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CORPORATE BEHAVIOURAL FINANCE – THE CASE OF LITHUANIA

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Abstract. Behavioural finances became especially important in recent years. Majority of studies covers individual investor decision making factors while corporate customers' investment behaviour, as a rule, encompass liability side (capital expenses, financing and structure; dividend policy; assessment of potential investment projects, etc.). This paper aims to establish investment possibilities of non-financial corporate investors in financial markets, basing on accomplished survey of companies managers, and strives to determine enterprise investment in financial assets assumptions. Though the results of the survey sample not fully meets the requirements of representativeness but satisfy the minimum margin error – up to 10 percent – acceptable level.

Keywords: behavioural finance, behavioural corporate finance, non-financial corporate investments in financial markets, non-financial companies' survey.

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JEL Classification: G02, G11.

1. Introduction

Investors' behaviour in financial markets arouses great interest among researchers and practitioners. Behavioural finance in recent years occupies a strong position in the field of investments. In most cases investigations are made from market perspective, for example analysis of market anomalies (Stankevičienė, Gembickaja 2012, etc.), market efficiency (Stádník 2012, etc.), seasonality (Debasish 2012, etc.) and so on. Others examine the factors influencing individual investors' investment decisions. Analyzing corporate financial / investment policy majority of investigations is related to capital financing or borrowing decisions taken. Thus, there is a slightly different understanding of behaviour corporate finance comparing with individual behavioural finance. This paper reports on the point of view of the investments not to fixed capital or business

development solutions, but company's participation in the financial markets, i.e. investments for assets enlargement purposes. The object of this paper is the corporate financial investments. The aim is to establish company's investment policies in financial markets. The objectives are: to overview scientific literature in the field of corporate investments; to investigate corporate managers to identify companies' investment policies; to establish the interrelations between companies' basic characteristics and factors determining companies' investment decision. Methods of research: comparative analysis of scientific literature, survey and correlation analysis.

2. Previous research

2.1. Corporate finance and efficient market hypothesis

The term "corporate finance" is intended to describe the interaction of managers and investors and its impact on value of the firm. In other words, the theory of corporate finance aims to explain the financial contracts and real investment behaviour that emerge from the interaction of managers and investors (according to this theory managers are supposed to make unbiased forecasts about future events and to use them in making decisions that best serve their own interests) (Baker, Wurgler 2011).

According to modern corporate finance, corporate executives as well as investors behave rationally in taking financial decisions. If the assumption of rational behaviour is correct, managers can expect that capital markets are fully efficient and mean that stocks and bonds are correctly priced at every single moment (prices of securities correctly reflect public information about their fundamental value). In accordance to this theory, investors goes without saying that managers take financial decisions based on their self-interest, rationally responding to incentives formed by compensation contracts, the market corporate control and other governance mechanisms (Shah 2013). Based on the fact that primary role of capital market is redistribution of property, which is efficient when prices help to redistribute resources fairly, Fama (1970) points out that the market can be called efficient if prices fully reflect available information which implies that market information is comprehensively used in order to set stock prices (Leipus, Norvaiša 2003). Hence, according to efficient market theory, the prices of securities are correct taking into account the information provided in the market, and competition among investors, seeking abnormal profits, drives prices to their "correct" value (Shah 2013). It is important to emphasize, that efficient market hypothesis does not assume that all investors act rationally, but it does assume that markets are rational; moreover, efficient market hypothesis does not assume that markets can foresee future, but it does assume that markets can make unbiased future forecasts. Talking about efficient market theory's impact on financial decisions, it must be added that, according to this theory, it was commonly assumed that information about securities and securities market as a whole spreads very fast and is reflected in the prices of securities without any delay (Malkiel 2003). Thus, according this approach, neither technical analysis (based on the research of stock prices

in the past in order to determine their prices in the future), nor even fundamental analysis (including the assessment of financial information such as profit, asset value etc. in order to identify "undervalued" securities) can enable investor to receive profit that exceed the return of randomly selected portfolio with comparable risk.

