DOES CORPORATE FINANCIAL ARCHITECTURE CONTRIBUTE TO SUSTAINABLE CORPORATE GROWTH? THE EVIDENCE FROM RUSSIAN COMPANIES

Ivashkovskaya I.

Stepanova A.

Eliseeva N.

Abstract

In this research the analysis of the impact of corporate financial architecture on a company's performance is conducted for a sample of large Russian companies. We focus on sustainable growth identified through the application of intrinsic value change criteria. We employ the integrated approach in order to understand the determinants of the sustainable growth based on key structural characteristics of a company. The financial architecture is represented by the ownership structure (managerial ownership, foreign ownership and ownership concentration), corporate governance (the structure of the board of directors and internal control) and capital structure. We examine the difference in characteristics of growth sustainability of Russian companies representing three different types of financial architecture of more than 50 large Russian firms. Our results indicate that corporate financial architecture has a significant impact on the sustainable corporate growth in the Russian market. More importantly, we show that the nature of the influence depends on the type of financial architecture.

JEL: G15, G34

Key words: corporate growth, corporate governance, ownership structure, performance, residual income, total shareholder return, emerging markets

Introduction

In the dynamic business environment each company needs to achieve the sustainability of growth in order to preserve its competitive advantages and market share. The problem of quality and sustainability of growth is especially important for Russian companies because of an emerging character of financial markets driven by greater volatility and instability. Thereby, the choice of optimal combination of structural characteristics, which help to achieve greater sustainability of growth, is among their primary tasks.

In this paper we study the quality of companies' growth based on the concept of financial architecture first suggested by Myers (1999). According to (Myers, 1999), financial architecture of the company is "the entire financial design of the business, including ownership, the legal form of organization, financing and allocation of risks". So, for a public corporation, financial architecture may differ at least through three main components: the ownership structure, corporate governance and capital structure. The hypothesis concerning the influence of these aspects on performance and results of previous studies will be examined in the following sections.

The concept of financial architecture in general is relatively new. Just a few studies are devoted to the examination of the influence of financial architecture on performance. The major part of the previous research takes into account a certain structural characteristic of a company (e.g. the ownership structure, capital structure or corporate governance) and examines its impact on performance separately from other structural characteristics. Since the interrelations between components of financial architecture are mainly ignored, the results of this type of research are quite controversial and unstable in case of the sample change. The integrated approach proposed in (Ivashkovskaya, Stepanova, 2011) partly solves this problem.

In 2012 (Kokoreva, Stepanova, 2012) applied the cluster analysis in order to capture the interrelations between different components of financial architecture. They found several types of financial architecture of large Russian companies. On the basis of these findings we analyse the link between financial

architecture and sustainable growth of companies. We contribute to the literature on corporate growth by several results. First, we introduce a new measure for sustainable growth (Sustainable growth index, SGI) and capture not only a sales revenue rate of growth, but also the intrinsic value changes of the companies in the sample. Second, we also use a market value based performance metric, namely total shareholder return (TSR) in order to understand the expectations about the quality of growth and the contribution of corporate financial architecture to the investor's perceptions of growth. The use of this set of measures facilitates the understanding of multiple dimensions of sustainable growth, namely from the points of view of strategy and finance. Third, we further develop the conceptual framework on the sustainable types of financial architecture among large scale Russian firms. The preceding findings imply that there are robust combinations between financial architecture components of Russian large companies and these clusters may provide and support different performance. Our results clearly indicate that the contribution of financial architecture components to intrinsic value changes and market-based measures of performance differs in each of three clusters that have been identified in the previous studies.

In the following sections, we show the main results of literature review concerning the impact of separate components of financial architecture on corporate performance. In Section 2 we develop the research hypotheses. We explain our approach and the measures for sustainable corporate growth, the research model and the data in Section 3. The description of types of financial architecture of Russian companies and the results of empirical research are discussed in Section 4.

Financial architecture and the company's performance: review of empirical studies

In this section we discuss the results of the stylized studies of the influence of different components of financial architecture on the company's performance. The previous approach is stylized because it is mainly based on the separate study of each of the structures – the ownership, governance, capital structure and their relationship with performance. In the review below we focus on the ownership structure and board's independence while paying special attention to the emerging markets.

Ownership structure

The first component of financial architecture is the ownership structure. Based on the results of the previous research on the emerging markets we focus on insiders' ownership, ownership concentration and foreigners' ownership.

There are two main hypotheses on *convergence of interests* (Jensen, Meckling, 1976) and entrenchment hypothesis (Morck, Shleifer and Vishny, 1988) offering controversial ideas on the effect of insiders' ownership on performance. The results of the prior research concerning the relation between managerial ownership and performance are quite controversial. Wahla and Shah (2012) found out the negative influence of an increase in managerial ownership on performance on a sample of Pakistani companies. Thereby, they confirmed the validity of the entrenchment theory. These results are in line with those obtained for the market of Iran. Alipour and Amjadi (2011) showed a negative and statistically significant relationship between managerial ownership and performance. However, they also proposed an alternative explanation for this finding: the majority of companies in the sample with a large fraction of shares possessed by managers were "family companies" which are characterized by poorer transparency and incomplete information disclosure. The evidence in favour of the hypothesis of the convergence of interests was also found in some papers. In particular, on a sample of German companies Mueller and Spitz (2006) demonstrated that the participation of managers in the share capital leads to an increase in the company's performance by 40%. Uwalomwa, Olamide (2012) came to a similar result on a sample of Nigerian companies. The authors showed a positive effect of managerial ownership on ROA.

Another interesting phenomenon which was discovered in the prior research is that there is a non-linear relationship between performance and managerial ownership. For example, Hermalin and Weisbach (1988) reported that managerial ownership positively affects performance when the fraction of shares owned by managers varies from 0% to 1%; the sign of association changes in the interval 1–5% and again becomes positive when managers owe 5–25% of shares.

A number of researchers studied managerial ownership and its impact on performance in Russia. For instance, Kuznetsov and Muravjev (2000) identified a positive influence of insider ownership on return on equity for Russian companies. However, these authors also concluded that this relation becomes statistically insignificant when the endogeneity of the ownership structure is taken into account. The endogeneity of the ownership structure was, however, rejected in the papers on the sample of companies from Russia and Europe (Ivashkovskaya and Stepanova, 2010; Ivashkovskaya and Stepanova, 2011a; Ivashkovskaya and Stepanova, 2011b).

Ownership concentration can have an ambiguous influence on performance. The leading theory, explaining the logic of the association between ownership concentration and performance, is the agency theory. However, it does not provide the univocal explanation of the link between ownership concentration and performance. On the one hand, there is a conflict of interests between managers and shareholders which ownership concentration is aimed to resolve. For example, Demsetz (1983), Shleifer and Vishny (1986), Denis, Denis and Sarin (1995) and Agrawal and Mandelker (1990) show that in case of significant ownership concentration shareholders possess more resources, so they can better monitor and control managers. In this case managers are less likely to pursue their own interests instead of maximizing the company's value. Thereby, ownership concentration should positively affect the company's performance.

The papers on emerging markets demonstrate the controversial evidence for the influence of ownership concentration on performance: in case of Tobin's Q negative for the firms from Russia and Brasilia (Maslennikova and Stepanova, 2010), a positive but statistically insignificant influence of ownership concentration on Tobin's Q for Pakistani companies (Wahla, Shah, 2012), a positive influence of ownership concentration on residual income (Ivashkovskaya, Stepanova, 2011). A positive effect of ownership concentration on performance measured by pre-tax profit was found by Karaca, Ecsi (2012) on the sample of Turkish companies. Finkelstein (1992) came to a similar conclusion and explained this result by the fact that the increase in shares fraction controlled by the members of the board of directors improves their motivation and leads to a faster innovations implication and adaptation to changes in business environment.

In a number of studies a nonlinear association between ownership concentration and performance was documented. Kuznetsov, Muraviev (2000) found out a non-linear U-shaped relation between ownership concentration and profitability of Russian companies in the period 1995–1997. Kapelushnikov (2001) also showed a non-linear relation. He reported that companies with ownership concentration varying from 10% to 50% are more efficient. However, Radygin and Entov (2001) indicated a positive effect of ownership concentration on performance. The absence of statistically significant relationship between ownership concentration and performance was reported by Dolgopyatova and Kuznetsov (2004).

In some studies, particularly, devoted to emerging markets, the attention is paid to the presence of foreign investors from developed countries among companies' shareholders. This component of financial architecture is of main importance for the analysis of emerging markets due to the absence of tradition and effective standards of corporate governance. Foreign investors contribute to the implementation of new technologies in production, as well as the introduction of new standards of corporate governance. In addition, they transmit their valuable expertise, which should have a positive impact on the performance of companies, and, consequently, on their value. As a proxy of foreign ownership the authors use the fraction of shares held by investors from abroad. Uwalomwa, Olamide (2012) confirmed that the presence of foreign investors positively affects performance on a sample of companies from Nigeria. Gregory and McCorriston (2005) showed that the companies from emerging markets acquired by companies from the UK are characterized by better performance.

Corporate governance

Corporate governance is the second structural component of financial architecture. An efficient corporate governance system aims to achieve the balance of interests between managers and owners and within owners by means of choosing the appropriate composition and structure of the board of directors and its procedures. In particular, several components of corporate governance should be examined: the size and composition of the board of directors, its efficiency and structure, the policy of the board of directors in

respect to management. The key aspect of corporate governance we focus on in this paper is the presence of independent directors in the composition of the board of directors. An independent director is the representative of the board of directors who is not affiliated with a company.

According to *the agency theory*, the presence of independent directors should positively affect performance due to the fact that independent directors are able to monitor managers more efficiently and motivate them to maximize the company's value. Besides, the presence of independent directors should settle the conflict between majority and minority shareholders. Independent representatives should ensure the rights of minority shareholders because if their rights are violated the reputation of an independent director can suffer. Thereby, according to the agency theory, the presence of independent directors should have a positive impact on performance because they are able to settle all kinds of agency conflicts.

