and to obtain statistically meaningful results.

The database used for testing the econometric model used was provided by www.finance.yahoo.com. The empirical study includes 50 American companies and related data series index S & P 500 and Treasury bills - U.S. Treasury T-Bills Week 13, totaling 52 time series, each series comprising 174 observations. Empirical analysis was conducted based on 39,156 observations.

Companies selected in the sample from the 8 major sectors of the American economy, namely: financial, consumer goods, industrial goods, primary production, technology, services, health care, utilities. Each sector consists of 4, 5, 6 or 9 depending on the selection made companies.

The objective of the empirical study

Objective of the analysis sample used consists in studying the formation mechanism of capital markets investor sentiment on return transactions made on the basis of risk associated gain or loss.

The empirical results of the model used

In order to estimate the regression equation coefficients ec. No. 30 using the method of least squares problems in eliminating the time series used Newey-West procedure for estimating regression parameters that actually produce standard errors 'HAC' already corrected for autocorrelation and for heteroskedasticity.

The results based on the econometric study of 50 American companies reveals that sectors such as financial, healthcare, utilities or services that have suffered most from the economic downturn than other sectors, presenting a higher volatility than the overall market. The reason is that businesses affected by the financial crisis reduced spending with third party services, health care activities and energy consumption of electricity or by restricting. The purpose of these actions was for most companies to adapt to the conditions of economic crisis.

Sectors such as industrial goods and primary production and the technology has been more volatile than the market and less volatile during certain periods. Industrial goods sector and primary production had a similar pattern and showed volatility on average higher in the pre-crisis and lower volatility in the post-crisis. Technology sector reflected a trend opposite to these two sectors above, being on average before the crisis more volatile than in the post-crisis period.

Consumer goods sector was the only one that showed a lower volatility than the overall market beta coefficient with values generally below one. This result is supported by the fact that enterprises may forgo investment costs or third party services but can not give in the same measure to food, clothing, or consumer goods that are necessary for daily living.

The results show that among the 50 American companies valued the equity cost were identified companies with high performance indicating investors' optimistic outlook on the yields offered by them. As alpha coefficient values taken for actions with minimum values it was found that they were more than 90% of cases showing negative actions showed lower yield than the overall market.

Chapter 6

Chapter objective

Chapter 6 presents general conclusions on addressing risk in the financial decision analysis and empirical testing of various financial and economic models and drawing lines of future research prospects and expanding empirical analysis performed.

Conclusions regarding possible sources of risk in the financing decision of a firm

This paper presents two main forms of risk approach. First the risk to the company using project management to achieve its major objectives. In this approach the risk is quantified at project level and characterized by financial equilibrium level of revenue and expenses thereof.

The appearance of novelty brought by research relates to quantify risk using financial indicators name: speed and income project cost and risk of its acceleration. This paper presents a conceptual model developed by the author to describe how a project manager decide its financing alternatives based on the analysis of the financing mix provided to the analysis of financial indicators calculated.

The decision of capital market financing by stock performance shares

Empirical studies on the subject of the relationship between risk and performance of American companies listed on the stock market by studying the empirical relationship between dividend yields and market efficiency as a whole. These steps were necessary to achieve the third objective, namely that of studying specific decision model of capital market financing for companies listed on the stock exchange.

Valuable contribution of this paper related to subjective aspects of financial decision lies in the foundation of a conceptual model of decision financing businesses both through traditional funding sources as well as the modern capital market. The model captures both objective aspects and the emotional, irrational and subjective human decision-making mechanism.

Any manager of a company that is listed on the stock market will have an eye to the beta and alpha coefficients related stock returns of the company they run. Any new development project undertaken by the company will directly impact the actual performance of the company listed on the stock exchange. The reason is that a company listed on the stock exchange has increased visibility to investors and they can "charge" or rather "encourage" any action or new project undertaken by a company listed on the stock exchange price of the shares listed on the stock exchange mechanism. In this respect, any company manager will be attentive to developments beta and alpha coefficients related stock returns of society because they are a "barometer" of

investors' perspective on the projects developed by the company and its stock directly influence performance.

The market tested empirically decision of 50 American companies reflects how any company manager will discuss the new development project financing and alternative capital market funding. The decision presents three categories of subjects, depending on the attitude towards risk. In the reality of everyday human decisions on capital market financing involves a degree of risk. Some investors are attracted by the risk, others risk aversion and a third category has a dual attitude towards risk, meaning that in specific situations, may be attracted to risk or to reject. Another factor in the decision to finance capital market investors is the prospect of future earnings which could be achieved through the exchange. Any estimate of the past for the future involves a degree of risk and the risk is quantified in the econometric model tested.

The decision tested empirically capital market presents an alternative to making the decision on the capital market financing for companies listed on the stock exchange, based on specific risk and return criteria.