It should be stated, that some decades ago the efficient market hypothesis was widely accepted by economists, which means that it was generally believed that securities markets were extremely efficient in reflecting information about individual securities and the stock market as a whole (Malkiel 2003). Nevertheless, the modern scientific economic literature increasingly indicates that efficient market hypothesis and its assumptions do not correspond to real behaviour of individual and corporate investors; it cannot be denied that in some cases investors behave irrationally. Such mismatch of theory and practice has led to re-evaluation of efficient market hypothesis and encouraged scientists to use the theory of cognitive psychology in order to explain irrational and illogical behaviour of investors that is not explained by modern corporate finance. Thus, since twenty-first century, the overall dominance of the efficient market hypothesis had become less universal – many nowadays economists support the idea that stock prices are at least partially predictable. Economists now emphasize psychological and behavioural elements of stock-price determination, and believe that future stock prices are somewhat predictable on the basis of past stock price patterns as well as fundamental analysis; these predictable patterns can enable investors to earn excess risk-adjusted rates of return (Malkiel 2003).

In recent scientific literature it is highlighted that the assumption of rational behaviour of managers and investors cannot be made in reality (Shah 2013). Results of significant number empirical studies contradict the efficient market hypothesis. For example, it was established that investors, making financial decisions, stress on peripheral information or "informational noise" (Black 1986). Furthermore, it was observed that deviations from rational behaviour are not random, but systematic and depend on the approach to risk assessment, evaluation of future uncertainty and the impact of problem presentation on decision making process (Kahneman, Riepe 1998); and investors rely more on psychological factors rather than on economic information taking investment decisions (Leipus, Norvaiša 2004). On the other hand, as stated by Leipus, Norvaiša (2004), if theoretical justification of efficient market hypothesis would depend only on the fact whether investors behave rationally, then the recognition of irrationality fact should deny the theory of modern corporate finance. The same authors also note that the existence of irrational investors is not in conflict with efficient market hypothesis, if each of them had only random effect on stock prices. On the other hand, it was already mentioned that investors' actions, deviating from rational behaviour, is not random, but systematic, besides – affecting each other (Kahneman, Tversky 1973). Irrationality of investors is attributable to decision-making errors that are regularly repealed by many investors. Such continuous errors are typical not only to individual but also to institutional investors (Leipus, Norvaiša 2004).

2.2. Theory of behavioural corporate finance

Behavioural finance is the application of psychology to financial decision making and financial markets. It differs from traditional finance based upon underlying assumption that decision makers are fully rational. Behavioural finance assumes that people are not always fully rational, because their moods, confidence and other psychological aspects play an important role on decision making (Shah 2013). As Leipus, Norvaiša (2004) pointed out financial market theory tries to explain deviations from efficient market hypothesis by irrational behaviour of investors, called behavioural finance theory. This theory explains how irrational investors' behaviour determines stock prices and other characteristics of securities market. These authors argue that the market is not efficient in most cases and market efficiency should be considered as a special or extreme case only. While traditional approach to corporate finance is based on firms' value-based management and three conditions – rational behaviour, capital asset pricing model, efficient markets, corporate behavioural finance exponents claim that traditional paradigm of these three components is affected by psychological factors (Shefrin 2001). Supposedly those psychological phenomenons do not allow the decision-makers to act completely rationally, and stock market prices do not reflect their fundamental value.

The theory of corporate behavioural finance is based on the assumptions of limited arbitrage and investors' irrationality. Limited arbitrage hypothesis states that in real market some stocks may not have perfect substitutes necessary to implement the arbitration; this explains the fact that new information not always affects market prices of stocks and the fact that market changes unrelated to new information affect stock prices (Leipus, Norvaiša 2004). Nevertheless, this hypothesis does not explain inefficient market substantially. The hypothesis of investors' irrationality implies that investors' financial decisions are determined by behavioural convictions and preferences. Leipus, Norvaiša (2004) argue that assumptions of limited arbitrage and investors irrationality (cognitive psychology statements about human thinking) complement each other and allows to predict stock prices and stock returns – if arbitrage is not limited, any stock prices changes (variations from equilibrium) should be levelled immediately and market would be efficient event in case of irrational investors; on the other hand, the existence of irrational investors determines stock prices deviations from equilibrium price.