However, according to *the stewardship theory*, it is more reasonable to include only representatives of the company in the board of directors, because the primary goal of the company's representatives is maximization of its value. Hall, Liebman (1998) argue that the representatives of the board of directors who invested their funds in the company are more motivated to increase its value because in case of opportunistic behaviour they will suffer significant losses. Besides, the representatives of the company are more familiar with the specifics of its business and know all the "pitfalls", which allows them to make more reasonable decisions with respect to the future strategy of the company (Davis and Donaldson, 1991). Another argument in favour of the company's representatives is that in comparison with independent directors, they have a better access to the information (Fama and Jensen, 1983), and they are more able to indicate problems of the company and work out solutions for these problems. Thus, for a number of reasons, the representatives of the company might undertake more appropriate and efficient strategic decisions in comparison with independent directors (Baysinger, Hoskisson, 1990).

The results of empirical studies concerning the impact of independent representatives' participation in the board of directors on performance are quite controversial. However, a general logic can be observed. In the majority of studies conducted for developing countries, the increase in the proportion of independent directors positively and statistically significantly affects corporate performance. For example, Ho and Williams (2003) indicate a positive relationship with the economic value added on intellectual and physical capital (TVAIC, TVAPC) for the companies from South Africa. Shan and McIver (2011) also report the existence of positive relation between the fraction of independent directors and performance in Chinese companies. However, this result turned out to be valid only for large corporations which are the subject of public attention. It confirms the hypothesis that independent directors are highly motivated to implement efficient government practices in order not to ruin their reputation. Thus, in countries with a poor level of institutional development and ineffective standards of corporate governance the presence of independent representatives in the board of directors might actually improve the performance.

However, many authors did not find any statistically significant influence of the presence of independent directors on performance in the samples from developed countries. In particular, Biener et al. (2004) used the simultaneous equations methodology and reported the absence of statistically significant association between these variables for companies from Switzerland. Ho and Williams (2003) also did not find out any influence of independent representatives in the board on TVAIC and TVAPC when they studied companies from Sweden and the United Kingdom.

Capital structure

The third component of financial architecture is the capital structure of the company because it captures the risk allocation between shareholders and other stakeholders of the firm.

According to the stakeholder theory, non-financial stakeholders (customers/suppliers, government, employees) are affected by the firm's financial instability. A highly levered capital structure has an impact on the company's strategic performance. Indeed, customers can reduce their demand for the company's products if its long-term survival is questionable. Suppliers may provide resources on less favourable terms. Highly qualified employees are also reluctant to work in highly levered companies because it may affect their salaries and bonuses. Bae, Kang and Wang (2010) report that firms which treat their employees fairly (as measured by high employee-friendly ratings) maintain lower levels of debt. Opler

and Titman (1994) show that highly levered firms lose market share to their more conservatively financed rivals during industry downturns. To be more precise, they report that firms from top deciles of leverage levels face a 26% higher decline in sales during a downturn than their more conservatively financed competitors. Margaritis and Psillaki (2010) demonstrate that the firms involved in the R&D process suffer the most in turbulent periods and find support for the core prediction of the agency costs theory. On the sample of French industrial companies they show that higher leverage is associated with improved efficiency over the entire range of observed data.

The Hypotheses

In order to understand the influence of corporate financial architecture on corporate growth we develop and test a set of the following hypotheses.

Within the governance structure in the overall financial architecture the independency of the board of directors is an important component which should affect corporate growth. Due to the fact that independent directors can contribute to the resolution of conflicts between majority and minority shareholders, the presence of independent representatives in the board of directors should improve the development of strategic vision and the quality of monitoring function of the boards. This impact should be especially significant in case of a poor level of institutional development and poor protection of minority rights in emerging capital markets.

Hypothesis 1: *The presence of independent directors should improve the quality of corporate governance and thus have a positive impact on the sustainability of growth.*

In a number of the previous studies it was demonstrated that the impact of insider ownership on performance is non-linear (Holderness et al., 1999; Ellili, 2011). The same relationship may exist between insider ownership and the sustainability of the company's growth. At first the increase in the proportion of shares in hands of managers may improve the performance due to convergence of interests. However, after a certain point, when there appears an entrenchment effect, the increase in insider ownership can have a negative impact on the sustainability of growth. Thus, the second hypothesis can be formulated as follows.

Hypothesis 2: *There is a non-linear relationship between the increase in insider ownership and sustainability of the company's growth.*

In companies with high ownership concentration, on the one hand, there is more power in hands of major shareholders, so they are capable for more efficient monitoring of managers. Besides, shareholders with high fraction of shares have a better access to the information, so they can take better strategic decisions. Thus, ownership concentration should positively affect the sustainability of growth. However, taking into account the specific of emerging markets in terms of lower quality of governance and conflicts resolution, it is reasonable to assume that high ownership concentration gives a rise to agency conflicts between majority and minority shareholders. Thus, the third hypothesis can be stated.

Hypothesis 3: *Russian companies with large ownership concentration show lower performance in terms of sustainability of growth.*

As shown in the previous research, foreign investors from developed countries can transfer their expertise and undertake better strategic decisions, which should positively affect corporate performance on all stages of the business cycle. Besides, since foreign investors can contribute to the implementation of better standards of corporate governance, higher foreign ownership should positively affect the sustainability of growth. Thus, the fourth hypothesis can be stated as follows.

Hypothesis 4: *The increase in the proportion of foreign ownership has a positive impact on the sustainability of growth.*

The increase in leverage can, on the one hand, provide an additional instrument of control over management. On the other hand, it can destroy the company's value especially in the crisis period due to higher bankruptcy costs and negative attitude of stakeholders to companies with high level of

leverage. The impact of capital structure on the sustainability of growth is ambiguous. Thereby, the fifth hypothesis can be stated in the following way.

Hypothesis 5: *Capital structure has a significant influence on the sustainability of growth; however, the direction of this influence depends on the stage of the business cycle.*

Methods and data

The primary goal of each company is to maximize its current performance. However, in circumstances of the dynamic business environment and growing competition it is important to consider not only current performance but also the company's growth and its sustainability. Indeed, only the company that is able to maintain sustainable growth can survive and compete successfully with its competitors in both product and capital markets.

Sustainable growth indices

The approach to corporate sustainable growth was first developed in the 1960s by experts of Boston Consulting Group. The sustainable growth rate was defined as a sales revenue growth rate which can be achieved by a company given its current operational and financial policies. This model is aimed at the analysis of balance between the company's current operating policy and sources of its financing. However, this approach does not take into account investment risks associated with the company and returns required by investors for this level of risks.

From the point of view of corporate finance it is necessary to consider not only accounting profit but also economic profit creation based on opportunity costs (cost of capital) and investment risks. Indeed, the negative value of economic profit means that accounting profit is not sufficient to cover the investment risks in this company. Therefore, the analysis of sustainable growth should incorporate strategic dimension of growth focused on the dynamics in the product markets and ability of the company to generate positive economic profit. To capture both sides of growth quality – strategy and finance – we introduce a sustainable growth index (Ivashkovskaya, 2010).

$$SGI = g_s * \frac{l}{k} * \sum_{i=1}^{k} \max\left[0, \left(ROCE_i - WACC_i\right)\right], \tag{1}$$

where g_s is a geometric average sales growth rate; k – the length of observation period; l – the number of years when the company had positive income spread; $ROCE$ – return on capital employed in the period I; $WACC$ – weighted average cost of capital in the period i.

This formula assumes the residual income spread to be calculated as the difference between return on capital employed and weighted average cost of capital. However, the lack of financial data concerning the issuance of bonds by Russian companies makes it difficult to determine cost of debt for these companies. However, this measure is necessary for the calculation of weighted average cost of capital (WACC). Mistakes in values of this indicator can lead to biased results and inadequate conclusions. In our model we used a modified approach - the residual income available for equity holders presented below:

$$RI = NI - Ke*E, \tag{2}$$

where RI is residual income available for equity holders; NI – net income for the period; Ke – cost of equity; E – equity (average value).

Thus, the residual income spread corresponding to the residual income available for shareholders can be represented by Formula 3:

$$Spread = \frac{NI}{E} - K_e. \tag{3}$$

Thus, for the purpose of the current research the sustainable growth indices were calculated according to Formula 4:

$$SGI = g_s * \frac{l}{k} * \sum_{i=1}^{k} \max\left[0, \left(ROE_i - K_{ei}\right)\right]. \tag{4}$$

The next indicator revealing the sustainability of the company's growth, which will be examined in the current research, is total shareholders return. TSR can be decomposed into capital gain and free cash flow return. According to the goal of the current research, it is reasonable to concentrate predominantly on a capital gain component of TSR as it reveals the dynamic of fundamentals and investors' expectations. Besides, we can face the lack of data concerning such components of TSR as share repurchases and debt repayment. Thus, only dynamic of dividend yield will be considered. Thereby, in the current research TSR will be calculated according to Formula 5.

$$TSR = G_{sales} + G_{Op_{Marg}} + G_{\frac{EV}{EBITDA}} + G_{div\_yield},$$

(5)

where G_{sales} is the growth rate of sales; $G_{Op_{Marg}}$ – the growth rate of operating margin; $G_{EV/EBITDA}$ – the growth rate of EV/EBITDA multiple; G_{div_yield} – the growth rate of dividend yield. The growth rates of all the components of TSR will be calculated as geometric averages.

On the second step the *mean values* of components of SGI and TRS will be calculated across companies representing a particular type of financial architecture. On the basis of these values, we compare the clusters of financial architecture.

Due to the fact that each cluster includes companies from different industries, on the following step the performance of representatives of clusters will be compared to the median levels of a corresponding industry. This is reasonable because various industries can be on different stages of the life cycle and, as a result, vary significantly in terms of an average sales growth rate, for example. So, after the values of components of SGI will be calculated they will be compared to the median levels in corresponding industries in order to find out whether the accessory to a particular type of financial architecture allows reaching sustainability of growth above the industry median level.

