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Does the External Institutional Environment Impact Corporate Capital Structure? Evidence from Emerging Economies

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Abstract

The relevance of the article stems from the lack of definitive conclusions about the influence of the external institutional environment on the speed of adjustment (SOA) to target capital structure in emerging economies. We assess the external institutional environment by the quality of law and the quality of law enforcement. We then explore the impact of external institutional environment on the SOA to target leverage for companies from emerging economies. We employ a linear partial adjustment model with fixed company effects, estimated using the Blundell-Bond method. The dataset includes 2,729 firms from 17 emerging economies over the period of 2010–2019. The value of SOA to target leverage is calculated for each country from the sample, taking into account the external institutional environment. A positive effect of law enforcement on the SOA of companies is revealed, although this influence is weak. Furthermore, grouping countries by the quality of the external institutional environment allows us to show that countries with the “best” institutions have a higher SOA than countries with the “worst” institutions for most indicators of external institutional environment quality. The final results provide empirical confirmation of the significant influence of law enforcement and of most indicators of law quality on the SOA of companies in emerging economies, which has not been proven previously in the scientific literature.

Keywords: emerging markets, external institutional environment, institutions, company capital structure, speed of adjustment to company target capital structure

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Introduction

Since the appearance of the paper by S. Myers [1] describing how companies determine their target capital structure, a large number of different publications have appeared on this topic. First, scientists focused on the capital structure of companies from the world's major economies, such as the USA and the United Kingdom. Then, researchers expanded their geographical samples to study emerging countries [2], Asian economies [3] and countries from other regions [4]. It should be noted that such papers usually point out both company-specific characteristics of capital structure management and country-specific factors. At some point, economists drew attention to the external institutional environment as an important country-specific factor. In this paper, we shall study the impact of external institutions on the corporate capital structure.

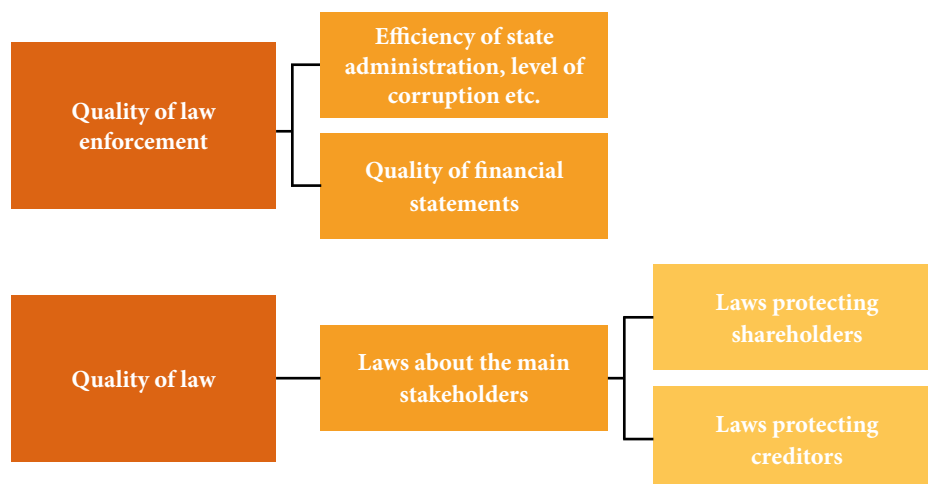
The external institutional environment is shaped by a country's social, political and legal rules, which influence both physical persons and companies. Political and social rules are rather difficult to measure while legal rules are set down in documents. Some researchers argue that the main legislative factors determining the influence of the external institutional environment on corporate economic

development is the efficiency of shareholder and creditor protection [5–7]. Many economists believe that the quality of law enforcement is even more important than the content of these laws.

One may divide the external institutional aspects mentioned above into two subgroups: quality of law and quality of law enforcement (Figure 1).

So, why is quality of law and quality of law enforcement capable of influencing the SOA of capital? The positive relation between these parameters and SOA stems, first and foremost, from reduced transaction expenses, i.e., the expenses incurred for adjusting to a certain target capital structure [8]. In a high-quality external institutional environment, investors are sure that their funds will be repaid and that a company will not behave opportunistically, evading its commitment of paying interest or dividends. Besides, the cost of obtaining funds from investors is not so high as in an economy with a less developed institutional environment, because investors do not charge a risk premium and other possible incremental costs needed for monitoring company operations. Consequently, as shown in [9; 10], a company can raise funds in the debt or stock market with lower expenses and within a shorter period.

Figure 1. Classification of aspects influencing institutions in a country



Source: compiled by the authors on the basis of literature analysis.

The first studies which considered the influence of the external institutional environment on the corporate capital structure appeared in the late 20th century. R. Rajan and L. Zingales analysed seven advanced economies to demonstrate that the corporate capital structure is affected not just by company-specific characteristics, but also by certain country-specific factors such as accounting standards, special features of the tax system, and bankruptcy regulations [11]. Later, A. Demirguc-Kunt and V. Maksimovic analysed a larger sample of developed and emerging countries and showed that differences in the level of long-term debt of companies in these two groups of countries depended

on the efficiency of the legal system, the maturity of the securities market, the state of the banking sector, and the amount of government subsidies [12]. Nevertheless, this study considered a limited number of emerging countries (only 11). One aspect of the authors' approach was later used in other studies. The authors employed the share of long-term debt in company capital as a dependent variable measuring the capital structure of companies. Favourable institutional conditions encourage companies to prefer long-term over short-term capital. As a result, later studies in this field began to assess the influence of the institutional environment on the share of long-term debt.