Talking about irrationality of investors it can be said that majority of scientific cognitive psychology researches manifest that people make systematic errors contemplating and making decisions - they are overconfident, overestimate recent experience, etc.; their preferences may also create distortions (Shah 2013). Behavioural corporate finance as a sub discipline of behavioural finance integrates psychology and economics into the study of human judgment and biases in decision making under conditions of uncertainty and challenges conventional ideas about corporate finance and compensation strategies. Behavioural corporate finance is concerned with the manner in which behavioural beliefs, behavioural preferences, and inefficient prices impact the corporate financial

decisions made by managers. As Shah (2013) states, behavioural finance seeks to explain our actions, whereas modern finance seeks to explain the actions of the "economic human being". Behavioural corporate finance theory plays a great role in the practice of corporate finance (Shefrin 2001).

The literature on behavioural corporate finance involves the study of how psychology impacts capital budgeting, capital structure, corporate governance, and mergers and acquisitions; in addition, investing and financing decisions of executives within firms are highlighted. Behavioural corporate finance literature examines how managers' too optimistic decisions can influence capital structure and try to find the ways to push them toward optimal behaviour (Shah 2013). Shefrin (2001) indicates that corporate managers and executives must recognize two key behavioural impediments to the process of value maximization:

- internal threat for the firm is called "behavioural costs" that undermine value creation. Shefrin defines behavioural costs as associated with errors that managers make due to cognitive imperfections and emotional influences.
- external barrier for to the company is stemmed from behavioural errors of investors and analysts: these errors can create a gap between fundamental values and market prices which can push the managers in the conflict when it is not clear how to evaluate analysts' and investors' errors in decision-making.

Advocates of value-based company management argue that with properly designed incentives, managers will maximize the value of firms for which they work; in such case behavioural costs can be simply regarded as another shape of agency costs, or the importance of cognitive errors is denied at all. On the other hand, followers of behavioural corporate finance tend believe that behavioural costs can be quite large and cannot be eliminated only through incentives. However, according to Shefrin (2001), incentives are matter of great concern, although there are limits to what incentives can achieve.

Shah (2013) analyzed dimensions by which traditional attitude to corporate finance differs from behavioural corporate finance and sought to explain behavioural biases of companies' managers (in Lithuania Leipus, Norvaiša (2004) propose the term "sentiment") and their impact on companies securities emission and along for companies value. It was stated that managers due to impact of some factors make irrational decisions in securities emission, that make an influence for companies' value.

After examination behaviour corporate finance literature (for example, Baker, Wurgler 2011; Shah 2013, and others) two main approaches can be identified:

- The first approach points out the impact of managers' irrational behaviour in the context of efficient financial markets.
- The second one points out rational managers' decisions in inefficient markets.

Despite the theoretical distinction of these two approaches, it is necessary to keep in mind that in reality neither managers nor investors act entirely rationally, that means that both groups acts to some extent irrationally. For this reason, elements of both

approaches should be considered in integrated manner. The latest financial economic literature attempts to provide advices that could help both - managers and investors – to improve decision making process (Nguyen, Schussler 2013).

2.3. Irrational investors' approach

According to the first approach, decisions made by investors are not fully rational and has an impact to rational managers decisions. In other words, financing and investment decisions of firms are understood as a rational response to mispricing in securities markets (Baker *et al.* 2004). Analyzing firms' financial behaviour according to this approach it is assumed that arbitrage in securities market is imperfect, therefore stock prices can be too high or too low and can influence stock issuance. The approach of rational managers and irrational investors and their decisions impact on issuance of securities can be defined by two dimensions: first, irrational investors influence stock prices (arbitrage restrictions), second, managers perceive mispricing (are able to understand difference between stock market price and fundamental value) and make decisions to reply to this phenomena.