In order to calculate industry mean levels of sales growth rate, sustainability of growth and residual income spread, necessary data was collected for the companies included in industrial stock indices on MICEX stock exchange. Such a choice of companies is based on several reasons. First, they are comparable with companies from the examined sample in terms of size. Indeed, it is not reasonable to calculate industry mean levels across all companies, including small ones as the results can be biased due to the fact that performance of companies of different sizes can vary in different stages of the life cycle. Thus, in case medium and small companies were included in calculation of median levels we could obtain inadequate results. Second, small companies often do not disclose their data concerning the cost of capital. Therefore, the calculation of median values of residual income spread would be problematic.

However, the impact of components of financial architecture on the sustainability of growth might vary in dependence on stages of the business cycle. Thus, it is reasonable to estimate the characteristics of sustainability of growth separately for different stages of the economic cycle. This will provide an opportunity to trace the change in the impact of components of financial architecture on the sustainability of growth, depending on the conditions of business environment. The observation period will be divided as follows: the pre-crisis period (2005–2007), the crisis period (2008–2009) and the post-crisis period (2010–2012).

Financial architecture of Russian companies

We study the sample of 50+ largest Russian nonfinancial companies that published their reports according to IFRS or US GAAP within 2005–2010 years and which belong to the three types of financial architecture according to the previous research. These companies represent various industries including transport, oil and gas, metal and mining, energy, automobile production, telecommunication, the chemic and consumer sectors. The description of clusters including the characteristics of financial architecture and performance is presented in Table 2.1.

Table 1

The description of types of financial architecture

Characteristic	Cluster 1	Cluster 2	Cluster 3

Independence of the board of directors	This cluster is characterized by almost constant fraction of independent representatives in the board of directors with the mean level 34–35%.	This cluster has the highest fraction of independent directors with the mean level varying in the range 39–42%.	This cluster is characterized by the lowest fraction of independent directors. Except for the year 2008, the mean level is about 30%.
Ownership concentration	The ownership concentration almost does not change in this cluster. Its mean level is about 68–69%.	This cluster demonstrates first the increase of ownership concentration to the highest mean level of 74% in 2009 and then a significant decline to 61%.	This cluster has the highest ownership concentration with a highest mean value in the pre-crisis period of 76%.
Foreign ownership	This cluster is characterized by the highest and increasing foreign ownership during all the observation period. The mean value of foreign ownership increases from 20% to 24%.	Foreign ownership in this cluster is the lowest. The mean value increases through the observation period from 2% to 4%.	This cluster is characterized by the intermediate level of foreign ownership with mean values 11–14%.
Managerial ownership	Managerial ownership is the lowest in this cluster. Its mean level is slightly more than 5%.	Management ownership for the representatives of this cluster is the highest in comparison to the other cluster. In the pre-crisis period the mean level varies in the range 17–27%.	This cluster is characterized by the intermediate level of managerial ownership with the mean values around 15%.
Capital structure	This cluster has the most conservative capital structure with the mean level of leverage of about 30%.	This cluster is characterized by the intermediate level of leverage. The mean levels of leverage vary in the interval 30–40%.	The companies from this cluster have the most aggressive capital structure. The mean level of leverage is never lower than 40% and the highest leverage is in the crisis 2008 year – more than 50%.
Tobin's Q	These companies have the lowest values of Tobin's Q during all the observation period. However, they are the most stable in terms of this indicator.	These companies are characterized by the intermediate values of Tobin's Q around 2 in stable periods. However, in the crisis the reduction of this indicator is also significant.	These companies have the highest values of Tobin's Q during all the observation period. However, they experience the most substantial fall of this indicator during crisis.
Sales growth rate	According to this criterion, the companies from this cluster outperform the rest in the crisis and post crisis periods.	The companies of this cluster are characterized by the intermediate growth rate of sale with the most significant fall in 2008.	These companies have the lowest sales growth rate.
CAPEX growth rate	These companies have the highest CAPEX growth rate in the post-crisis period with the mean value of 8–10%.	Companies from this cluster have a stable growth rate of CAPEX with the mean values of around 7–8%.	These companies had the highest growth rate of CAPEX in the pre-crisis period with the mean value of 11–13%. However, after the crisis they experience the most significant fall of this indicator to the mean level of 5–6%.

Thus, the types of FA have the following distinctive features.

Cluster 1: It is characterized by the highest foreign ownership and the lowest managerial ownership and ownership concentration. The capital structure is the most conservative for this cluster.

Cluster 2: It is characterized by the highest managerial ownership combined with the highest level of independency of the board. Foreign ownership is the lowest in this cluster and the leverage is moderate.

Cluster 3: This cluster is characterized by the medium foreign and managerial ownership, but the highest level of leverage and ownership concentration.

It is also important to mention that no industry effect on clusters formation was found. In other words, each cluster contains the representatives of several sectors.

The methodology of the research assumes comparison of SGI values and values of its components for companies from the sample with industry mean levels. However, several industries are poorly represented

in the sample. Thereby, it is necessary to expand the sample in order to obtain adequate mean levels across industries. For this purpose, the data was collected for the companies which are included into industrial indices on MICEX stock exchange. Such a choice of companies provides an opportunity to reach the comparability of companies in terms of size and ensures that necessary information will be disclosed. All necessary financial data was collected from Bloomberg database.

Empirical results

As far as the aim of the research is to test the relations between financial architecture of a company and sustainability of its growth on the current step the task is to check whether companies representing different types of financial architecture vary in terms of sustainable growth index.

 On the first step the SGI was calculated for the whole observation period (2005–2010). The results of calculations are visualized by means of matrixes of quality of growth (Diagrams 1 and 2) and the histogram of mean values of components of SGI for companies representing different types of financial architecture (3).

The matrixes of quality of growth are constructed on the basis of components of SGI. Both of them show the strategic component of growth (average growth rate of sales) and the ability of a company to create positive economic profit. The last component is represented by the sustainability of growth (l/k measure) on the first diagram and on the second diagram it is reflected by the accumulated for the period residual income spread ($\sum_{i=2005}^{2010}(ROEi - Rei)$).
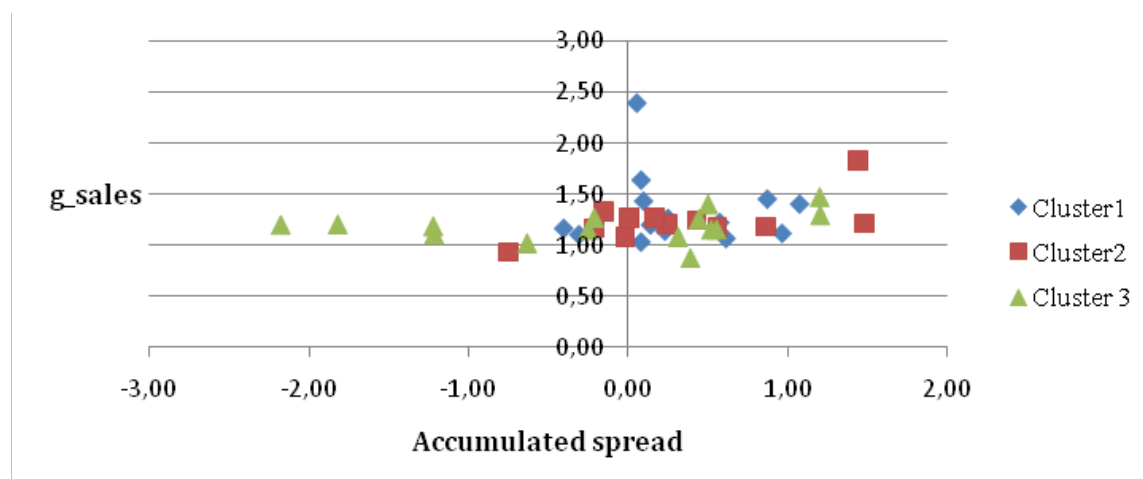

Diagram 1: The sustainability of growth of Russian companies (2005–2010)
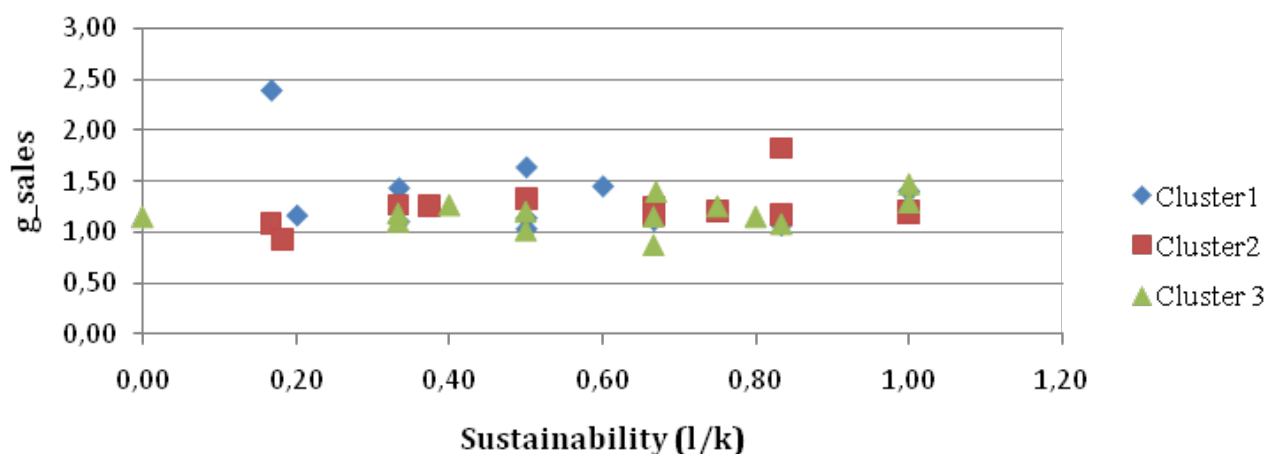