In 2006, J. Fan and co-authors studied the differences in the corporate capital structure between two groups of countries: developed and emerging ones. They also used a more extensive sample comprising 39 countries. They uncovered a significant relationship between country characteristics (legal and tax systems, level of corruption, maturity of the securities market, legislative framework for bankruptcy regulation) and company leverage. For example, they showed that, in more corrupt countries, companies tend to use short-term debt while, in a more protected legal environment, the share of long-term borrowed funds and equity in company capital structure is higher [13]. Long-term debt is of great importance for implementing company strategy, including investment projects, mergers and acquisitions.

After 2010, the number of regional studies dedicated to the external institutional environment and capital structure increased. B. Awartani et al. studied the structure of debt obligations and its company-specific and institutional factors (mainly law enforcement factors) using a sample of Middle East and North Africa (MENA) countries. They came to the conclusion that such countries make considerable use of long-term debt and have relatively well-developed external institutions [14]. Ö. Öztekin and M. Flannery, in their turn, considered the influence of the institutional environment (factors of the legal system, the level of creditor and shareholder protection) on the SOA to the target capital structure, analysing a mixed sample of developed and emerging countries. It should be said that, once again, their sample comprised only a limited number of emerging countries. The authors showed that institutions have a significant impact on the expenses of adjustment to the target capital structure, hence, on the SOA to the target capital structure [8].

The paper by B. Matemilola et al. [10] is one of the most recent studies on this topic. The authors consider the influence of the institutional environment on the SOA to the target capital structure of companies only in emerging countries. Nevertheless, the authors evaluated only a limited number of factors determining the institutional environment, employing just six indicators from the Worldwide Governance Indicators database of the World Bank. They showed that institutions influence the capital structure of companies in Latin American, Eastern European and Asian countries, while no such relationship exists in Africa.

S. Makarova and K. Merkulov conducted a detailed study of the influence of the external institutional environment on the capital structure of Russian companies using a sample of 72 Russian firms for 2007–2011 [15]. The authors established that such indicators of the external institutional environment as the improved protection of creditor rights, the greater independence of the judicial system, and the positive subjective perception of corruption drive long-term debt up in the capital structure of Russian companies. At the same time, the level of property rights protection is related negatively to the long-term debt of Russian companies. According to the authors, the reason is that the effective

protection of property rights encourages shareholders to provide equity. As a result, the debt load in the financing structure decreases. However, these findings are true only for Russia and are not applicable to other emerging economies.

Nevertheless, the positive impact of the legal environment for creditors on the amount of long-term funds provided by them is not proven by all empirical studies. For example, L. Booth et al. detected only a weak relationship between an external institutional environment favourable to creditors and the share of long-term debt in the total debt of companies [2]. Other prominent researchers found such a relationship only in developed countries, not emerging ones [12].

It should be noted that companies often avoid using long-term borrowed funds to finance their operations if they realize that they will find themselves in a less favourable position than their creditors. Under such circumstances, companies may prefer to use their own funds for financing. A company's decision not to use long-term borrowed funds may be a manifestation of its market power, i.e., its independence from creditors' funds even if the institutional environment for borrowing funds improves and debt becomes cheaper [15]. Therefore, it is difficult to predict how an institutional environment favourable to creditors will affect the corporate capital structure (the share of long-term debt to total debt).

We use a sample of 2,729 companies from 17 emerging countries for the period from 2010 to 2019 to study the nature of influence of two groups of factors which are indicative of the external institutional environment of companies. One group relates to law enforcement, and the second one to quality of law. These factors cannot be considered separately. Indeed, high-quality law increases the number of transactions, including credits [11]. At the same time, the existence of a law enforcement system is an essential aspect of the institutional environment for companies [7; 8; 16]. To the best of our knowledge, the only publication to consider both quality of law and quality of law enforcement is the paper by Flannery and Öztekin [8]. Nevertheless, these authors use the assessments of other scholars as proxy variables although such assessments are often out of date. The quality of law and law enforcement can have a significant impact on the rapidity with which companies attain their target level of capital structure. However, scholars hold different views on the influence of these determinants on the SOA to the target capital structure of companies, and there is no empirical estimate of the nature of their influence. This explains the importance of the present research.

Furthermore, this is the first paper to study this problem for a sample consisting exclusively of countries with emerging markets (in addition, the choice of countries is justified in contrast to many other studies). It should be highlighted that this article examines countries similar to Russia from the point of view of market maturity. Although researchers have previously included emerging countries in their papers [8; 14], this study uses the largest sample of countries with emerging markets in the literature. As a result, we as-

sess the impact of the factors of the external institutional environment on the target capital structure in a more comprehensive and accurate manner than previous studies. Existing publications have failed to assess the influence of the full scope of factors indicative of both the quality of law enforcement and the quality of the laws themselves in protecting shareholder and creditor rights.

A sample of 2,729 companies from 17 countries for 2010–2019 allowed us to obtain new results.

First, we calculated for the first time the speed of adjustment to the target capital structure of companies for each emerging market economy, taking the quality of law enforcement into account. In particular, for Russia, this factor exerts a significantly positive impact on the capital structure of companies at the 1% level (calculated as the ratio of long-term and short-term debt to the capital market value) while the SOA of Russian companies is 0.215. On the basis of the obtained SOA values across countries, we established that the higher the quality of law enforcement, the greater the overall speed of adjustment to the target capital structure. It should be noted that, although this relationship is clearly observable, it is quite weak on the whole.

Second, dividing the entire sample of countries into three subgroups based on the quality of law enforcement (the first group with the highest indicators, the second one with average indicators, and the third group with the lowest ones) led to the following new results. The SOA for the first and second subgroups are higher (29.2 and 42.8%, respectively) than for the third subgroup, where the SOA did not exceed 16%. Thus, empirical research proves that the quality of law enforcement has a significant impact on the speed of adjustment to the target capital structure of companies from emerging markets.