It is argued (Nguyen, Schussler 2013) that rational managers keep a balance between three goals:

- market timing – strategy related to decisions that aim exploiting temporary mispricing;
- catering – decisions that aim boosting stock prices above the level of intrinsic value;
- increasing intrinsic value.

As it was already mentioned, it can be assumed that managers are rational and interested in maximizing firm value. In such case market timing strategy can be used – if firms' stock price is too high, rational manager will issue more stocks in order to take advantage of high investors' interest; if firms' stock price is too low, rational manager repurchase stocks (Baker, Wurgler 2011). According to these authors, market-book ratio is reliable indicator to predict stock returns in the future, that means high stock prices result low or negative returns in the future. Moreover, firms with high valuations issue more equity while firms with low valuations repurchase their shares (Shah 2013).

Market timing strategy, as Thaler (1993) pointed out, is also a base for capital structure theory: if market-book ratio of firm A is much higher than firm B and both companies have duplicate profitability, size, fraction of tangible assets, then managers of A firm may have more equity share in their capital structure than firm B.

2.4. Irrational manager approach

According to the second approach to behavioural corporate finance, managers are not entirely rational making financial and investment decisions. This corporate finance behaviour model analyses the impact of managers' preferences, subjective opinions, biases

and sentiments on corporate management decisions in the context of efficient financial markets (Baker *et al.* 2004). An assumption of irrational managers' approach is that managers are able to decide themselves and they are not entirely controlled by corporate governance mechanisms (Nguyen, Schussler 2013).

Talking about managerial decisions that may have negative effect on shareholders (firm value reduce), there can be distinguished two types: intentional and unintentional decisions. Intentional value reduction decisions - when managers try to outsmart shareholders, lead to agency conflicts which can be solved by correcting incentives and coordinating managers' and shareholders' interests. Meanwhile, unintentional value reduction decisions do not occur due to different managers' and shareholders' interests, they are rather the consequences of managers' mistakes. These mistakes are the consequence of psychological factors and can be reduced or avoided through the implementation of management training and education (Nguyen, Schussler 2013). According to Modigliani-Miller theorem the value of a firm is unaffected by its financial structure in the absence of taxes; modern corporate finance analysis: various means, by which taxes, asymmetric information, and self-interest in contractual relations can change optimal financing and investment decisions of firms; economic forces that lead firm to the optimal ownership structure – contractual nature of firm is highlighted (De Bondt, Thaler 1994). Nevertheless, corporate financial behaviour can be affected by shareholders', creditors', managers', customers', suppliers' behaviour, resulting difference of actual corporate decisions from their normative ideals.

2.5. Studies on behavioural corporate finance

There are a number of studies that explore the issue of corporate finance in economic literature. On of the best-known in this field is Lintner and his analysis (1956) of corporate dividend policy as well as his proposed theoretical model of corporate dividends. Litneer states, that the amount of dividends and other characteristics serve as primary and active factor in companies decision making process. It should be noted that results of this study are still relevant and theoretical model, proposed by Lintner, has deeply affected the ways how dividend policy researches are conducted (Graham, Harvey 2001). There are numerous studies exploring how firms evaluate potential investment projects. A large part of studies focus only on large firms' behaviour and suggest that internal rate of return (IRR) is the primary method for evaluation of investment projects (Graham, Harvey 2001). Gitman & Forrester performed a survey of large US firms and found out that only less that 10 percent of respondents use net present value as their primary method and more than a half of firms report IRR as primary method (Gitman, Forrester 1977). Stanley & Block have also found out that 65 percent of respondents have chosen IRR as their primary technique for project evaluation (Stanley, Block 1984). The results of research conducted by Moore & Reichert revealed that 86 percent of US Fortune 500 firms as primary method use some type of discounted cash flow analysis (Moore, Reichert 1983). Other researches

of large firms revealed similar results (for example, Trahan, Gitman 1995; Bierman 1993; Bruner *et al.* 1998 and others).