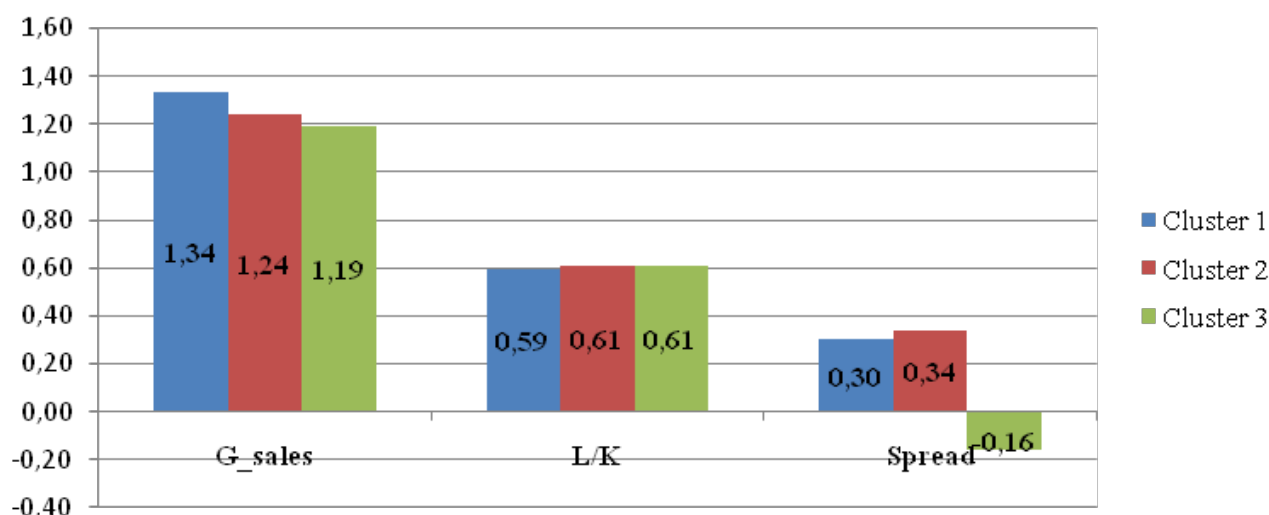*Diagram 2: The sustainability of growth of Russian companies (2005–2010)*

Diagram 3: The mean values of components of SGI for Russian companies (2005–2010)

According to Diagrams 1 and 2, we cannot draw a univocal conclusion that the companies in various FA clusters differ significantly in terms of sustainability of growth. Nevertheless, we can demonstrate several important findings.

First, we can observe that the firms of the first and the second clusters are characterized by the higher average growth rate of sales. For the first cluster the mean growth rate of sales for the period is 34%. For the second cluster it is 24% and for the third cluster the corresponding value is 19%. Besides, the first cluster is characterized by the largest and growing over time foreign ownership, which can also positively affect the sales growth rate as foreign investors from developed markets are able to share a valuable expertise and implement more efficient standards of corporate governance. These results provide evidence in favour of *Hypothesis 4*.

For the second cluster the lack of foreign ownership is compensated by considerable insiders' ownership. As far as the sales growth rate refers to the amount of indicators that can be easily observed by shareholders, managers should be interested in its maximization in order not to be replaced.

In terms of sustainability of growth (l/k – the fraction of the observation period when the company earns positive economic profit) the companies from different financial architecture clusters are mixed. However, more than 20% of companies from the first and the second cluster generate positive economic profit during all the observation period, while for the third cluster the corresponding ratio is only 12%.

As it was mentioned before, no sustainable influence of industries on the clusters was found. In other words, each cluster contains companies from various industries. Thus, it is reasonable to compare indicators of quality of the company's growth to corresponding industry average levels. This is justified due to the fact that various industries can be on different stages of the life cycle and the comparison of characteristics of companies representing various industries can be inconsistent. Thereby, it is reasonable to consider not absolute values of SGIs but the values in comparison to the mean ones of corresponding industry.

The median values of the components of SGI across industries are reported in Table 2. The discrepancy in median values of average growth rates of sales and accumulated residual income spread confirms the validity of our approach. Since the variation between industries in terms of components of SGI is significant, it is reasonable to compare the company's performance to industry average levels.

Table 2

Median values of SGI components across industries

	g_sales	SGI	l/k (sustainability)	Accumul. spread
Automobile production	1,11	0,14	0,33	-0,31
Metal	1,17	0,47	0,67	0,33

Oil and gas	1,25	0,51	0,92	0,41
Telecommunication	1,07	0,43	0,67	0,38
Transport	1,12	0,34	0,67	0,39
Energy	1,44	0,17	0,33	0,08
Chemistry	1,14	0,38	0,75	0,43

In order to classify the companies from the sample according to the level of sustainability of growth the following criteria were applied. The companies whose performance exceeds the median level in the industry by more than 25% were attributed to the most efficient type in terms of sustainability of growth. Companies which demonstrate performance below 75% of the median were assigned to the least effective type. The companies with parameters of sustainability varying in the range of 75−125% of the median were assigned to the group with average characteristics of the quality of growth.

It is important to understand whether the clusters of financial architecture coincide with types of sustainability of growth formed according to three criteria: revenue growth rate, steadiness of growth and accumulated residual income spread. The results of comparison are represented in Table 3.

Table 3

Comparison of FA clusters with types of growth

Criteria	The fraction of matches
SGI	41%
Steadiness (L/k)	46%
Accumulated Spread	46%

In almost 50% of cases the type of financial architecture corresponds to the type of sustainability of growth. This result provides only minor support for the hypothesis that the type of financial architecture determines the sustainability of growth. Nevertheless, it is important to mention that more than 70% of companies characterized by the first type of financial architecture (most efficient) outperform the industry mean levels according to the sales growth rate and accumulated residual income spread. For the third (least efficient) cluster of financial architecture the corresponding characteristics are 55% for the sales growth rate and slightly more than 40% for accumulated residual income spread.

On the following step, the volatility in terms of key characteristics of sustainability of growth was estimated. An interesting result was obtained with respect to value creation criteria. The companies from the first cluster are characterized as the least volatile. The standard deviation of residual income spread for these companies during the observation period is 14% and the year-average of residual income spread is 6%. For the representatives of the second cluster corresponding values are 16% and 5%. The companies from the third FA cluster are the most volatile: the standard deviation of economic profit is almost 35%. These results provide evidence in favour of *Hypothesis 2* concerning non-linear relations between managerial ownership and sustainability of growth. Insignificant participation of managers in equity helps to align the incentives of shareholders and managers and motivate the least to maximize the value of a company. More significant insider ownership, however, negatively affects the value creation process as the managerial entrenchment effect takes place. The representatives of the third cluster confirm this theory. The mean value of insider ownership in this cluster varies in the interval 13–16%, so managers have significantly more power than those from the first cluster where managerial ownership is slightly more than 5%. Having more shares in disposition, managers would rather care about the stability of the business than the maximization of the company's value.

The next step of the research is to examine the characteristics of the quality of growth for representatives of different clusters in various circumstances of business environment. Thus, it is useful to distinguish the pre-crisis (2005–2007), crisis (2008–2009) and post-crisis (2010–2012) periods and estimate the components of SGI separately for these periods. However, due to the fact that several companies went public just before the crisis and did not report their financial data before, the decision was taken to exclude the pre-crisis period because of the small sample size. Thus, the components of SGI were calculated separately for the crisis (2008-2009) and post-crisis (2010–2012) periods.

Table 4 reports the mean and median values of the sales growth rate, sustainability and accumulated income spread for the companies from various FA clusters in the crisis period.

Table 4

Sustainable growth characteristics for different clusters in the crisis period (2008–2009)

Criteria	Cluster 1		Cluster 2		Cluster 3	
	Mean	Median	Mean	Median	Mean	Median
G_sales	108%	109%	99%	98%	102%	105%
L/K	0,321	0,000	0,417	0,500	0,467	0,500
Accum. spread	-0,052	-0,058	-0,082	-0,109	-0,464	0,074

Table 4 shows that in the crisis period the companies from the first and the third clusters still have on average a positive sales growth rate; however, for the third cluster this value is close to zero. The companies from the second cluster are characterized by a slightly negative sales growth rate. This can be explained by the fact that in the pre-crisis period these companies had the lowest growth rate of investments which resulted in the loss of customers in the crisis period. Besides, the reported dynamic of sales in the second cluster is mostly driven by the metal companies such as NLMK and Severstal which faced a substantial price decrease. We can also argue that these results correspond to the logic of the stakeholder theory of capital structure and are in line with those of (Opler and Titman, 1994) who reported that highly levered firms lose market share to their more conservatively financed rivals during industry downturns. Thus, this result provides support for *Hypothesis 5*.

Concerning the sustainability of growth, contrary to predictions, the companies from the second and the third cluster demonstrated stronger results. However, if the representatives of the first cluster obtained on average *moderately* negative economic profit, the companies from the other clusters demonstrated larger variation. It can be explained by the differences in capital structure of these companies.

On the next step, the impact of financial architecture on the sustainability of growth in the post-crisis period was examined. The mean and the median values of components of SGI in the post-crisis period (2010-2012) are contained in Table 5.

Table 5

Sustainable growth characteristics for different clusters in the post-crisis period

Criteria	Cluster 1		Cluster 2		Cluster 3	
	Mean	Median	Mean	Median	Mean	Median
G_sales	1,161	1,160	1,169	1,192	1,128	1,143
L/K	0,62	0,83	0,58	0,67	0,40	0,33
Accum. spread	0,04	0,08	-0,04	-0,02	-0,24	-0,11

We can observe that companies from the first and the second clusters are characterized by higher sales growth rates in post-crisis periods than the representatives of the third cluster. It can be explained by the fact that more conservative capital structure for these companies resulted in the lower cost of equity in post-crisis periods which provided an opportunity to make additional investments to increase sales. Besides, it can be stated that companies from the first cluster demonstrate the most sustainable growth (according to l/k criterion) in the post-crisis period while the representatives of the third cluster perform poorer according to this criterion. The same result was obtained for the accumulated residual income spread. On average the representatives of the first cluster generate positive economic profit every year after the crisis period. The companies from the second cluster generate almost sufficient income to cover the required return on equity. As a result, the average accumulated residual income spread is close to zero. Concerning the companies from the third cluster, apparently they have higher costs of equity due to the higher level of risk associated with them. Thus, they have a negative economic profit for the majority of the period and a significantly negative accumulated spread. These results confirm *Hypothesis 5*.