Prospects for future research

This paper presented the analysis and testing of the econometric model used to understand the mechanisms of the formation of capital markets investor sentiment on return transactions made on the basis of the risk of gain or loss associated financing decisions of listed companies on the stock market.

Achieving this goal was achieved by resorting to statistical and econometric methods and techniques that we studied the empirical relationship between the yields of the selected action compared to the capital market subjects, represented by the return of a market index.

Further, the research started in this work can be extended by testing both global empirical model of the decision to grant the stock market and other emerging markets such as border or.

And thence, will test and other valuation models yield financial decisions such as capital market Estrada's model (2000) or 3-factor model of Fama & French (2003). Fractal analysis with agent-based modeling could be used to unravel the mysteries of conjugate complex financial phenomena.

REFERENCES:

1. Aggarwal R. & Goodell John W. (2011), *International variations in expected equity premia: Role of financial architecture and governance*, J. of Multi. Fin. Manag. 18 (2008) 389–404, www.elsevier.com/locate/econbase, available online at www.sciencedirect.com, accesat la 03.10.2012
2. Aggarwal R. & Goodell John W. (2008), Equity premia in emerging markets: National characteristics as determinants, Journal of Multinational Financial Management, journal homepage: www.elsevier.com/locate/econbase, available online at www.sciencedirect.com, accesat la 09.12.2012
3. Ahmad – Khalife S. et al., 2010, CAPM & Adjusted CAPM, available online at <http://ssrn.com/abstract=1577006>, accesat la data de 12.03.14
4. Arrow K. J. (1964), The Role of Securities in the Optimal Allocation of Risk-bearing, The Review of Economic Studies, Vol. 31, No. 2. (Apr., 1964), pp. 91-96., Stable URL: <http://links.jstor.org/sici?sici=00346527%28196404%2931%3A2%3C91%3ATROSIT%3E2.0.CO%3B2-D>, accesat la data de 04.04.2014
5. Arrow K. J. (1951), Alternative Approaches to the Theory of Choice in Risk-Taking Situations, Econometrica, Vol. 19, No. 4. (Oct., 1951), pp. 404-437., Stable URL: <http://links.jstor.org/sici?sici=00129682%28195110%2919%3A4%3C404%3AAATTTO%3E2.0.CO%3B2-F>, accesat la data de 04.04.2014
6. Allais Maurice, (1988), An Outline of my Main Contributions to Economic Science, Nobel Lecture, December 9, 1988
7. Arnold, R., (2004), Economics, ed. Thomson Learning, USA,
8. Aumann, (2004), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
9. Aumann R. J., Serrano R. (2008), An Economic Index of Riskiness, [Journal of Political Economy, 2008, vol. 116, no. 5_ 2008 by The University of Chicago. All rights reserved. 0022-3808/2008/11605-0001
10. Brooks C., (2008), Introductory Econometrics for Finance, 2nd.edition, Cambridge Press
11. Bloomquist K. (2004), A comparison of Agent-Based Models of Income Tax Evasion, Internal Revenue Service, Office of Research Washington, D.C., USA;
12. Boman A., (2014), What Can We Learn from a Consumption Based Asset Pricing Model with Systemic Risk?, available at papers.ssrn.com, accesat la data de 10.03.14
13. Boloş Marcel, (2006), Bugetul și contabilitatea comunităților locale, între starea actuală și posibilități de modernizare, Ed. Economică, București

14. Baele et al., (2014), Cumulative Prospect Theory and the Variance Premium, available at: <http://ssrn.com/abstract=2411577>, accesat la data de 10.03.14
15. Baker, (2003), Notes for Mathematics, Groups, symmetry and fractals, Department of Mathematics, University of Glasgow,
16. Black F., Jensen M., Scholes M., 1972, The Capital Asset Pricing Model: Some Empirical Tests, Studies in the Theory of Capital Markets, Michael C. Jensen, ed., Praeger Publishers Inc., available online at papers.ssrn.com, accesat la data de 10.03.14
17. Bartholdy J., Mateus C., (2007), Financing of SME's: An Asset Side Story, available online at papers.ssrn.com, accesat la data de 10.03.14
18. Bătrâncea L., (2009), Teoria jocurilor, comportament economic, experimente, Ed. Risoprint, Cluj Napoca,
19. Boudon Raymond coord. și colectiv, (2005), Tratat de sociologie, Ediția a doua, ed. Humanitas, București
20. Broquet C., Cobbaut R., Gillet R., van den Berg A., (2004), Gestion de portefeuille, ed. De Boeck Supérieur, Bruxelles.
21. Chirilă E., Finanțele întreprinderilor, Editura Universității Oradea, ISBN 973-613-056-8, 2001
22. Camerer C. et al., (2001), Behavioral Game Theory: Thinking, Building and Teaching, Research paper NSF grant,
23. Cowell F. A., (2004), Microeconomics, Principles and Analysis, Sticerd and Department of Economics, London School of Economics,
24. Collins D. & Abrahamson M., (2006), Measuring the cost of equity in African financial markets, Emerging Markets Review 7 (2006) 67–81, accepted 27 June 2005, available online at www.sciencedirect.com, accesat la 09.10.2012
25. Dixit A., (1990), Optimization in economic Theory, Oxford University Press, USA
26. Donadelli M. & Proserpi L., (2012), On the role of liquidity in emerging markets stock prices, Research in Economics, <http://dx.doi.org/10.1016/j.rie.2012.06.001>, available online at www.sciencedirect.com, accesat la 19.10.2012
27. Dvořák T. & Podpiera R. (2006), European Union enlargement and equity markets in accession countries, Emerging Markets Review 7 (2006) 129–146, www.elsevier.com/locate/emr, available online at www.sciencedirect.com, accesat la 09.11.2012
28. Dallal G. E, (2008), The Behavior of the Sample Mean (or Why Confidence Intervals Always Seem to be Based On the Normal Distribution), available online at: <http://www.jerrydallal.com/LHSP/meandist.htm> .