Moore, Reichert (1983) interalia stated that volatility of economic conditions led to increased importance of rigorous financial analysis in firms – financial executives actively use financial techniques in financial decision making process; least since 1980's relatively sophisticated capital budgeting procedures were accepted across most industries (US case), and many firms supported their decision making with a "package" of formal tools. Trahan, Gitman (1995) surveyed CFO's (Chief Executive Officers) of Fortune 500 and Forbes 200 best small companies and found out that most of respondents appear to have little interest in the current state of academic research in corporate finance and are not minded to use professionals or professors consultations, both paid or unpaid; however they do express a desire to know more about various financial decision methods.

Meanwhile, Graham, Harvey (2001) performed a survey of both small and large firms (about cost of capital as well as capital financing and structure) and provided somewhat different results. The authors found that the amount by which stock is undervalued or overvalued is an important consideration in issuing common stocks. Moreover, the results of the same research revealed that the size of firm is a factor that significantly affects financial activities in firms; large firms are more likely to use net present value techniques and the capital asset pricing model for project evaluation, while small firms are more likely to use the payback criterion; majority of large firms have a tight or nearly tight debt ratio limits, while only one-third of small firms have such limits. The authors ascertained that a surprisingly large number of firms use firm risk instead of project risk criteria. Graham, Harvey (2001) also argues that managers making decisions about capital structure rely heavily on informal rules. Issuing debt securities firms consider financial flexibility and credit ratings as crucial factors, whereas reduction of earnings per share (EPS) and analysis of resent stock market are the most important determinants of equity securities issuance. In the same work authors emphasize that very little evidence that executives are concerned about asset substitution, asymmetric information, transactions costs, free cash flows, or personal taxes (Graham, Harvey 2001).

Cronqvist *et al.* (2012) have found out that financial behaviour of firms is related to the manner how their CEOs behave personally in the context of leverage choices: the authors have found out positive, economically significant and reliable relation between corporate and personal leverage. These results are consistent with an endogenous matching of CEOs to firms based on preferences, as well as with CEOs imprinting their personal preferences on the firms they manage, particularly if governance is weaker. Moreover, it is argued that CEOs personal behaviour can partly explain financial behaviour of firms they work for (Cronqvist *et al.* 2012).

3. Theoretical Framework

To establish investment possibilities of non-financial corporate investors in financial markets investigation of managers/finance managers of Lithuanian corporate companies' was accomplished. To ensure the representativeness of the results 383 companies should be interviewed[1]. The respondents were given a questionnaire consisting of 7 parts. Questionnaire was made using open and closed questions.

- The first part of the questionnaire was designed to identify the respondent's profile. To determine investor profile the company's branch, period of activities, operational area, and the size criteria was used. In addition, it was aimed to establish whether the company has made investments.
- The second part of questions was designed to identify the business entities approach to risk. Respondents were asked to define the factors that affect investment decisions making. Though the risk is a quantifiable dimension, this survey discounted such factor and respondents where asked just to classify it into "any","additional" or "much additional" risks.
- The third part of the questionnaire was intended to determine expectations of companies approach assessing the economic prospects of Lithuanian economy.
- Corporate investment objectives were identified by the fourth part of the questionnaire. It was aimed to find out the company's goals and motivations shaping their financial investment portfolio.
- The fifth part was designed to determine the duration of companies financial investments.
- Sixth part of questionnaire was intended to determine the company's approach to the tax environment and tax impact on financial investment decisions.
- The final – seventh part – was designed to assess other potential company's financial investment policy determinants.

Correlation analysis was performed. Correlation matrix was created to evaluate how factors such as industry, period of activities, company's size, operational area and annual income correlate with decisions to invest, the frequency of investment policy review, application of investment constraints, assessment of investment return and approach to the return and risk, i.e. factors describing the investor itself.

1 The size of sample was calculated according following formula (Schwarze 1993):

$n = \frac{N \cdot 1.96^2 \cdot p \cdot q}{\varepsilon^2 \cdot (N-1) + 1.96^2 \cdot p \cdot q}$, where: N – size of population; p – proability that certain attribute is present in population; q – probability that certain attribute is not present in population; ε – level of precision (probability of error); value 1,96 pass 95 percent level of confidence of standardized normal distribution.