Third, quality of law was used to analyse the second group of indicators that evaluate the state of the external institutional environment. To this end, the sample of 17 countries was divided into three subsamples based on indicators of the protection of shareholder and creditor rights. This section of the research provided the following new results. It was shown that higher indicators of the rate of repayment to creditors in case of bankruptcy, the degree of managerial responsibility and the level of protection of minority shareholder rights lead to higher company SOA. For this parameter, the group with the “best” institutions has the highest speed of adjustment, the group with “average” institutions exhibits moderate speed while the group with the “worst” institutions is the slowest one. In the groups with the “best” and “worst” institutions, dependence was confirmed for the indicators of the amount of fund recovery by creditors, the depth of credit information about borrowers, and the legal strength index. For each of these indicators, the SOA is always higher in the group with the “best” institutions than in the group with the “worst” institutions. Apart from that, the expenses for fund recovery by creditors in case of bankruptcy (bankruptcy expenses) was revealed to have a clearly negative impact.

In the subsequent sections of the paper, we put forward the key hypotheses of our empirical research, substantiate

the choice of research methods, and describe the sample of countries and companies. Finally, the empirical research results and their interpretation are presented along with conclusions.

Research Hypotheses

Now let us substantiate our hypotheses about the impact of the external institutional environment on the SOA to the target structure of capital of companies from emerging markets. As previously stated, we evaluate the quality of the external institutional environment on the basis of two groups of factors: quality of law enforcement and quality of law in a given country.

First, we consider the first group of factors to generate hypotheses about their influence on the company capital structure. The best-known and most widely used indicators of quality of law enforcement are the data published by the World Bank in the Worldwide Governance Indicators (WGI) database [17]. The sources for indicators of governance quality comprise surveys of companies and households (for example, the Global Competitiveness Report of the World Economic Forum), assessments of commercial agencies and mass media (for example, *Global Insight*) [18], assessments of non-governmental institutions (*Reporters Without Borders*), various other organizations (such as the *European Bank for Reconstruction and Development*) [19] and public sector organizations (for example, the *French Ministry of Finance*). In all, about 30 different sources are used to compile WGI indicators [20]. Similar indicators have been used by a number of other authors, including M. Belkhir et al. [21].

Proxy indicators of law enforcement are indicative of governance efficiency (Figure 1). They are divided into three main groups, with two indicators in each.

The first group of indicators describes the processes of electing, monitoring, and rotating the government and government officials. The first indicator in the group is Voice and Accountability to society. This indicator shows whether people consider elections of the head of state and government bodies to be honest and fair and whether the printed media are free. The second indicator is Political Stability and Absence of Violence/Terrorism, which measures citizens' perception of the probability of government destabilization.

The second group of indicators provides insight into the state's ability to introduce effective reforms. The first indicator of this group is Government Effectiveness. It gives an idea of how people assess the quality of public services. The second indicator is Regulatory Quality. It is focused on the state's ability to develop and introduce reforms which foster the rapid development of the private sector.

The third group of indicators is centred on the respect of the citizens and the state for the institutions regulating economic and social interaction between them. This group comprises the Rule of Law indicator. It shows the degree of confidence among economic operators that society respects and complies with the law. The final indicator in this group is Control of Corruption. It assesses

people's perception of the existence of corruption at the state level.

Thus, in the present paper six indicators from the World Governance Indicators database compiled by the World Bank are used as proxy variables for the factors of the external institutional environment relating to law enforcement. Their values range from -2.5 to 2.5 . To avoid multicollinearity, we shall compile an aggregate index on the basis of these six indicators.

It should be noted that we decided to exclude financial statement quality from the set of indicators describing law enforcement in our research.¹

This leads to our first hypothesis.

Hypothesis 1. The higher the quality of law enforcement in a country, the faster the speed of adjustment to the target capital structure of companies.

Now let us justify the choice of proxy variables for measuring the quality of law. As stated above, the main legislative factors that determine the influence of the external institutional environment on the economic development of companies are the quality of shareholder and creditor protection [5–7].

In line with World Bank methodology, we added three factors to the first group of determinants indicative of the quality of laws protecting creditors. They are related to the probability of fund recovery in case of bankruptcy and are published in the Doing Business database of the World Bank. The first factor is the time period within which creditors can recover their funds in the event of borrower bankruptcy. The second factor is bankruptcy expenses, which are indicative of the amount of funds necessary to cover court proceedings and other services related to the bankruptcy procedure. The third factor is the amount of debt recovery in case of bankruptcy. This value is equal to the amount of cents per dollar which the borrower must repay. For creditors, it is important to understand the probability of recuperating the debt financing of a company. Creditors consider the high probability of recovery to be a favourable feature of the external institutional environment. In such a case, they are more willing to grant companies long-term financing. Apart from that, companies do not incur high expenses to attract debt capital because the offer of funds by creditors is high.

This leads to hypothesis 2.

Hypothesis 2. The better the national legislation protecting creditors in a bankruptcy procedure, the higher the speed of adjustment to the target capital structure of companies.

It is of great importance that laws vest rights in creditors to collect the necessary information about borrowers so as to protect themselves. Therefore, the second group of factors indicative of the quality of laws protecting creditors' rights

comprises the legal strength index of investors (borrowers and creditors) and the depth of the information disclosed by borrowers to creditors. This data was also obtained from the Doing Business database of the World Bank. The legal strength index determines the extent to which laws in a certain country facilitate obtaining and granting loans. The depth of information for creditors shows the coverage and scope of information about a company's creditworthiness as well as the availability of such information. In general, well-designed laws protecting creditors reduce information asymmetry between creditor and borrower, decreasing the creditor's transaction expenses. In such circumstances, creditors do not have to make significant efforts to mitigate risks because, in an environment favourable to creditors, their rights are already secured at a high level. This leads to the following hypothesis.