29. Damodaran A., (2004), Finding the Right Financing Mix: The Capital Structure Decision, available online at Damodaran Online Home Page for Aswath Damodaran - <http://pages.stern.nyu.edu/~adamodar/>, accesat la data de 29.03.2011
30. Damodaran Aswath, (2007), Corporate Finance: Capital Structure and Financing Decisions, available online at Damodaran Online Home Page for Aswath Damodaran - <http://pages.stern.nyu.edu/~adamodar/>, accesat la data de 29.03.2011
31. Damodaran Aswath, (2008), Investment Valuation: 2nd ED., Mc.Graw Hill, Breally and Myers – Finance,
32. Elvin Mike,(2004), Financial Risk Taking: An Introduction to the Psychology of Trading and Behavioural Finance, Wiley Trading Series, England,
33. Estrada J., (2000), A cost of equity on emerging markets, A downside risk aproach, available at papers.ssrn.com, accesat la data de 10.03.14
34. Fabozzi J. Frank & Peterson P., (2003), Financial Management and Analysis, 2nd ed., John Wiley & Sons, Inc, USA
35. Fama, Eugene F. & Richard Roll, (1968), Some Properties of Symmetric Stable Distributions, Journal of the American Statistical Association: September, pp 817-36.
36. Fama E.F. & Kenneth R.F., (2003), The Capital Asset Pricing Model: Theory and Evidence, available at papers.ssrn.com, accesat la data de 10.03.14
37. Frank M.Z. & Goyal V.K., (2003), Capital Structure Decisions, available online at papers.ssrn.com, accesat la data de 10.03.14
38. Frank M.Z. & Goyal V.K., (2009), Profits and Capital Structure, available online at papers.ssrn.com, accesat la data de 10.03.14
39. Fama, E.F. & French, K.R., (1993), Common risk factors in the returns on stocks and bonds, Journal of Financial Economics 33, 3–56.
40. Fama, E.F. & French, K.R., (1996), Multifactor explanations of asset pricing anomalies, Journal of Finance 51 (1), 55–84.
41. Fama, E.F. & French, K.R., (1998), Value versus growth: the international evidence. Journal of Finance 53, 1975–1999.
42. Falconer Kenneth, (2003), Fractal Geometry: Mathematical Foundations and Application. Second Edition, John Wiley & Sons.
43. Friedman I. & Savage L.J., (1948), The Utility Analysis of Choices Involving Risk, Journal of Political Economy, LVI (August, 1948), 279-304.