According to Statistics Lithuania, 86929 companies operates in Lithuania in the beginning of 2013 (N = 86929). To determine p, the probability of the worst option is used, that is 50 %. Hence, p = 0.5. Since q = 1 – 0.5 = 0.5. Using 5 percent margin of error and 95 percent of confidence, the number of respondents should be 383 companies.

4. Behavioural corporate finance of Lithuanian non-financial companies

Survey was accomplished in the beginning of 2013; 125 companies returned the completed questionnaires. The number companies is less than needed with 5 percent margin of error and 95 percent of confidence, but is still acceptable, as the margin of error is reached up to 10 percent. 19 respondents are from the manufacturing branches, 27 companies operate in trade, while the remaining 79 are service companies. More than half (51.6%) of respondents operate only in Lithuania, 43.7% – both in Lithuania and abroad. More than half of respondents (53.2%) operate in the market over 10 years. To summarize the results it can be said that mainly trading companies invest in the financial market, operating over 10 years (Table 1), with income per year under 1 million litas (0,29 million Euros) (Table 2).

Table 1. Operating period (Source: created by the authors)

Operating period	Number of companies	Percentage from investigated companies
Company operates less than a year	9	7.2%
Company operates for more than a year, but less than five years	23	18.4%
Company operates for more than five years, but less than ten years	26	20.8%
Company operates for more than ten years	67	53.6%

Table 2. Company size, income per year (Source: created by the authors)

Volume of income per year	Number of companies	Percentage from investigated companies
Less than 1 million litas	51	40.8%
1-5 million litas	29	23.2%
5–10 million litas	9	7.2%
Over 10 million litas	36	28.8%

74 percent of respondents indicated that they make an investment portfolio. The objective of majority companies' financial investments is to generate income or to implement any specific goal, such as - to accumulate funds for implementation of a project (Table 3).

Table 3. The goal of investment portfolio (Source: created by the authors)

The goal for investment portfolio formation	Percentage from investigated companies
To ensure the preservation of existing assets	15.2%
Generate income	34.8%
To achieve a specific investment objective (e.g., to accumulate a certain amount of funds for implementation of the project)	32.6%
Grow value	17.4%

In addition, 30 percent of respondents are/would be more concerned preserving the value of existing capital than strive for the growth, i.e. companies are willing to have lower returns or not to expand at all, but to ensure stability and to reduce risk to a minimum. Nevertheless, 57 percent of companies are ready to overtake some degree of risk to enlarge the value of investment portfolio. The rest are prepared to take on a lot more risk in order to obtain the higher return than the market average.

As the portfolio formation is associated with the risk and return, decision making for 67 percent of respondents is more determined by potential return than by potential loss. Company's response to portfolio short-term fluctuations is reflected in Table 4.

Table 4. Response to portfolio short-term fluctuations (Source: created by the authors)

Description of response	Percentage from investigated companies
Fluctuations could cause large company concern. Immediate action would be taken	25%
Fluctuations could cause company concern, but radical action would not be taken	54.3%
Fluctuations could cause a very small concern. No action would be taken	16.3%
The company would pay no attention to such fluctuations	4.3%

It is noted that majority of respondents could concern about fluctuations in the market, but they would prefer not to act radically. During the market downturn companies often do not retreat from the market and wait for the stock price rise.

In order to determine the behaviour of the firms in terms of risk, they were asked what if the company has the ability to achieve its goals, but it should overtake more risks. Distribution of answers is provided in Table 5. It is seen that over 77 percent of respondents firms would overtake only a little more risk and a higher proportion of available funds would not invest.