Hypothesis 3. The better the national legislation protecting creditors when granting credits, the higher the speed of adjustment to the target capital structure of companies.

Now we proceed to the quality of laws protecting shareholders. According to the World Bank's position, represented by indicators from the Doing Business database which were used by S. Djankov et al. [22], the protection of minority investor rights and the extent of the managerial responsibility are indicators of the quality of the external institutional environment from the standpoint of shareholders. Both indices measure the impact investors can produce on a company, including their ability to influence the management's decisions. This allows us to formulate our fourth hypothesis.

Hypothesis 4. The better the national legislation protecting shareholder rights, the higher the speed of adjustment to the target capital structure of companies.

Similar hypotheses have been advanced by several other authors. R. La Porta et al. were among the first to assess differences between developed countries by institutional characteristics (creditor and shareholder rights) [5]. Also, some researchers showed the impact of the development of the debt and stock markets (which may potentially be a result of the protection of creditor and shareholder rights) on financial and economic indicators such as economic growth and the expansion of capital-intensive sectors [11; 23]. Later, A. Demircuc-Kunt and V. Maksimovic advanced and substantiated similar hypotheses to those of the present study, describing the influence of creditor and shareholder rights on the capital structure of companies. In particular, they showed that, in more developed countries that obviously have more advanced institutions, the share of long-term capital in the total borrowed funds of companies is greater [12]. Nevertheless, scholars have explored the impact of the external institutional environment first and foremost on the share of long-term funds

¹ The financial statements of large publicly traded companies are prepared on the basis of uniform international standards. Each country may have its own principles of financial accounting and preparing reports. However, due to the growing globalization and the free flow of capital from one country to another, uniform international standards are used extensively. They are understandable for market participants in any geographic location. The principles used in IFRS are applied in a coordinated and combined fashion. Publicly traded companies in emerging economies have to publish their financial statements according to IFRS or US GAAP [5]. For these reasons, the quality of financial statements may be insignificant for such companies.

in the company capital. In our study, we premise on the assumption that, if in better institutional conditions companies can raise long-term capital in an easier way, their speed of adjustment to the target structure will probably also be higher. This may be due to the fact that companies can change their capital structure quickly, when necessary, by obtaining debt capital from the stock or debt markets.

Research Methodology

Today, most researchers use the linear partial adjustment model to measure the speed of adjustment to the target capital structure, because it posits that companies adjust to their target capital structure gradually over a longer time interval (for example, a year).

During the first stage of assessment of the partial adjustment model, we assume that the current debt-to-asset ratio of companies differs from the target value by a certain error (1). Consequently, after obtaining the β coefficients in equation (1), we calculate this target structure for each company. The values of target financial leverage are necessary for calculating the SOA.

$$Lev_{ij,t} = Lev_{ij,t}^* + \varepsilon_{ij,t} = \beta_j X_{ij,t-1} + \varepsilon_{ij,t}. \quad (1)$$

In equation (1), i designates the company, j – the country, and t – the time period. $Lev_{ij,t}^*$ represents the target debt-to-asset ratio and $X_{ij,t-1}$ – the vector of company-specific variables that influence the target level of the debt-to-asset ratio.

At the second stage, after having obtained the form of the partial adjustment equation (2) and the values of the target and current capital structure, we evaluate λ_j – the SOA for companies of each country.

$$Lev_{ij,t} - Lev_{ij,t-1} = \lambda_j (Lev_{ij,t}^* - Lev_{ij,t-1}) + \varepsilon_{ij,t}. \quad (2)$$

Inserting equation (1) into equation (2), we get equation (3), which allows us to calculate λ_j :

$$Lev_{ij,t} = (\lambda_j \beta_j) X_{ij,t-1} + (1 - \lambda_j) Lev_{ij,t-1} + \varepsilon_{ij,t}. \quad (3)$$

However, equation (1) and, consequently, equation (3) ignore the impact of macroeconomic factors and the factors of the external institutional environment. Therefore, it is necessary to add macroeconomic factors and the factors of the country's financial market development Z_{jt} as well as the institutional characteristics Q_{jt} to the set of company-specific factors. Numerous research papers indicate the importance of adding institutional characteristics to the equation when studying the capital structure [8; 13; 25]. In addition, let us show that the equation also takes into consideration the fixed effects of time α_t and companies n_j (unobserved effects characteristic of individual companies, for example, management quality) [10]. After adding the above factors, equation (1) takes the following form:

$$Lev_{ij,t}^* = \beta_F X_{ij,t-1} + \beta_M Z_{jt-1} + \beta_I Q_{jt-1} + n_j + \alpha_t + \varepsilon_{ij,t}, \quad (4)$$

where β_F is beta for the company parameters, β_M – beta for macroeconomic and financial market factors, and β_I – beta for institutional factors.

Since equation (4) best takes into account the external effects that influence the SOA, we will use it as our main equation taking into account the effects of time, companies, financial market factors and institutional environment factors [9; 10]. It would be incorrect to ignore such external effects, since many authors in the academic literature have come to the conclusion that macroeconomic factors and determinants of financial markets and institutions influence the economic and financial performance of companies [5; 12].

After choosing the form of the equation for the partial adjustment model, it is necessary to consider the technical econometric implementation of these regressions. The ordinary least squares (OLS) method ignores completely company fixed effects and so is undesirable [26]. Besides, this method undervalues the SOA. The fixed effects model, as the name implies, takes into account the fixed effects of companies, yet it provides biased results since it fails to take into consideration the bias inherent in limited panel data. Such bias is characteristic of the data used in studies on corporate finance [24; 27]. We should stress that the fixed effects model usually overestimates the SOA.