44. Gwartney, J., Lawson, R., (2003), Economic Freedom of the World Annual Report: 2003. The Fraser Institute, Vancouver. available online at <http://www.freetheworld.com>, accesat la data 10.02.2009
45. Goyal V.K, Frank M.Z., (2003), The effect of market conditions on capital structure adjustment, available online at papers.ssrn.com, accesat la data de 10.03.14
46. Gaud et al., (2005), Debt-Equity Choice In Europe, Research Paper N° 152, June 2005, FAME - International Center for Financial Asset Management and Engineering, Universitatea din Geneva, descărcat online de pe papers.ssrn.com, accesat la data de 10.03.14
47. Gordon & Shapiro (1956), Capital investment analysis the required rate of profit, Management Science, 102-110
48. Gareis Roland, (2006), Happy projects!, Ed. aII-a, ed. ASE, București,
49. Gellert W., Dr. Kustner, Dr.Hellwich, Kastner, (1980), Mică Enciclopedie Matematică, traducere de Postelnicu V., Coatu Silvia, Ed. Tehnică, București
50. Gibbons Robert, (1992), Game Theory for Applied Economists, Princeton University Press, New Jersey,
51. Greene William, (2003), Econometric Analysis, 5th Ed., Prentice Hall, USA
52. Gujarati, (2004), Basic Econometrics, Fourth Edition, The McGraw-Hill Companies
53. Grades M. et al., (2010), On the estimation of the cost of equity in Latin America, journal homepage: www.elsevier.com/locate/emr, Emerging Markets Review 11 (2010) 373–389, available online at www.sciencedirect.com, accesat la 09.10.2012
54. Halpern et al. (1998), Finanțe manageriale – Modelul canadian, ed. Economică, București; traducere după lucrarea Canadian managerial finance – 4th ed., (1994), ed. Dryden, Canada
55. Hart, O., (2001), Financial contracting. Journal of Economic Literature 39, 1079–1100.
56. Hayek F., (1945), The use of knowledge in society, The American Economic Review, sept. 1945, vol. XXXV, no.4, available online at <http://www.aeaweb.org/aer/top20/35.4.519-530.pdf>, accesat în 05.04.2014
57. Hayek F., (1974), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 5.04.2014
58. Harvey, C.R., (1995), Predictable risk and returns in emerging markets, Review of Financial Studies 8, 773–816
59. Hearn B. et al. (2009), Market liquidity and stock size premia in emerging financial markets: The implications for foreign investment, International Business Review (2009), doi:10.1016/j.ibusrev.2009.02.009, available online at www.sciencedirect.com, accesat la 10.10.2012

60. Hicks J.R, Value and Capital (New York: Oxford University Press, 1939).
61. Hurwicz L., (2007), But Who Will Guard the Guardians?, Prize Lecture, December 8, 2007
62. Hurwicz, Maskin, Myerson, (2007), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
63. Ibbotson, R.G. et al., (2006), The demand for capital market returns: a new equilibrium theory. In: Goetzmann, W.N., Ibbotson, R.G. (Eds.), The Equity Risk Premium. Oxford University Press, Oxford.
64. Jensen M. și W. Meckling, (1976), Theory of the firm : managerial behaviour, agency costs and capital structure, Journal of Financial Economics, nr.3,
65. Jensen M. & Michael C., (1968), The Performance of Mutual Funds in the Period 1945-1964." Journal of Finance, V. 23, No. 2: pp 389-416. Available from the Social Science Research Network eLibrary at: <http://papers.ssrn.com/Abstract=244153>. Jensen, Michael C. 1969. "Risk, the Pricing of Capital Assets, and the Evaluation of Investment Portfolios." Journal of Business, V. 42, No. 2: pp 167-247.
66. Kraus & Litzenberger, (1973), A state preference model of optimal financial leverage, J. of Finance, vol 28, 911-922
67. Kahneman D. & Amos Tversky, (1981), The Framing of Decisions and the Psychology of Choice Science, New Series, Vol. 211, No. 4481. (Jan. 30, 1981), pp. 453-458. URL:
68. <http://links.jstor.org/sici?sici=00368075%2819810130%293%3A211%3A4481%3C453%3ATFODAT%3E2.0.CO%3B2-3>
69. Kahneman D. & Amos Tversky, (1974), Judgment under Uncertainty: Heuristics and Biases, Science 185, n o. 415 (1974): 1124-1131,
70. Kahneman D. & Amos Tversky, (1979), Prospect Theory. An analysis of decision under risk, Econometrica, Vol. 47, Issue 2 (Mar. 1979),
71. Kahneman D. & Tversky A., (1992), Advances in Prospect Theory: Cumulative Representation of Uncertainty Stanford University, Department of Psychology, Stanford, Journal of Risk and Uncertainty, 5:297-323 (1992), Kluwer Academic Publishers
72. Kahneman D., (2009), Digital, Life, Design, Conference Munich, Germany, Courtesy of DLD, How Greenspan's Framework went awry, www.fora.tv.
73. Kahneman D., (2002), Maps Of Bounded Rationality: A Perspective On Intuitive Judgment And Choice, Prize Lecture, December 8, 2002
74. Kahneman D.; Jack L. Knetsch; Richard H. Thaler, (1991), Anomalies: The Endowment Effect, Loss Aversion, and Status Quo Bias, The Journal of Economic Perspectives, Vol. 5, No. 1. (Winter, 1991), pp. 193-206. URL: <http://links.jstor.org/sici?sici=08953309%28199124%295%3A1%3C193%3AATEELA%3E2.0.CO%3B2-V>, accesat la data de 05.06.2008