Despite the fact that the variation across companies according to different characteristics of the quality of growth is not so significant, the general pattern can be observed. All in all, the companies from the

first cluster on average outperform the representatives of the second and the third cluster. The most noticeable discrepancy can be observed in terms of value creation. While the companies from the first cluster generate positive economic profit during almost all the post-crisis period, the representatives of the second and especially the third cluster are not able to generate income sufficient to cover their cost of capital required by investors. Thus, the combination of insignificant insider ownership, the efficient board structure, foreign investors' participation and conservative capital structure provides an opportunity to reach sales growth rates exceeding industry median levels and generate cash flow sufficient to cover cost of capital. The increase in managerial ownership leads to the entrenchment effect accompanied by opportunistic behaviour, which negatively affects the company's value. These results confirm *Hypotheses 2 and 5*.

However, the increase in the share of independent representatives in the board of directors provides an additional instrument of management control and motivation, which prevents them from opportunistic behaviour and provides an opportunity for the company to reach the steadiness of growth. Thus, *Hypothesis 1* can also be confirmed.

The impact of financial architecture on Total Shareholders Return

It is also vital to examine the influence of corporate financial architecture on components of *total shareholders return* because this indicator is of crucial importance for investors as it provides them with a "useful snapshot of value creation" (BCG, 2000). In this section the influence of financial architecture on the components of total shareholders return will be examined.

Diagram 4 depicts the mean values of TSR components during all the observation period (2005–2010) for companies representing different clusters of financial architecture.
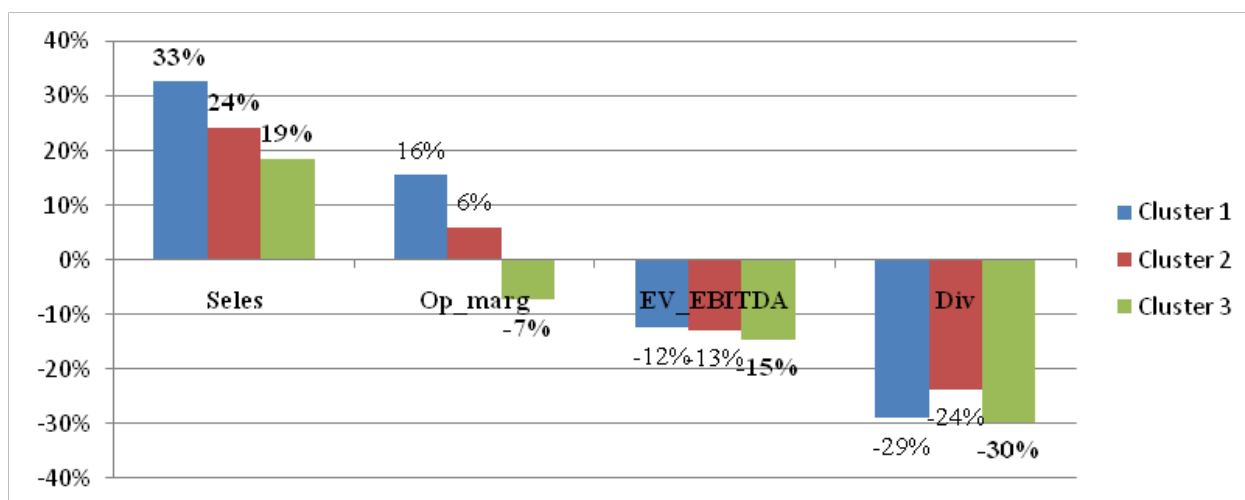

Diagram 4. Total shareholders return (2005–2010)

We can observe that the representatives of the first FA cluster significantly outperform the other companies in the sales growth rate and operating margin growth rate which together constitute the growth of fundamental value. These results are in line with those obtained for the sustainable growth index. Indeed, a significant participation of foreign investors in the equity of these companies combined with reasonable managerial ownership ensures the proper stimuli allocation for the growth of fundamental value. As far as foreign investors control on average more than 20% of equity of these companies, they can contribute to the management process and implement new technologies and expertise. This can help both to work out the right marketing strategy and achieve better levels of operating efficiency, which can result in impressive sales and operating margin growth. This result provides support for *Hypothesis 4*. Contrary to the firms of the first FA cluster, the companies from the third cluster are characterized by the moderately negative operating margin growth rate during the 2005–2010 period, despite the fact that foreign investors control more than 10% of equity. This can be explained by the fact that the ownership concentration is larger in the third cluster which might lead to conflicts between majority and minority shareholders and complicate the process of decision-making by the board of directors. Thus, there might

be negative influence on the efficiency of the board, which results in poor strategic decisions. This result provides evidence in favour of *Hypothesis 3*.

The next component of TSR is a value multiple EV/EBITDA. Concerning multiple growth rates, we can observe that all the companies demonstrate negative average values for the whole period. This is caused by the consequences of the financial crisis when the capitalization of the majority of companies fell substantially and the recovery was long and complicated. Nevertheless, we can observe that the companies from the third cluster face more significant reduction in this multiplier, which can be explained by higher leverage that negatively affects market valuation in the crisis period.

The last component of total shareholder return is dividend yield. First of all, it is important to notice that dividend yield is only a minor source of cash flow for shareholders of Russian companies. The majority of companies from the sample either do not pay dividends on a regular basis or do not do this at all. Since the data concerning dividend yield is very poor and filled with gaps, it is hard to draw adequate conclusions on its basis. Less than 50% of companies from the sample pay dividends at all and a lot of them pay dividends just episodically. Thus, on the basis of data provided by Bloomberg data base we can observe that the dividend yield of the firms of all the clusters decreased on average during the observation period. This can be caused by the consequences of the financial crisis 2008–2009 as companies did not have enough free cash flow to pay out dividends. It is also interesting to notice that more than 60% of companies from the second cluster pay dividends whereas the corresponding figure for the first and the third cluster is 50% and 20% respectively. The companies of the second cluster are characterized by the highest insider ownership, so it is reasonable to assume that the dividends are paid in order to motivate managers and provide them an opportunity to obtain benefits without selling their stock, which is a negative signal for investors.

Now it is reasonable to divide the observation period into the crisis (2008–2009) and post-crisis (2010–2012) ones and examine the differences in components of TSR for the representatives of various FA clusters. Diagram 5 presents the mean values of components of TSR for companies from different FA clusters. Due to the lack of data, the dividend yield growth rate was excluded from the analysis. Thus, the diagram includes mean values of growth rates of sales, operating margin and EV/EBITDA multiple.
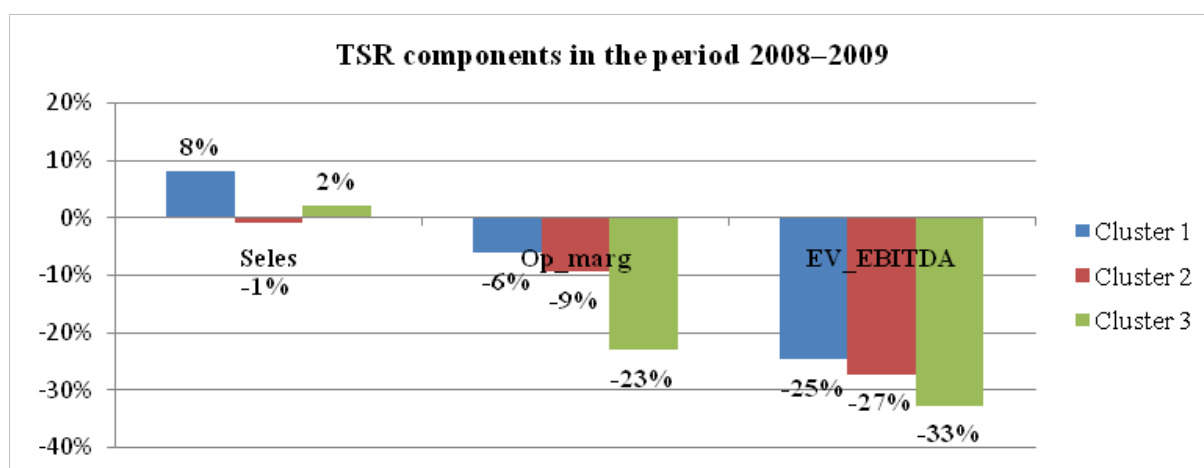

Diagram 5. Total shareholder return in the crisis period (2008–2009)

The dynamic of sales was discussed in details in the previous section as the sales growth rate is also a component of sustainable growth index.

Concerning the operating margin dynamic, all the companies faced the reduction of this indicator in the crisis period. Nevertheless, for the companies from the first and the second cluster the fall in operating margin was significantly less than for companies with the third type of financial architecture. This is the evidence in favour of better operating performance of companies with the first and the second type of financial architecture which can be explained by more efficient combination of the ownership structure and corporate governance.

We can also observe that in the crisis period all the companies demonstrated the decrease in the values of multiple that is to be expected. However, the companies characterized by the first and the second types of FA experienced a slightly less severe fall in values of multipliers. This confirms that these companies are perceived by investors as less risky and provides support for *Hypothesis 5*.