The problem of biased results can be solved by applying more advanced econometric techniques. For example, in 1991 M. Arellano and S. Bond proposed the generalized method of moments (GMM). The first step of their methodology consisted in obtaining the first differences using the panel data in order to eliminate time-invariant fixed effects. They showed that lagged values of the dependent variables could be a good instrument for the first difference (independent variable) because this methodology provides more reliable estimates than OLS or fixed effects when the regression residuals are uncorrelated. However, the existence of correlation renders the method ineffective [28].

In 1998, R. Blundell and S. Bond solved the estimation problem in the presence of residual correlation. Besides the first differences of Arellano and Bond, they offered to use lagged first differences as instruments [29].

Although the Blundell-Bond GMM method makes the calculation of the SOA rather accurate, second-order autocorrelation renders it inefficient, similarly to the Arellano-Bond method. This problem was solved by constructing a model with higher lag order [30] and using at least the fourth lag [31].

In 1995, J. Kiviet proposed another approach to regression estimation. This approach (LSDVC) calculates an explicit adjustment using available data [32]. However, when this method was tested on real data, researchers noted that it provides unreliable and inaccurate results in the case of endogenous regressors [33].

Thus, for our study we choose an approach which constructs a regression taking into consideration company fixed effects. This approach does not require extensive panel data, is concise and bears in view individual company characteristics. As for the econometric implementation of this approach, we use the Blundell-Bond estimation method. This method can deal with problems which OLS, the

fixed effects panel model and the Arellano-Bond method are unable to solve. Incidentally, other advanced approaches have their own drawbacks: they are difficult to use with unbalanced panels (a model which takes into consideration a higher lag order) and have endogeneity issues (LS-DVC) [24]. Consequently, we shall estimate the following equation:

$$Lev_{ij,t} = (\lambda_j \beta_F) X_{ij,t-1} + (\lambda_j \beta_M) Z_{j,t-1} + (\lambda_j \beta_I) Q_{j,t-1} + (1 - \lambda_j) Lev_{ij,t-1} + n_j + \alpha_t + \varepsilon_{ij,t} \quad (5)$$

Nevertheless, the econometric regression estimation is not the only method applied in the present study. The reason is that the regression estimation only provides the numerical value of the speed of adjustment (SOA) for each individual country or the sample as a whole. At the same time, one needs other methods to compare the obtained numerical

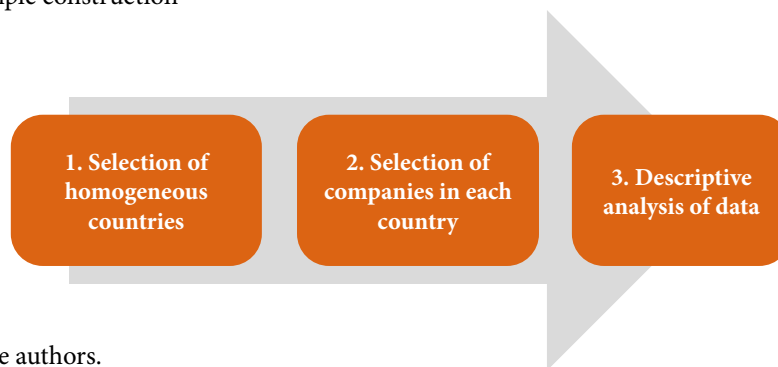
SOA values – for example, the construction of comparative histograms. Researchers have successfully applied such a mixed approach [34]. Moreover, the present study substantiates the estimate of the SOA not only for each country separately but also for samples of countries grouped by the quality of the external institutional environment.

Thus, we are going to use econometric methods to assess the SOA as well as making a preliminary division of countries into samples and subsequently constructing comparative graphs or histograms.

Description of the Sample

We shall now pass to the descriptive characteristic of data. The following steps were taken to compile the sample of companies and countries which is most relevant for the study (Figure 2).

Figure 2. Stages of sample construction



Source: compiled by the authors.

First, we compiled a sample of countries with a level of market maturity similar to the Russian case. Since Russia is an emerging economy according to many international organizations, the sample for analysis comprised countries also considered by global researchers to be on the way to a developed market. Our sample has the following sources:

- Data of international organizations such as UNO and IMF;
- Data of the research centre EMGP (Emerging Markets Global Players);
- Components of market indices, including FTSE, S&P Emerging BMI, and MSCI Emerging Markets.

Table 2. Emerging economies considered in the study

Europe	Eastern and South Asia
Hungary (29 companies)	Indonesia (205 companies)
Greece (183 companies)	China (204 companies)
Poland (204 companies)	Malaysia (203 companies)
Russia (192 companies)	Thailand (200 companies)
	Philippines (202 companies)
	Pakistan (161 companies)
South America	Western Asia
Argentina (66 companies)	UAE (55 companies)
Brazil (205 companies)	Saudi Arabia (150 companies)
Mexico (127 companies)	
Chile (140 companies)	
	Africa
	Republic of South Africa (203 companies)

Source: compiled by the authors.

The final list consists of 17 countries (Table 2). In most countries, the bulk of the sample consists of companies from extractive sectors, electric power companies, telecom and construction companies. Some countries (for example, China) have a significant share of companies from high-tech sectors. The initial sample comprised approximately 25 countries but some of them were excluded for one reason or another. The most common reason was the impossibility of obtaining significant results due to a small number of observations.

Second, for each of the selected emerging economies we chose companies listed on the stock exchange in 2010–2019 (the sample leaves out more recent years as the COVID-19 pandemic could produce biased results). Financial institutions were excluded from the sample. Moreover, if the number of companies in a certain country significantly exceeded 200, the extra companies were eliminated. We did so to avoid a situation where a country would have too much weight in the sample when grouping countries on the basis of the quality of institutional factors. This could lead to biased results. We chose 200 companies because the number of public joint-stock companies in Russia is 192, and Russia is the main country in this study. The number of companies for each country in the sample is indicated in parentheses after the country in Table 2. We get an unbalanced data panel for 10 years across 17 countries with 2,729 companies. It should be noted that, if in

some country several companies were similar to each other in terms of market capitalization, all of them were included in the sample. This is the reason why some countries are represented by more than 200 companies. However, the number exceeds 200 insignificantly. The data collected for the research is detailed in [35].