75. Daniel Kahneman, (2007), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
76. Kolmogorov N. & Fomin S., (1970), Introductory real analysis, Dover Publications, New York,
77. Krugman P., (2008), Some Chaotic Thoughts On Regional Dynamics Synopsis: Examines, in easy terms, basic principles of Economic Geography-- or why industries grow where they do. Discourages prediction, available online at: <http://www.pkarchive.org/theory/temin.html>, accesat la data de 04.04.2008
- a) Lintner, J., (1965), Security Prices, Risk, and Maximal Gains from Diversification, *Journal of Finance*, V. 20: December, pp 587-616.
- b) Lintner, J. (1965), The Valuation of Risk Assets and the Selection of Risky Investments in Stock Portfolios and Capital Budgets, *Review of Economics and Statistics*, V. 47: pp 13-37.
78. Liebovitch L., (1998), *Fractals and Chaos Simplified for Life Sciences*, Center for Complex Systems – Florida Atlantic University, Oxford University Press, New York-Oxford, 1998;
79. Lischewski J. & Voronkova S., (2011), Size, value and liquidity. Do They Really Matter on an Emerging Stock Market?, *Emerging Markets Review*, journal homepage: www.elsevier.com/locate/emr, available online at www.sciencedirect.com, accesat la 09.10.2012
80. Lapidus M. & Frankenhuijsen M., (2006), *Fractal Geometry, Complex Dimensions and Zeta Functions Geometry and Spectra of Fractal Strings*, Springer Science, Business Media, LLC
81. Long J. B., Jr., (1972), Consumption-Investment Decisions and Equilibrium in the Securities Market, in ed. Michael C. Jensen, *Studies in the Theory of Capital Markets*. New York: Praeger Publishers.
82. Levy H., (1978), Equilibrium in an imperfect market, A constraint on the number of securities in a portfolio, *American Economic Review* 68, 643-658,
83. Lally M. & Swidler S. (2008), Betas, market weights and the cost of capital: The example of Nokia and small cap stocks on the Helsinki Stock Exchange, *International Review of Financial Analysis* 17 (2008) 805–819, available online at www.sciencedirect.com, accesat la 11.10.2012
84. Lucas R., (1995), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
85. Macal C., North M., (2006), Tutorial on agent-based modeling and simulation part two: How to model with agents, *Proceedings of the 2006 Winter Simulation Conference*, Center for Complex Adaptive Agent Systems Simulation Decision & Information Sciences Division, Argonne National Laboratory, USA;
86. Mandelbrot Benoit, (1983), *The Fractal Geometry Of Nature, Updated and Augmented*, International Business Machines Thomas J. Watson Research Center Freeman and Company, New York;

87. Mandelbrot Benoit B, Sterling Professor of Mathematical Sciences, Yale University, New Haven, USA, (1963), New methods in statistical economics, *Journal of Political Economy*, 71,
88. Mandelbrot Benoit B, (2000) Fractal financial fluctuations; do they threaten sustainability?, *Science for Survival – Pontificia Academia Scientiarum*, MM.Vol.61, nr.3,
89. Mandelbrot Benoit B, Sterling Professor of Mathematical Sciences, Yale University, New Haven, USA,(2003), *Handbook of Heavy Tailed Distributions in Finance*, Edited by S.T. Rachev, Elsevier Science 2003, B.V.,
90. Mandelbrot, Benoit., Hudson, Richard L., (2004), *The (mis)behaviour of markets : a fractal view of risk, ruin and reward*,
91. Myers, (2001), Capital structure, *J. of Economic Perspective*, vol.15, 81-102
92. Modigliani F. & Miller M., (1958), Cost of Capital, corporation finance, theory of investment, *American Economic Review*, vol.48: 261-297
93. Morgenstern O., J. von Neumann, (1944) *Theory of Games and Economic Behavior*. 1953 edition, Princeton, NJ: Princeton University Press.
94. Markowitz H., (1952), Portfolio Selection - *The Journal of Finance*, Vol. 7, No. 1. (Mar., 1952), pp. 77-91, Stable URL: <http://links.jstor.org/sici?sici=0022-1082%28195203%297%3A1%3C77%3APS%3E2.0.CO%3B2-1>, accesat la 04.03.2014
95. Markowitz H., (1952), The Utility of Wealth, *The Journal of Political Economy*, Vol. 60, No. 2. (Apr., 1952), pp. 151-158. Stable URL: <http://links.jstor.org/sici?sici=00223808%28195204%2960%3A2%3C151%3ATUOW%3E2.0.CO%3B2-2>. The *Journal of Political Economy* is currently published by The University of Chicago Press, accesat la 03.02.14
96. Mayfield S., (2004), Estimating the market risk premium, *Journal of Financial Economics* 73 (2004) 465–496, Available online 15 June 2004, 2004 Elsevier B.V, available online at www.sciencedirect.com, accesat la 09.11.2012
97. Modigliani, F. & Perotti, E., (2000), Security markets versus bank finance: legal enforcement and investor protection. *International Review of Finance* 1, 81–96.
98. Myers, S., (1977), The determinants of corporate borrowing. *Journal of Financial Economics* 5, 147–175.
99. Merton R., (1973), An intertemporal capital asset pricing model, *Econometrica* 41, 867 – 887
100. Merton R., (1981), On Market Timing and Investment Performance, An equilibrium theory of Value for Market Forecasts, *Journal of Business*, vol.54, issue 3, (iul.1981), pp.363-406, available at papers.ssrn.com, accesat la data de 10.03.14
101. Mishra D.R. & O'Brien T. J., (2005), Risk and ex ante cost of equity estimates of emerging market firms, *Emerging Markets Review* 6 (2005) 107– 120, www.elsevier.com/locate/econbase, available online at www.sciencedirect.com, accesat la 12.10.2012