Now it is reasonable to examine the influence of financial architecture on the components of total shareholder return in the post-crisis period (2010–2012). The data on mean values of sales, operating margin, EV/EBITDA multiple and share price growth rates are presented in Diagram 6.
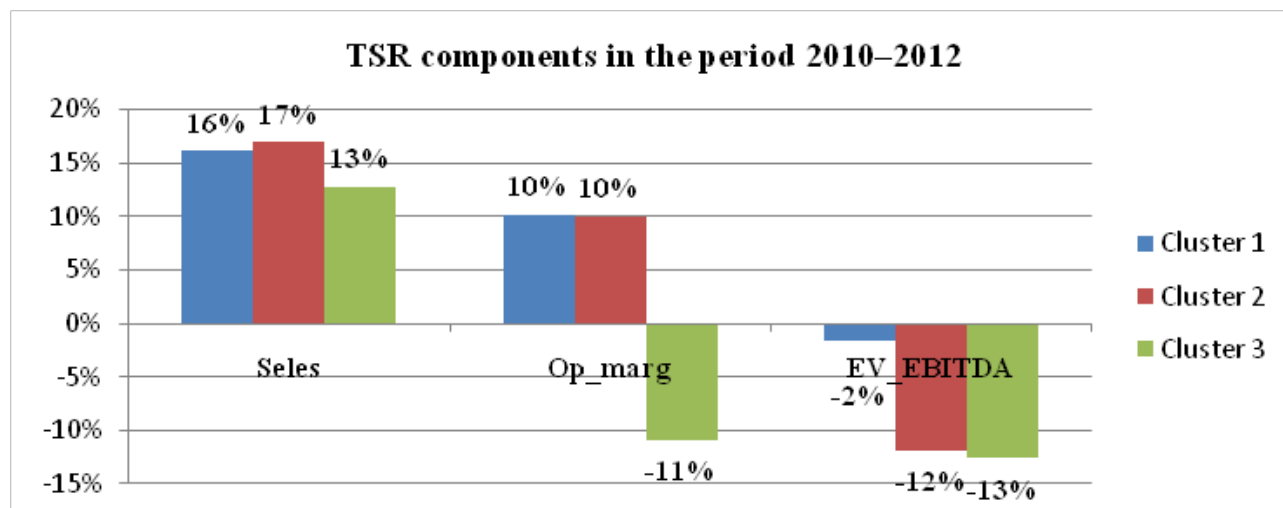

Diagram 6. Total shareholder return in the post-crisis period (2010–2012)

The discrepancy between the clusters in the average growth rate of sales was discussed in the section devoted to the analysis of sustainability of growth.

Concerning the dynamic of operating margin, we can observe that, contrary to the companies with the third type of financial architecture, the representatives of the first and the second cluster demonstrate a positive movement of this indicator. Thus, the financial crisis caused more serious consequences for companies with the third type of financial architecture. This can be due to the combination of a less conservative capital structure and a highly concentrated ownership structure. The first factor negatively affects cost of equity for these companies and leads to lower investments. The second factor might lead to conflicts between majority and minority shareholders and complicate the decision making process. Thus, the evidence in favour of *Hypotheses 3* and *5* is provided.

According to Diagram 6, the representatives of all the clusters on average face the reduction of EV/EBITDA multiple. This can be explained by the fact that by the end of 2009 the share price of many companies almost reached and in some cases even exceeded the pre-crisis levels but in the subsequent periods there was a correction. In general we can observe that the companies with the first type of financial architecture demonstrate only slight reduction in the value of the multiple whereas the representatives of the second and especially the third cluster experience a more substantial decrease. This can be due to a more conservative capital structure of the companies from the first cluster, which makes them less risky and more attractive for investors in the unstable post-crisis environment. Moreover, the companies with the first type of financial architecture are characterized by the most significant and growing participation of foreign investors, which has a positive impact on market valuation (Tobin's Q). These results provide support for *Hypotheses 2* and *5*.

In general we have observed the differences in the sustainability of growth (revealed through SGI and TSR) between the companies characterized by various types of corporate financial architecture. Despite the fact that there is no clear division of the firms of different clusters according to sustainability growth index, several *patterns of growth* can be observed. First, the companies of the first and the second cluster outperform the rest according to both the strategic component of growth and the financial one – economic profit creation. Besides, they provide a higher level of total shareholders return. Especially considerable differences between the representatives of various types of financial architecture can be seen from the prospective of fundamental value. The companies with the smallest managerial ownership and substantial

participation of foreign investors in general are less volatile and provide positive residual income spread for the majority of the observation period. The summary of results is presented below.

Cluster 1. The companies representing this cluster outperform the other companies in terms of both the fundamentals growth rate and accumulated residual income spread. Thus, they are characterized by the most sustainable growth. This can be explained by significant foreign ownership and the smallest managerial ownership combined with the most conservative capital structure, which allows decreasing the cost of equity and generate on average positive economic profit.

Cluster 2. These companies occupy the second position in terms of sustainability of their growth. They demonstrate a higher variation in the sales growth rate in comparison to the representatives of the first cluster and generate on average moderate economic profit. Such dynamic can be explained by the lack of foreign participation and a less conservative capital structure, which destructs the sustainability of growth. The highest level of managerial ownership in this cluster is compensated by a significant independency of the board of directors, which provides a higher quality of control over management.

Cluster 3: These companies perform poorer in terms of sustainability of growth in comparison with the other companies. The companies characterized by this type of financial architecture demonstrate the lower growth rate of fundamentals and generate on average negative economic profit. These companies also demonstrate higher volatility in terms of residual income spread. There are several explanations of these results. First, the companies representing the third cluster have the highest level of leverage during all the observation period. Thus, these companies are associated with the highest level of risk, which negatively affects the cost of capital and, consequently, the residual income spread. Second, these companies are characterized by more significant managerial ownership than the representatives of the first cluster, which leads to the entrenchment of managers. Finally, a quite significant level of foreign ownership in this cluster is compensated by the highest ownership concentration, which might prevent the implementation of new technologies and standards of corporate governance due to conflicts between majority and minority shareholders.

In general, the results of the current research provide support for all the stated hypotheses. The first cluster with the highest foreign ownership and the most conservative capital structure outperform the other clusters in terms of sustainability of growth, which supports Hypotheses 4 and 5. The involvement of independent directors in the board improves the sustainability of growth as it provides a better control over management (Hypothesis 1). Ownership concentration negatively affects the quality of growth due to conflicts between majority and minority shareholders (Hypothesis 3). The representatives of the third cluster provide evidence in favour of this logic, since, in spite of a significant foreign ownership, they perform poorer in comparison to the representatives of the second cluster characterized by the lowest foreign participation. Finally, the evidence in favour of non-linear relations between managerial ownership and sustainability of growth was found (Hypothesis 2). The companies from the first and the second clusters (with the smallest and highest levels of managerial ownership respectively) outperform the firms of the third cluster in terms of sustainability of growth.

Conclusion

This study contributes to the examination of the impact of financial architecture on the company's performance. In general, it provides evidence supporting the hypothesis that financial architecture influences the sustainability and quality of the company's growth. For a sample of large Russian companies it was demonstrated that the firms representing different types of financial architecture vary in terms of sustainability of growth. In particular, the companies with a more conservative capital structure, insignificant managerial ownership and active participation of foreigners in equity capital outperform the others in terms of sales, operating margin growth rates and residual income spread. These companies were also shown to be less volatile in both the crisis and post-crisis periods. The most substantial difference between the representatives of various types was found in terms of residual income spread which is one of the most important aspects from the point of view of contemporary financial analysis as it takes into account alternative costs of capital and reveals the ability of a company to generate positive economic profit.

This study also supports the hypothesis that the components of financial architecture cannot be studied separately. Therefore, a complex model of the analysis of performance should be applied as the components of financial architecture are interconnected and affect each other. In particular, it was demonstrated that in the companies with higher ownership concentration, foreign ownership has a less impact on performance, which can be explained by arising conflicts between majority and minority shareholders. Also, for companies that are characterized by large managerial ownership the involvement of independent directors can positively affect the sustainability and quality of growth as independent representatives are able to monitor managers better and motivate them to maximize the value of a company.

The results obtained in this research are in line with the results of the prior research for the Russian market conducted by Ivashkovskaya and Stepanova (2011a, 2011b, 2011c) and Kokoreva and Stepanova (2012). These results can be interesting for managers of Russian companies because they can help to establish an appropriate financial design of a company, providing an opportunity to reach more qualitative types of growth and thus improve the perception of a company by all types of stakeholders, including financial and non-financial ones.

The current research provides a background for future studies. There are several ways of how this research could be continued. First, the methodology of the analysis could be applied to developed countries and cross-country differences could be examined. Second, there exists a possibility to extend the sample so that the companies from the second echelon could be included in order to obtain greater variation in terms of performance. However, it could be realized only providing the fact that all financial and non-financial data is available for these companies. The third way to continue the current research is to examine the non-linear relations that can arise between the components of financial architecture and performance.

References

1. Agrawal. A., Mandelker, G. (1990), Large shareholders and the monitoring of managers, the case of antitakeover charter amendment, Journal of Financial and Quantitative analysis, 25 (1990) 143–167.

2. Agrawal, A., Mandelker, G. (1992), Shark repellent and the role of institutional investors in corporate governance, Managerial and Decision Economics, 13 (1992) 15–22.

3. Alipour, M., Amjadi, H. (2011), The Effect of Ownership Structure on Corporate Performance of Listed Companies in Tehran Stock Exchange: An Empirical Evidence of Iran, International Journal of Business and Social Science, 1(2) (2011) 49–55.

4. Anderson, R., Mansi, S., Reeb, D., (2003), Founding family ownership and the agency cost of debt, Journal of Financial Economics, 68 (2003) 263–285.

5. Bae, K., Kang, J., Wang, J. (2010), Employee Treatment and Firm Leverage: A Test of the Stakeholder Theory of Capital Structure, Available at SSRN: http://ssrn.com/abstract=1610170.

6. Baliga, B., Moyer, R., Rao, R. (1996), CEO duality and firm performance: What's the fuss?, Strategic Management Journal, 17 (1996) 41–43.

7. Baysinger, B., Hoskisson, R. (1990), The composition of boards of directors and strategic control: Effects on corporate strategy, Academy of management review, 15 (1990) 72–87.

8. BCG Report (2000), New perspectives on value creation: a study of the world's top performers // www.bcg.com.

9. BCG Report (2006), Spotlight on growth. The role of growth in achieving superior value creation // https://www.bcg.com/documents/file14876.pdf.

10. Beasley, M. (1996), An Empirical Analysis of the Relation between the Board of Director Composition and Financial Statement Fraud, The Accounting Review, 4(71) (1996) 443–465.