Table 5. The level of risk tolerance (Source: created by the authors)

Description of risk tolerance	Percentage from investigated companies
Would pass any risk	5.4%
Would overtake some additional risk, but certainly not invest all their available assets	77.2%
Would overtake some additional risk, by investing all of their disposable funds	15.2%
Would overtake much additional risk by investing all their disposable funds	2.2%

This is supported by the deeper survey – 67 percent of companies' state that it is worth investing in the stock market, however no more than 10–15% declines can be tolerated during the crisis; almost 20 percent indicate that investing in stock market is not worth (Table 6).

Table 6. Attitude to investing in stock market (Source: created by the authors)

Description of approach	Percentage from investigated companies
It is pointless to invest in the stock market, as it is unlikely that it will be able to earn.	19.6%
It is worthwhile to invest in the stock market, but only in very small amounts. Can be tolerated only rare and little significant market declines (not more than 10 percent).	30.4%
It is worth to invest in the stock market during the crisis can be tolerated not more than 10–20 percent declines	37%
It is worth to invest in the stock market and take on a possible decline (20–30%) risk for greater return on investment. In the portfolio value decline, the company may wait 1–2 years before the value has recovered.	10.9%
It is worth to invest in the stock market, even if the value of the portfolio can be reduced 35% and more, as it gives the opportunity to earn high returns.	2.2%

The answers about appropriate period of portfolio recovering are following (Table 7).

Table 7. The period a company is willing to wait to restore portfolio value (Source: created by the authors)

Number of years	Percentage from investigated companies
Less than one year	13%
1–2 years	42.4%
2–3 years	17.4%
More than 3 years	27.2%

It is noted that majority of companies prepared to wait for 1–2 years to restore the value of their portfolio. It can be stated that the majority of companies (88 percent) would agree to lower a preferred return against reduced investment risk.

In order to determine the company's investment behaviour, five speculative portfolios considering risk-return relationship were presented (Fig. 1). Corporate executives chose mainly C portfolio (53 percent) – which is average in the terms of risk and return.

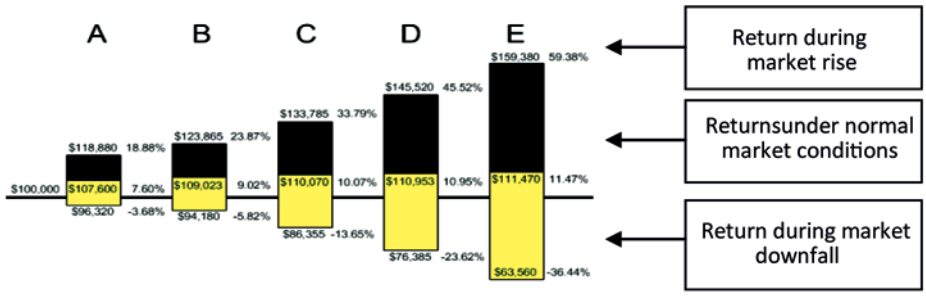

Fig. 1. Suggested investment portfolios indicating possible return or loss from investments (Source: created by the authors)

Companies estimate economic situation in the five-year period in the country and the world as neutral with a more positive outlook.

To determine the tax impact on portfolio respondents were asked to determine main objectives for investment portfolio managers. The answers are presented in Table 8.

Table 8. Company's attitude to tax impact on portfolio return (Source: created by the authors)

Characteristic of attitude to tax impact	Percentage from investigated companies
Income from investments is tax deferred, so tax minimization is not so important.	7.6%
The company has suffered losses in the past, so the future income tax will be reduced at the expense of losses in the past.	19.6%
The portfolio should be managed so that the taxes are minimized.	72.8%

The majority of respondents indicated that the company's investment portfolio should be managed to ensue minimized taxes.

To determine whether it is important to keep part of the portfolio in cash to ensure liquidity, the vast majority of companies (56 percent) indicate, that cash does not / would not be considered as part of investment portfolio, as the company has no liquidity needs and the money that may be needed is kept on a separate account and are not / would not be part of the investment portfolio. 76 percent of companies surveyed indicate that their investment portfolio has limitations: one of the most important, that the period of a bond, does not exceed 3 years; shares or bonds of any one company should not exceed 20 percent of the portfolio value; if the company invests in funds, investment into one fund cannot exceed 20–30 portfolios value.