102. Mossin, J., (1966), Equilibrium in a Capital Asset Market, *Econometrica*, V. 34, No. 2: pp 768-83.
103. Machina M. J., (1987) Choice Under Uncertainty: Problems Solved and Unsolved, *The Journal of Economic Perspectives*, Vol. 1, No. 1. (Summer, 1987), pp. 121-154. Stable URL:<http://links.jstor.org/sici?sici=08953309%28198722%291%3A1%3C121%3ACUUPSA%3E2.0.CO%3B2-X>, accesat la 04.04.2014
105. Markovitz H., (1959), The Utility of Wealth, *The Journal of Political Economy*, Vol. LX, no. 2, april 1952, USA, Cowles Foundation Paper 57 USA.
106. Markovitz H., Levy H., (1979), "Approximating expected utility by a function of mean and variance", *American Economic Review*, June, USA.
107. Markovitz H., 1987, Mean-Variance Analysis in Portfolio Choice and Capital markets, Basil Blackwell Inc., New York, available at papers.ssrn.com, accesat la data de 10.03.14
108. Maskin Eric, (2007), Mechanism design: How to implement social goals, Prize Lecture, December 8, 2007
109. Myerson R., (2007), Perspectives on mechanism Design in economic theory, Prize Lecture, December 8, 2007.
110. McAfee P., (2006), Introduction to economic analysis, California Institute of Technology, available online at: <http://www.introecon.com>
111. McFadden D., (2000), Economic Choices, Nobel Prize Lecture, December 8, 2000,
112. McFadden D. & Cox E. M., (2005), The New Science of Pleasure Consumer Behavior and the Measurement of Well-Being, University of California, Berkeley, Frisch Lecture, Econometric Society World Congress, London August 20, 2005
113. Morar I. și colectiv, (2009), Fiscalitate, Ed. Universității din Oradea,
114. Moșteanu Tatiana, Marcel Boloș, Ioana Popovici, (2010), Turbulence or chaos on the public budget revenues" paper published in the *Annals of the University of Oradea*., available online at: <http://steconomicuoradea.ro/anale/volume/2010/n1/049.pdf>
115. Michalski G., (2012), Risk sensitivity indicator as correction factor for cost of capital rate, 6th International Scientific Conference Managing and Modelling of Financial Risks Ostrava, VŠB-TU Ostrava, Faculty of Economics, Finance Department, Electronic copy available at: <http://ssrn.com/abstract=2193398>, accesat la data de 10.02.2014
116. John Nash Jr., (1994), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008

117. Neumann J., Oskar Morgenstern, (1944), Theory of games and economic behavior, Princeton University Press, Bulletin (new series) of the American Mathematical Society Volume 37, Number 1, Page 103,S 0273-0979(99)00832-0, Article electronically published on December 21, 1999
118. Nistor E. I., (2004), Teorie și practică în finanțarea întreprinderilor, Ed. Casa Cărții de Știință, Cluj-Napoca,
119. McAfee P., (2006), Introduction to economic analysis, California Institute of Technology, available online at: <http://www.introecon.com>, accesat la 05.06.2009
120. Pratt J. W.,(1964), Risk Aversion in the Small and in the Large, Econometrica, Vol. 32, No. 1/2. (Jan. - Apr., 1964), pp. 122-136. Stable URL: <http://links.jstor.org/sici?sici=0012-9682%28196401%2F04%2932%3A1%2F2%3C122%3ARAITSA%3E2.0.CO%3B2-W>, accesat la 04.04.2014
121. Phelps E., (2006), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
122. Popovici I., Scarlat E., Rizzo F.,(2011), A Decision Model on Financing a Project using Knowledge about Risk Areas, published in the Journal of Knowledge Management, Economics and Information Technology indexed in DOAJ: no.01/2011; August:1-11;
123. Popovici I., (2010), Premises Of An Agent-Based Model Integrating Emotional Response To Risk In Decision-Making, published in <http://www.springerlink.com> 01/2011; 10:237-245, 12/2010; DOI:10.1007/978-3-642-22194-1_24
124. Popovici I., Scarlat E., Boloș M., (2010), Agent-based modeling in decision-making for project financing”, published in the Journal „Economic Computation and Economic Cybernetics Studies and Research”, www.ecocyb.ase.ro
125. Rasmusen E., (2000), An introduction to Game Theory, Games and information, fourth edition, Basil Blackwell,
126. Romer D., (1996), Advanced Macroeconomics, McGraw-Hill Companies, Inc., USA
127. Ross S., (1999), An introduction to Mathematical Finance, Options and other Topics, published by the Cambridge University Press, USA
128. Sogorb-Mira F. & López-Gracia J., (2002), pecking order versus trade-off: an empirical approach to the small and medium enterprise capital structure, available online at papers.ssrn.com, accesat la data de 10.03.14
129. Sogorb Mira F., (2002), How SME Uniqueness Affects Capital Structure, available online at papers.ssrn.com, accesat la data de 10.03.14
130. Scarlat E., (2005), Agenți și modelarea bazată pe agenți, Ed. ASE București;