11. Beasley, M., Salterio, S. (2001), The relationship between board characteristics and voluntary improvements in audit committee composition and experience, Contemporary Accounting Research, 4(18) (2001) 539–571.

12. Beiner, S., Drobetz, W., Schmid, F., Zimmermann, H. (2004), Is board size an independent corporate governance mechanism?, Kyklos, 57 (2004) 327–357.

13. Bergstressera, D., Philippon, T. (2006), CEO incentives and earnings management // Journal of Financial Economics, 3(80) (2006) 501–530.

14. Bhabra, G. (2007), Insider ownership and firm value in New Zealand, Journal of Multinational Financial Management, 17 (2007) 142–154.

15. Bhagat, S., Black, B. (2002), The Non-Correlation between Board Independence and Long-Term Firm Performance, Journal of Corporation Law, 27 (2002) 231–273.

16. Bhagat, S., Bolton, B. (2008), Corporate governance and firm performance, Journal of Corporate Finance, 14 (2008) 257–273.

17. Bonn, I. (2004), Board Structure and Fir m Performance: Evidence from Australia, Journal of Management and Organization, 1(10) (2004) 14–25.

18. Bradley, M., Jarrell, G., Kim, E. (1984), On the Existence of an Optimal Capital Structure: theory and Evidence, Journal of Finance, 39 (1984) 857–878. doi:10.2307/2327950.

19. Brailsford, T., Oliver, B., Pua, S. (2002), On the Relation of Ownership Structure and Capital Structure, Accouting and Finance, 42 (2002) 1–26.

20. Brickley, J., Coles, J. (1997), Leadership structure: Separating CEO and chairman of the board, Journal of Corporate Finance, 3 (1997) 189–220.

21. Buck, T., Liu, X., Skovoroda, R. (2008), Top executive pay and firm performance in China, Journal of International Business Studies, 39 (2008) 833–850.

22. Burkart, M., Gromb, D., Panunzi, F. (1997), Large Shareholders, Monitoring and the Value of the Firm. Quarterly Journal of Economics 3(112) (1997) 693–728.

23. Burns, N., Kedia, S. (2003), Do executive stock options generate incentives for earnings management? Evidence from accounting restatements /working paper, University of Georgia, Athens, GA and Harvard Business School, Boston, MA.

24. Cheng, Q., Warfield, T. (2005), Stock-based compensation, insider trading, and earnings management, Accounting Review, 2(80) (2005) 441–477.

25. Christensen, J., Kent, P., Stewart, J. (2010), Corporate Governance and Company Performance in Australia, Australian Accounting Review, 4(55(20)) (2010) 372–386.

26. Claessens, S., Djankov, S., Fan, J., Lang, L. (2002), Disentangling the incentive and entrenchment effects of large shareholdings, Journal of Finance, 57(6) (2002) 2741–2771.

27. Conger, J.A., Finegold, D., and Lawler, E.E. (1998), Appraising Boardroom Performance, Harvard Business Review, 1(76) (1998) 136–148.

28. Core, J., and Guay, W. (1999), The use of equity grants to manage optimal equity incentive levels, Journal of Accounting and Economics, 28 (1999) 151–184.

29. Core, J. Guay, W., Rusticus, T. (2006), Does Weak Governance Cause Weak Stock Returns? An Examination of Fir m Operating Performance and Investors' Expectations, The Journal of Finance, 2(61) (2006) 655–687.

30. Dalton, C.M., Dalton, D.R. (2005), Boards of Directors: Utilizing Empirical Evidence in Developing Practical Prescriptions, British Journal of Management, 6 (2005) S91–S97.

31. Dalton, D., Daily, C., Johnson, J., Ellstrand, A. (1999), Number of directors and financial performance: A meta-analysis, Academy of Management Journal, 42 (1999) 674–686.

32. Davidson, R., Goodwin-Stewart, J., Kent, P. (2005), Internal Governance Structures and Earnings Management, Accounting and Finance, 2(45) (2005) 241–267.

33. Davis, J., Donaldson, L. (1991), Stewardship Theory or Agency Theory: CEO Governance and Shareholder Returns, Australian journal of management, June (1991) 49–64.

34. Demsetz, H., & Lehn, K. (1985), The structure of corporate ownership: causes and consequences, Journal of Political Economy, 93 (1985) 1155–1177.

35. Demsetz, Villalonga, (2001), Ownership Structure and Corporate Performance. Journal of Corporate Finance, 7 (2001) 209–233.

36. Demsetz, H. (1983), The structure of ownership and the theory of firm. Journal of law and Economics, 26 (1983) 375–390.

37. Denis, D., Denis, D., & Sarin, A. (1995), Performance changes following top management dismissals. Journal of Finance, 50 (1995) 1029–1057.

38. Denis, D.J., Denis, D.K., and Sarin, A. (1997), Ownership structure and top executive turnover, Journal of Financial Economics, 45 (1997) 193–221.

39. Dharwadkar, R., George, G., Brandes, P. (2000), Privatization in emerging economies: An agency theory perspective. Academy of Management Review, 25 (2000) 650–669.

40. Durnev, A., and Kim, E.H. (2005), To Steal or Not to Steal: Firm Attributes, Legal Environment, and Valuation, Journal of Finance, 60 (2005) 1461–1493.

41. Ellili, N. (2011), Ownership Structure, Financial Policy and Performance of the Firm: US Evidence, International Journal of Business and Management, 10(6) (2011) 80–93.

42. Fama, E.F., & Jensen, M.C. (1983). Separation of ownership and control, Journal of law and Economics, 26 (1983) 301–326.

43. Farinos, J.E., Garcia, C.J., Ibanez, A.M. (2006), Operating and Stock Market Performance of State-owned Enterprise Privatizations: The Spanish Experience, SSRN Paper.

44. Finkelstein, S. (1992). Power in top management teams: Dimensions, measurement, and validation, Academy of Management Journal, 35 (1992) 505–538.

45. Firstenberg, P.B., and Malkiel, B.G. (1994), The Twenty- First Century Boardroom: Who Will be in Charge?, Sloan Management Review, 1(36) (1994) 27–35.

46. Francis, J., Olsson, P., and Schipper, K. (2005), Call options and accruals quality, working paper, SSRN, Rochester, NY.

47. Gompers, P.A., Ishii, J.L., Metrick, A. (2003), Corporate governance and equity prices. Quarterly Journal of Economics, 1(118) (2003) 107–155.

48. Green, S., & Liu, S.G. (2005). Exit the dragon? Privatization and state control in China. Chatham House, Blackwell: London.

49. Gregory, A., McCorriston, S. (2005). Foreign acquisitions by UK limited companies: short- and long-run performance. Journal of Empirical Finance, 12 (2005) 99– 125.

50. Grossman, S.J., and Hart, O. (1982), Corporate financial structure and managerial incentive, in J. McCall, ed.: The Economics of Information and Uncertainty, University of Chicago Press, Chicago.

51. Hall, B., Liebman, J. (1998), Are CEOs Really Paid Like Bureaucrats?, 113 Q.J. ECON. 653 (1998).

52. Hanlon, M., Rajgopal, S., and Shevlin, T. (2003), Are executive stock options associated with future earnings?, Journal of Accounting and Economics, 36 (2003) 3–43.

53. Hermalin. B., & Weisbach, M.S. (1988), The determinants of board composition. RAND Journal of Economics, 19 (1988) 589–606.

54. Himmelberg, C.P, Hubbard, R.G., & Palia, D. (1999), Understanding the determinants of managerial ownership and the link between ownership and performance, Journal of Financial Economics, 53 (1999) 353–384.

55. Ho, C., Williams, M. (2003), International comparative analysis of the association between board structure and the efficiency of value added by a firm from its physical capital and intellectual capital resources.

56. Holderness, C., Kroszner, R., Sheehan, D. (1999), Were the Good Old Days that Good? Changes in Managerial Stock Ownership since the Great Depression. Journal of Finance. 2(54) (1999) 435–469.

57. Ivashkovskaya, I.V., Stepanova, A.N. (2012), Financial Architecture and Economic Profit Creation in Russia: Corporate Governance in the Pre-Crisis and Post-Crisis Economy. October 2012. SSRN Working Paper. Available at SSRN: http://ssrn.com/abstract=2160879.

58. Ivashkovskaya, I., Stepanova, A. (2011b) Does strategic corporate performance depend on corporate financial architecture? Empirical study of European, Russian and other emerging market's firms, Journal of Management Government, 15 (2011b) 603–616.

59. Jensen, M.C. (1993), The Modern Industrial Revolution. Exit and the Failure of Internal Control Systems, Journal of Finance, 3(48) (1993) 831–880.

60. Jensen, M., Murphy, K. (1990), Performance Pay and Top-Management Incentives, Journal of Political Economy, 2(98) (1990) 225–64.

61. Jensen, M., Meckling, W. (1976), Theory of the firm: managerial behavior, agency costs, and ownership structure, Journal of Financial Economics, 3 (1976) 305–360. doi:10.1016/0304-405X(76)90026-X.

62. Karaca, S., Ecsi, I. (2012), The Relationship between Ownership Structure and Firm Performance: An Empirical Analysis over Istanbul Stock Exchange (ISE) Listed Companies, International Business Research, 1(5 (2012) 172–181.

63. Kent, P., Stewart, J. (2008), Corporate Governance and Disclosures on the Transition to International Financial Reporting Standards, Accounting and Finance, 4(48) (2008) 649–671.

64. King, M., Santor, E. (2008), Family values: ownership structure, performance and capital structure of Canadian firms, Journal of Banking and Finance, 32 (2008) 2423–2432.

65. Kokoreva, M. S., Stepanova, A. N. Financial Architecture and Corporate Performance: Evidence from Russia, EJournal of Corporate Finance, 2 (2012) 34–44.

66. Krivogorsky, V. (2006), Ownership, board structure, and performance in continental Europe, The International Journal of Accounting, 41 (2006) 176–197.

67. La Porta, R., Lopez-De-Silanes, F., Shleifer, A., &Vishny, R.W. (1997), Legal determinants of external finance, Journal of Finance, 52(3) (1997) 1131–1150.