Third, before analysing the data it is important to ensure that the country-specific indicators show reasonable minimum, maximum and average values for company-specific, macroeconomic and financial metrics and do not contain outliers, i.e., they are factually correct on the whole. To verify these characteristics, we made a table of the variables used in the present paper (Table 3).

We describe in a separate table the aforementioned institutional variables used in the research (Table 4). They are taken from two different World Bank databases, which is also indicated in this table. Six indicators identified by the World Bank are used as proxy variables for law enforcement. Their values range from –2.5 to 2.5. These indicators cannot be applied as separate variables in the research model as they are strongly interconnected. For example, greater accountability to society may entail lower corruption levels. More effective governance may enhance the quality of regulation in a country. To avoid multicollinearity, an aggregated index from these six indicators must be constructed.

Table 3. Description of dependent and control variables

Variable	Calculation methodology	Data source
Dependent variables for the model of influence of the institutional environment on the speed of adjustment to the target capital structure of companies		
MLEV	Ratio of total debt (long-term and short-term) to market value of company capital, 2010–2019	Authors' calculations based on Bloomberg data
Company-specific control variables		
Profitability	Ratio of operating profit to total assets of companies, 2010–2019	Authors' calculations based on Bloomberg data
Market-to-book value	Ratio of the market value of company capital (amount of debt and market capitalization) to total assets of companies, 2010–2019	
Size	Natural logarithm of company assets, 2010–2019	
Tangibility	Ratio of fixed assets to total assets of companies, 2010–2019	
Macroeconomic control variables		
GDPgr	GDP growth rate in proportions, 2010–2019	World Development Indicators, World Bank
Control variables of the financial market		
MC	Ratio of market capitalization of all companies listed on the stock exchange to GDP of the country, 2010–2019	World Development Indicators, World Bank

Source: compiled by the authors.

Table 4. Independent variables characterizing the institutional environment of the selected countries

Variable	Description of the variable, UOM	Data source
1. Quality of law enforcement		
VA	Right to vote and accountability to society, in points	Worldwide Governance Indicators, World Bank
PS	Political stability and no violence, in points	
GE	Governance efficiency, in points	
RQ	Regulation quality, in points	
RL	Supremacy of law in society, in points	
CC	Control of corruption, in points	
2. Quality of law		
2.1. Quality of creditor protection		
Time	Number of years necessary for the creditor to recover funds in case of borrower's bankruptcy, year	Doing Business, World Bank
Cost	Expenses for bankruptcy procedures, % of property	
Recovery_rate	Present value of a share of property returned to the owner after bankruptcy procedures, cents per dollar	
Strength_legal_rights	Index of creditor legal strength, in points	
Depth_credit_inf	Depth of information about borrowers, in points	
2.2. Quality of shareholder protection		
Extent_dir_liab	Level of managerial responsibility, in points	Doing Business, World Bank
Strength_minor_inv	Protection of minority investor rights, in points	

Source: compiled by the authors.

We constructed one aggregated indicator Inst6 on the basis of six variables indicative of quality of law enforcement, by taking the mean value of these variables. No indicator in Inst6 was assigned a greater or lesser weight. Although each indicator has its own specific features, we consider them to be equally important for assessing quality of law enforcement. The sum of the indicators would allow to take the influence of each of them into account. It is important for us to obtain an averaged value of the indicators leaving out the impact they produce separately. A similar method of averaging the external institutional environment indicators was applied by B. Matemilola et al. [10].

The above six indicators of the World Bank are based on surveys of people's subjective perception of characteristic features of the institutional environment in their country of residence. World Bank experts assert that they are justified for scientific research and cross-country comparison. They argue that citizens' perception is of importance because their behaviour in the economic and other spheres depends on their perception of the norms of conduct and laws in their country. For example, if citizens believe that

courts are inefficient and the police is corrupted, they will avoid these agencies. Furthermore, information about people's perception of different institutional features in their country is important for both science and society, because it is difficult to find a more objective alternative to this data. For example, information about corruption is not publicly available, and so it is impossible to find an objective data source about its existence and scope. Finally, even officially recorded data about the effectiveness of governance and the extent of law compliance may not be indicative of the actual state of things. Consequently, data on perception of institutional characteristics is often of greater value [19].

Table 5 presents descriptive statistics of data for Russia. According to it, the data contains no errors or outliers because all variables take on adequate values. For example, market leverage (MLEV) ranges from 0 to 1. Since the data sample was limited, descriptive statistics for each country were analysed manually. When the minimum or maximum values differed significantly, the sample of companies for the country was reviewed and companies with obvious errors in economic indicators were eliminated.