131. Scarlat E., (2006), Caracteristici fundamentale ale dinamicii sistemelor neliniare unidimensionale. Elemente de teoria bifurcatiilor. Metode topologice de cercetare a comportamentului haotic, Ed.ASE București;
132. Scarlat E. & Chiriță N., (2001), Macroeconomie dinamică, Ed. Economică, București;
133. Shirai, S., (2004), Assessing the impact of financial and capital market reforms on firms' corporate financing patterns in India. South Asia Economic Journal 5, 189–208.
134. Serway et al., (2009), College Physics – 8th Edition, Ed. Brooks/ Coole, Cengage Learning, USA
135. Snowden D., (2008), Now, everything is fragmented, available online at:
<http://www.kmworld.com/Articles/News/News-Analysis/Now,-everything-is-fragmented--48949.aspx>
136. Shackman J. D. (2006), The equity premium and market integration: Evidence from international data, available at www.sciencedirect.com, Int. Fin. Markets, Inst. and Money 16 (2006) 155–179, doi:10.1016/j.intfin.2005.01.004, available online at www.sciencedirect.com, accesat la 10.10.2012
137. Sharpe W.F., (1964) Capital asset prices – A theory of market Equilibrium under conditions of risk, The Journal of Finance, Vol.19, Issue 3 (Sept.1964), pp. 425-442, publicat de www.jstor.org
138. Sharpe W.F.,(1991), Capital asset prices with and without negative holdings, Journal of Finance, Volume 46, Issue 2, june 1991, 489-506,
139. Samuels et al., (2003), A Companion to the History of Economic Thought, Blackwell Publishing Lt, USA
140. Screpanti E. & Zamagni S., (2005), An Outline Of The History Of Economic Thought, Oxford University Press,
141. Sowell T., (2004), Applied Economics - Thinking Beyond Stage One, Basic Books, A Member of the Perseus Books Group, USA
142. Smith A., (1776), An Inquiry into the Nature and Causes of the Wealth of Nations, an electronic classics series publication, The Electronic Classics Series, Jim Manis, Editor, PSU-Hazleton, Hazleton, PA 18202, available online at: <http://www.hn.psu.edu/faculty/jmanis/jimspdf.htm>; consultat la data de 10.11.2009.
143. Stancu I., (2007), Finanțe, ed. Economică, București,
144. Stancu I. & Mitroi A., (2007), Finanțe comportamentale versus analiză tehnică și fundamentală, Revista de Economie Teoretică și Aplicată, <http://store.ectap.ro/articole/176.pdf>, accesat la 04.04.2009.
145. Simon H., (1978), Nobel Prize Lecture, available online at: http://www.nobelprize.org/nobel_prizes/economic-sciences/laureates, accesat la 04.04.2008
146. Todea A., (2005), Eficiența informațională a piețelor de capital – studii empirice pe piața românească, Ed. Casa Cărții de Știință, Financial Crisis of The Faculty Of Finance, Insurance, Banking And Stock Exchange

(Fabbv) - Bucharest Academy Of Economic Studies, Faculty of Economics And Business Administration
(Feaa) - West University of Timișoara, Sif Banat-Crișana,