68. La Porta, R., Lopez-De-Silanes, F., Shleifer, A., &Vishny, R.W. (1998), Law and finance. Journal of Political Economy, 106(6) (1998) 1113–1155.

69. Laffont, J.-J., Tirole, J. (1993), A Theory of Incentives in Procurement and Regulation. Cambridge, MA: MIT Press.

70. Long, M., Malitz, E. (1985), Investment Patterns and Financial Leverage, in Friedman, B. (Ed.). Corporate Capital Structures in the United States.

71. Mace, M. (1986), Directors: Myth and Reality, Harvard Business School Press, Boston MA.

72. Margaritis, D., Psillaki, M. (2010), Capital structure, equity ownership and firm performance, Journal of Banking & Finance, 34 (2010) 621–632.

73. Maury, B. (2006), Family ownership and firm performance: empirical evidence from Western European corporations, Journal of Corporate Finance, 12 (2006) 321–341.

74. Mcconnell, J., Servaes, H. (1990), Additional evidence on equity ownership and corporate value, Journal of Financial Economics, 27 (1990) 595–612.

75. Megginson, M., Netter, J. (2001), From State to Market: A Survey of Empirical Studies on Privatization, Journal of Economic Literature, 2(2) (2001) 321–389.

76. Miguel, A., Pindado, J., Torre, C. (2004), Ownership Structure and Firm Value: New Evidence from Spain, Strategic Management Journal, 25 (2004) 1199–1207.

77. Mir, A., Seboui, S. (2008), Corporate Governance and the Relationship between EVA and Shareholder Value, Corporate Governance, 1(8) (2008) 46–58.

78. Modigliani, F., Miller, M. (1958), The cost of capital, corporation finance and the theory of investment, The American Economic Review, 3(48) (1958) 261–297.

79. Morck, R., Shleifer, A., Vishny, R.W. (1988), Management ownership and market valuation, Journal of Financial Economics, 20 (1988) 293–315.

80. Mueller, E., Spitz, A., (2006), Managerial Ownership and Company Performance in German Small and Medium-Sized Private Enterprises, German Economic Review, 2 (2006) 2–18.

81. Myers, S. (1984), The Capital Structure Puzzle // Journal of Finance, 3(39) (1984) 575–592.

82. Myers, S. (1999), Financial architecture. European Financial Management, 2(5) (1999) 133–141.

83. Opler, T., Titman, S. (1994), Financial Distress and Corporate Performance. Available at SSRN: http://ssrn.com/abstract=5425.

84. Park, S.H., Luo, Y. (2001), Guanxi and organizational dynamics: Organizational networking in Chinese firms, Strategic Management Journal, 22 (2001) 455–477.

85. Patel, S.A., and Dallas, G.S. (2002), Transparency and Disclosure: Overview of Methodology and Study Results—United States, SSRN Working Paper No. 422800.

86. Peng, M.P., Luo, Y. (2000), Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. Academy of Management Journal, 43 (2000) 486–501.

87. Perevalov, Y., Gimadii, I., and Dobrodei, V. (2000), Does Privatisation Improve performance of Industrial Enterprises? Empirical Evidence From Russia, Post-communist economies, 12(3) (2000) 337–363.

88. Pound, J. (1988), Proxy contests and the efficiency of shareholder oversight, Journal of Financial Economics, 20 (1988) 237–265.

89. Rajgopal, S., Shevlin, T. (2002), Empirical evidence on the relation between stock option compensation and risk taking, Journal of Accounting and Economics, 33 (2002) 145–171.

90. Rosenstein, S., and Wyatt, J.G. (1990), Outside directors, board independence and shareholder wealth, Journal of Financial Economics, 26 (1990) 175–191.

91. Shan, Y., McIver, P. (2011), Corporate governance mechanisms and financial performance in China: panel data evidence on listed non financial companies, Asia Pacific Business Review, 3(17) (2011) 301–324.

92. Shleifer, A., Vishny, R.W. (1986), Large shareholders and corporate control, Journal of Political Economy, 94 (1986) 461–479.

93. Shleifer, A., Vishny, R.W. (1998), The grabbing hand: Government pathologies and their cures. Boston: Harvard University.

94. Shleifer, A., Vishny, R. (1997), A Survey of Corporate Governance, The Journal of Finance, 2(52) (1997) 737–778.

95. Sun, Q., Tong, W. (2003), China share issue privatization: the extent of its success, Journal of Financial Economics, 70 (2003) 183–222.

96. Thomsen, S., Pedersen, T. (2000), Ownership Structure and Economic Performance in the Largest European Companies, Strategic Management Journal, 21(6) (2000) 689–705.

97. Tian, L., & Estrin, S. (2005), Retained state shareholding in Chinese PLCs: Does government ownership reduce corporate value?, working paper 750. Ann Arbor: William Davidson Institute.

98. Uwalomwa, U., Olamide, O. (2012), An Empirical Examination of the Relationship between Ownership Structure and the Performance of Firms in Nigeria, International Business Research, 1(5) (2012) 208–215.

99. Vafeas, N. (1999), Board Meeting Frequency and Firm Performance, Journal of Financial Economics, 1(53) (1999) 113–142.

100. Vera, A., Ugedo, J. (2007), Does ownership structure affect value? A panel data analysis for the Spanish market, International Review of Financial Analysis, 16 (2007) 81–98.

101. Villalonga, B., Amit, R. (2006), How do family ownership, control and management affect firm value?, Journal of Financial Economics, 80 (2006) 385–417.

102. Wahla, K., Shah, S. (2012), Impact of Ownership Structure on Firm Performance Evidence from Non-Financial Listed Companies at Karachi Stock Exchange, International Research Journal of Finance and Economics, 84 (2012) 6–13.

103. Williams, R.J., Fadil, P.A., and Armstrong, R.W. (2005), Top Management Team Tenure and Corporate Illegal Activity: The Moderating Influence of Board Size, Journal of Managerial Issues, 4(17) (2005) 479–493.

104. Xu, X., and Wang, Y. (1999), Ownership structure and corporate governance in Chinese stock companies, China economic review, 1(10) (1999) 75–98.

105. Yatim, P., Kent, P., and Clarkson, P. (2006), Governance Structures, Ethnicity, and Audit Fees of Malaysian Listed Firms, Managerial Auditing Journal, 7(21) (2006) 757–782.

106. Yermack, D. (1996), Higher Market Valuation of Companies with a Small Board of Directors, Journal of Financial Economics, 2(40) (1996) 185–211.

107. Young, M., Peng, M., Ahlstrom, D., Bruton, G., Jiang, Y. (2008), Corporate governance in emerging economies: A review of the principal-principal perspective, Journal of Management Studies, 45 (2008) 196–220.

108. Zhang, A., Zhang, Y., and Zhao, R. (2001), Impact of ownership and competition on the productivity of Chinese enterprises. Journal of comparative economics, 2(29) (2001) 327–346.

109. Zhang, W. (2006), China's SOE reform: A corporate governance perspective, Corporate Ownership and Control, 3 (2006) 132–150.

110. Ивашковская И., Кукина Е., Степанова А. Влияние корпоративной финансовой архитектуры на экономическую прибыль: эмпирическое исследование российских компаний в кризисный и предкризисный период // В кн.: XII Международная научная конференция по проблемам развития экономики и общества. В четырех книгах. Книга 4. / Отв. ред.: Е.Г. Ясин. Кн. 4. М.: Издательский дом НИУ ВШЭ, 2012. С. 39-48.

111. Ивашковская И.В., Степанова А.Н. Возможна ли оптимальная финансовая архитектура компании? Сравнительный анализ компаний Европы, России и других стран с растущими рынками капитала // В кн.: X Международная научная конференция по проблемам развития экономики и общества. В 3 кн. / Отв. ред.: Е.Г. Ясин. Кн. 2. М.: Издательский дом ГУ-ВШЭ, 2010. С. 329–339.

112. Ивашковская И., Степанова А. Корпоративная финансовая архитектура и стратегическая эффективность компании: сравнительный анализ компаний России, Восточной и Западной Европы // В кн.: Корпоративные финансовые решения. Эмпирический анализ российских компаний (корпоративные финансовые решения на развивающихся рынках капитала) / Науч. ред.: И.В. Ивашковская. М.: ИНФРА-М, 2011. № 7. С. 142–153.

113. Ивашковская И., Волотовская О. Устойчивость роста компаний с развивающихся рынков капитала: эмпирический анализ // Корпоративные финансы. 2012. № 4 (24).

114. Ивашковская И., Животова Е., Индекс устойчивости роста: эмпирическая апробация на данных российских компаний // Вестник Санкт-Петербургского университета. 2009. № 4.

115. Ивашковская И. Модель корпоративного управления на основе стоимости для стейкхолдеров // Вестник финансовой академии. 2010. № 2. С. 29–35.

116. Ивашковская И.В. Финансовые измерения корпоративных стратегий. Стейкхолдерский подход. 2-е изд., перераб. и доп. М.: НИЦ ИНФРА-М, 2013. – 320 с. – (Научная мысль; Экономика).

117. Ивашковская И., Кокорева М., Степанова А. Финансовая архитектура российских компаний: эмпирический анализ. М.: ИНФРА-М (в печати).

118. Капелюшников Р. Собственность и контроль в российской промышленности // Вопросы экономики. 2001. № 12. С. 103–124.

119. Кузнецов П.В., Муравьев А.А. Механизмы участия государства в управлении акционерными обществами государственной и смешанной форм собственности в России // Вестник СПбГУ. Сер. 8. Менеджмент. 2002. № 8, т. 1. С. 34–57.

120. Кузнецов П.В., Муравьев А.А. Структура акционерного капитала и результаты деятельности фирм в России // Экономический журнал ВШЭ. 2000. № 4, т. 4. С. 475–504.

121. Масленникова М., Степанова А. Влияние структуры собственности на эффективность деятельности на примере российских и бразильских компаний // «Корпоративные финансы 2010. №3 (15). С. 35–46.