Table 5. Descriptive statistics of variables in the sample for Russia

Variable	Average value	Median	St. deviation	Min.	Max.
MLEV	0.26	0.24	0.22	0.00	0.94
Profitability	0.09	0.09	0.16	-3.57	1.30
Market-to-book value	0.86	0.65	0.81	0.00	10.3
Size	6.77	7.04	2.30	-5.52	12.9
Tangibility	0.45	0.49	0.27	0.00	0.92
GDPgr	0.02	0.02	0.02	-0.02	0.05
MC	0.35	0.37	0.16	0.00	0.62
VA	-1.03	-1.04	0.09	-1.13	-0.88
PS	-0.81	-0.93	0.18	-1.03	-0.53
GE	-0.23	-0.20	0.19	-0.47	0.15
RQ	-0.42	-0.39	0.07	-0.55	-0.34
RL	-0.77	-0.77	0.03	-0.82	-0.72
CC	-0.95	-0.95	0.10	-1.09	-0.82
Time	2.00	2.00	0.00	2.00	2.00
Cost	9.00	9.00	0.00	9.00	9.00
RR	41.4	41.7	1.60	38.6	43.2
Strength_legal_rights	6.65	7.00	2.06	4.00	9.00
Depth_credit_inf	7.00	7.00	0.00	7.00	7.00
Extent_dir_liab	2.00	2.00	0.00	2.00	2.00
Strength_minor_inv	28.5	28.5	0.55	28.00	29.00

Source: compiled by the authors.

Now let us build a correlation matrix for Russian companies that will provide us with a preview of the relationships between the variables. One mostly observes a positive relationship between the dependent variable MLEV and the interest variables. We should note that some variables are not shown in the correlation matrix, because for Russia they assume a single value for the entire time interval un-

der consideration. So, it is impossible to construct a correlation matrix for them. As a result, we see that market leverage correlates with the aggregated variable of the quality of law enforcement, Inst6. It is interesting to note that MLEV correlates negatively with the index of creditor legal protection (Strength_legal_rights) although, according to theory, this indicator should correlate positively.

$$\text{Corr}(\text{MLEV}, \text{Inst6}) = 0.0140$$

$$\text{Corr}(\text{MLEV}, \text{RR}) = 0.0830$$

$$\text{Corr}(\text{MLEV}, \text{Strength_legal_rights}) = -0.0724$$

$$\text{Corr}(\text{LDR}, \text{Inst6}) = 0.0723$$

$$\text{Corr}(\text{LDR}, \text{RR}) = -0.0568$$

$$\text{Corr}(\text{LDR}, \text{Strength_legal_rights}) = 0.1055$$

The interrelation between the dependent variable and control variables is presented below. The correlation of MLEV with Size and Tangibility is also positive.

$$\text{Corr}(\text{MLEV}, \text{Profitability}) = -0.1428$$

$$\text{Corr}(\text{MLEV}, \text{MB}) = -0.2447$$

$$\text{Corr}(\text{MLEV}, \text{Size}) = 0.1343$$

$$\text{Corr}(\text{MLEV}, \text{Tangibility}) = 0.1977$$

$$\text{Corr}(\text{MLEV}, \text{GDPg}) = -0.0788$$

$$\text{Corr}(\text{MLEV}, \text{MC}) = -0.0740$$

$$\text{Corr}(\text{LDR}, \text{Profitability}) = 0.0531$$

$$\text{Corr}(\text{LDR}, \text{MB}) = 0.0744$$

$$\text{Corr}(\text{LDR}, \text{Size}) = 0.4198$$

$$\text{Corr}(\text{LDR}, \text{Tangibility}) = 0.4054$$

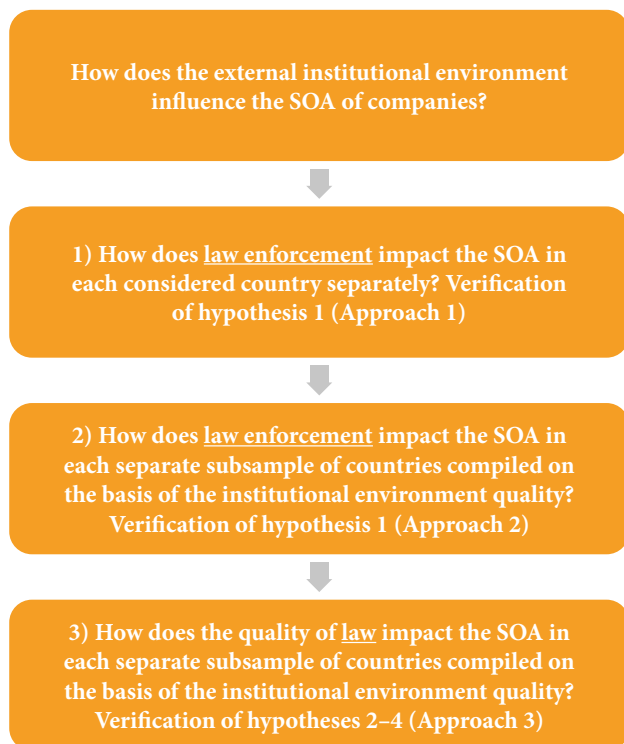
$$\text{Corr}(\text{LDR}, \text{GDPg}) = 0.0450$$

$$\text{Corr}(\text{LDR}, \text{MC}) = -0.0285$$

Research Results

To illustrate the stages of the empirical research we constructed a step-by-step sequence map (Figure 3).

Figure 3. Empirical research map



Source: compiled by the authors.

As shown by the research map, during the first stage we assessed the speed of adjustment for companies from all selected countries. Table 6 presents the numerical results of evaluation for Russia, while Figure 4 shows the results for the other considered countries.

As we see from Table 6, the SOA is equal to 0.215 (calculated as $1 - 0.785$). Tests for AR(1) and AR(2) errors and the Sargan test confirm the high quality of the regression. There is also no multicollinearity (the VIF test gives results below 10). Coefficients for lags of company-specific and institutional characteristics are significant at the 1% level. They include the ratio of the market value of equity to the book value (MB₁), company size (Size₁), and assessment of law enforcement as a factor of the external institutional environment (Inst₆).

At the second stage, based on Table 6 and similar tables representing other considered countries, we obtained the results shown in Figure 4.