147. Todea et al., (2012), The informational efficiency of the Romanian stock market:evidence from fractal analysis, Emerging Markets Queries in Finance and Business, Procedia Economics and Finance 3 (2012) 111 – 118, doi: 10.1016/S2212-5671(12)00128-1
148. Todea et al., (2009), D-Capm: Empirical Results On The Bucharest Stock Exchange, Annals of The 10th International Conference In Finance And Economic Stability In The Context of financial crisis.
149. Todea A., (2008), Investiții – Selecția și finanțarea proiectelor de investiții/ Investiții financiare/ Gestiunea portofoliului, ed. Casa Cărții de Știință, Cluj Napoca 2008
150. Trencă I., (2005), Managementul financiar, Ed. Casa Cărții de Știință, Cluj,
151. Tulai I. C., (2003) Finanțe, Editura Casa Cărții de Știință, Cluj-Napoca,
152. a) Tulai I. C., Popovici I., (2010), “Premises of a decision model in financing projects” paper published in the Annals of the University of Oradea : Economic Science 01/2010; DOI:<http://www.doaj.org/doaj?func=openurl&genre=article&issn=1222569X&date=2010&volume=1&issue=1&spage=394>, Source: DOAJ;
152. b) Tulai I. C., Popovici I., (2010), “Modeling Risk using Elements of Game Theory and Fractals” paper published in Finante - provocarile viitorului (Finance - Challenges of the Future) 01/2010; 1(11):79-83. Source: RePEc;
153. Treynor, Jack L. 1965. How to Rate Management of Investment Funds. Harvard Business Review, V. 43: pp 63-75
154. Taleb N. & Mandelbrot B., (2005), Fat Tails, Asymmetric knowledge, and decision making. Nassim Nicholas Taleb’s Essay in honor of Benoit Mandelbrot’s 80th birthday, Wilmott Magazine, 2005
155. Taleb N., (2007), The Black Swan: The Impact of the Highly Improbable, Penguin, London.
156. Taleb N. & Pilpel A., (2007), Epistemology and risk management, Risk and Regulation Magazine , 25.08.200,
157. Taleb N., (2007), Black Swans and the Domains of Statistics, The American Statistician, August 2007, Vol.61, nr.3,
158. Taleb Nassim, (2008), The Role and Nature of High Impact Events (Black Swans): Technical Commentary and Empirical Data, Appendix to Edge Magazine, Sept. 2008
159. Taleb Nassim, (2008), The Role and Nature of High Impact Events (Black Swans): Technical Commentary and Empirical Data, Appendix to Edge Magazine, Sept. 2008.
160. Talpos I. et al., (2006), Deciziile publice și cultura, publicat în Revista de Economie teoretică și aplicată, available online at: http://www.ectap.ro/deciziile-publice-si-cultura-ioan-talpos_bogdan-dima_cosmin-enache_mihai-mutascu/a90/.

161. Talpos I. & Enache C.,(2007), Public finance and extreme events, publicată în analele Universității "1 Decembrie 1918" din Alba Iulia, a Facultății de Științe – ”Annales Universitatis Apulensis Series Oeconomica”, Nr. 9 / 2007, volumul 1, available online at:
<http://www.oeconomica.uab.ro/index.php?p=papers&l=ro&volumul=920071>.
162. Tversky A. & Kahneman D., (1974), Judgment under Uncertainty: Heuristics and Biases, Science 185,no. 415,
163. Varian Hal R., (1992), Microeconomic analysis, Norton International Student Edition, USA
164. Verboncu Ion, (2008), Managementul organizației, suport de curs pentru masterat online,
165. Welch, I., (2003), Capital Structure and Stock Returns, Journal of Political Economy, available online at papers.ssrn.com, accesat la data de 10.03.14
166. Williams J.B, (1938), The Theory of Investment Value (Cambridge, Mass.: Harvard University Press, 1938),
167. Zlate M., (2004), Tratat de psihologie organizațional - managerială, vol.1, ed. Polirom, București,

Comunicate si articole din presă:

168. Communication From The Commission To The Council, The European Parliament, The European Economic And Social Committee And The Committee Of The Regions: Implementing the Community Lisbon Programme:Financing SME Growth – Adding European Value, , 29.6.2006, COM(2006) 349 final”, Brussels,
169. Implementing the Community Lisbon Programme:Financing SME Growth –Adding European Value Communication from the Commission to the Council,,the European Parliament, the European Economic and, Social Committee and the Committee of the Regions, COM(2006) 349, 29.6.2006
- 170.Guide on Private Equity and Venture Capital for Entrepreneurs, an EVCA Special Paper, November 2007, European Private Equity & Venture Capital Association.
171. EVCA survey “Employment Contribution of Private Equity and Venture Capital in Europe”, November 2005.
172. EVCA Quarterly Activity Indicator, Q2- 2009 realizat de PEREP_Analytics, din 17 August 2009
173. Modalitățile prin care UE sprijină acordarea de împrumuturi întreprinderilor mici și mijlocii, available at:http://www.access2finance.eu/ro/Romania/more_about_how_it_works.htm

Surse de date pentru studiul de caz:

www.ins.ro

www.finantare.ro

www.fonduri-structurale.ro

finance.yahoo.com