Companies usually review investment policy once a year (Table 9).

Table 9. The frequency of investment portfolio reviews (Source: created by the authors)

Number of years	Percentage from investigated companies
Every 1 year	78.3%
Every 2 year	12%
Every 3 year	8.7%
Every 4 year	1.1%
Every 5 year	0%

It is also true that companies tend to consult investment professionals and the majority of them do it every quarter-half a year.

Significant part of correlation matrix created to evaluate dependence of factors characterizing the company itself and factors characterizing company's investment peculiarities is presented in Table 11. Fluctuation range of correlation coefficients is wide, i.e. $-0{,}25 < \rho < +0{,}36$. Despite of this, strong relationship was not detected whereas significant correlations were as follows (Table 10):

Table 10. Correlation matrix (Source: created by the authors)

Factors characterizing the company	Factors characterizing company's investment peculiarities	Correlation	Significance, %
Operational area	Decision to invest	–0,248	1,0
Corporate income	Frequency of investment policy reviews	+0,250	5,0
Corporate size	Frequency of investment policy reviews	+0,275	5,0
Corporate size	Approach to investment return	+0,261	5,0
Corporate income	Approach to investment return	+0,360	5,0
Operational area	Approach to the relationship between risk and return	+0,243	5,0

Data show that there is a negative significant correlation (–0,248) between decision to invest and the operational areas – companies that operate only in Lithuania normally are not engaged in financial investments. The highest positive correlation coefficient is between corporate income and approach to investment return (+0,360). Approach to investment return is also positively dependent on corporate size (total assets) (+0,261). The frequency of investment policy reviews depends mostly on the size of company and income (accordingly +0,275 and +0,250) – the correlation is positive and significant to the entire population, the larger is the company (total assets) or amount of income, the more it is considered on investment portfolio reviews. Companies' attitude towards risk-return relationship also has a significant positive correlation (+0,243) with operational area – companies that operate only in Lithuania normally would prefer to lower possible return against reduced investment risk – and is applicable to entire population.

Despite mentioned results indicating a weak correlation and absence of linearity we cannot conclude that relationship between selected variables does not exist. In our case, relationship can be non-linear or it can be proved only using qualitative methods due to the data specifics.

5. Conclusions

The analysis of studies in the field of behaviour corporate finance shows that they are related to capital or debt financing issues. Latest investigations demonstrate that in financial / investment decision making managers' solutions are influenced by their personal preferences, particularly if control of a company is weaker. Besides personal behaviour sometimes explain financial behaviour of companies they are employed in.

The results of Lithuanian non-financial companies' survey in the field of financial investments decisions show, that mainly trading companies invest in the capital market, operating over 10 years and with income per year below 1 million litas (0,29 million Euros). Investigation of companies' risk tolerance show that over 77 percent would overtake only a little more risk and a higher proportion of available funds would not

invest. In addition the majority of companies (88 percent) would agree to lower a preferred return against reduced investment risk. The majority of respondents pointed out that taxes should be minimized managing investment portfolio (72.8 percent); 78.3 percent of respondents usually review investment policy once a year. Majority of respondents (76 percent) indicate that their investment portfolio has some limitations: the period of investments in bonds should not exceed 3 years; share of equity or bonds of the same company should be below 20 percent of the portfolio value; investments in one fund should be bellow 20–30 percent of the portfolio value.

The correlation coefficients fluctuation ranges were.$-0{,}25 < \rho < +0{,}36$.. Notwithstanding strong relationship was not detected there is significant negative correlation (–0,248) between decision to invest and the operational areas. Significant positive correlation was between the frequency of investment policy reviews and the size of company and income (accordingly +0,275 and +0,250); between companies approach to risk vs. return with operational area (+0,243). Though the results of the survey sample not fully meets the requirements of representativeness but still satisfy the minimum margin error and could be treated as sufficient. It could be stated that the results are appropriate to explain corporate investments in financial markets policy.

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