According to Figure 4, there is a weak positive correlation between the quality of development of the external institutional environment and the SOA of companies. It is confirmed by the positive slope of the curve of dependence of the SOA on the quality of institutional development in different countries. In the present case, it is challenging to build a regression of influence of the external institutional environment on the SOA across countries, because the number of countries in the sample is small. Such a regression will most likely yield results that will not pass the quality tests. Therefore, additional tooling is necessary for analysis across countries. As indicated earlier, we shall now proceed to make comparative diagrams to obtain results even for such a small sample. Such a mixed approach has already been successfully used by the authors of the present paper [34].

At the first stage of our research, we found λ_j from equation (5) for each country by applying econometric regression analysis; at the second stage, λ_j for all the countries were combined and shown on the same graph (Figure 4). The results of SOA estimation for companies in each considered country are presented in the Appendix. The graph shows that the higher the quality of law enforcement, the higher the companies' SOA.

Thus, we show a positive albeit weak correlation between the external institutional environment and the speed of adjustment to the target capital structure for companies from emerging economies. Thus, hypothesis 1 about the positive influence of the quality of law enforcement on the SOA of company capital is confirmed.

An alternative approach (Approach 2, Figure 3) to verifying the impact of the external institutional environment on the SOA divided the entire sample of countries into three subgroups based on the quality of institutions. The quality of the external institutional environment was also evaluated using the law enforcement proxy Inst₆ within a certain interval. Then, each subgroup of countries was assessed by applying equation (5).

The *first subgroup* comprises such countries as Chile, Poland, UAE, Hungary, Malaysia and Greece. The proxy variable of the institutional environment for the quality of law enforcement (Inst₆) in these countries ranges

Table 6. Assessment of SOA for Russian PJSCs for 2010–2019

Variables	Ratio	St. deviation	P-value	
MLEV(-1)	0.7845	0.0657	<0.0001	***
Const	-0.0092	0.0030	0.0020	***
Profitability_1	-0.0211	0.0247	0.3912	
MB_1	0.0306	0.0099	0.0020	***
Size_1	0.0426	0.0110	0.0001	***
Tangibility_1	-0.0035	0.0522	0.9462	
GDPg_1	-0.4759	0.2676	0.0753	*
MC_1	0.0189	0.0299	0.5274	
Inst6_1	0.6299	0.1413	<0.0001	***
P-value of the test for AR(1) errors	0.0000			
P-value of the test for AR(2) errors	0.5583			
P-value of the test for Sargan's overidentification	0.0111			
Number of observations	1.091			

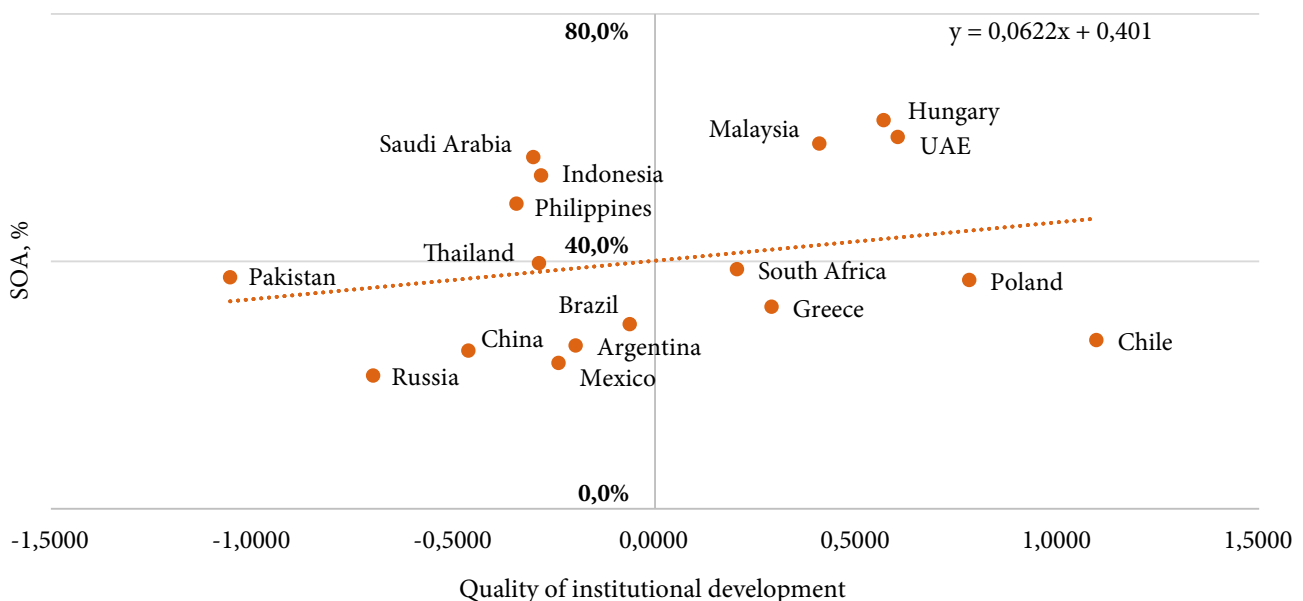
*** significance at the 1% level, ** significance at the 5% level, * significance at the 10% level.

Dependent variable: market leverage MLEV

Source: calculated by the authors using Gretl.

from 0.29 for Greece to 1.1 for Chile (the maximum value of the proxy variable for all companies from the World Bank database equals 2). The *second subgroup* consists of South Africa, Brazil, Argentina, Mexico, Indonesia and Thailand. For this subgroup the proxy variable value ranges from -0.29 for Thailand to 0.2 for

South Africa. The *third subgroup* includes Saudi Arabia, the Philippines, China, Russia and Pakistan. Here, the highest average value for the level of development of the institutional environment for the period of 2010–2019 is -0.3 for Saudi Arabia while the lowest value is -1.06 for Pakistan.

Figure 4. Dependence of company SOA on the quality of law enforcement in emerging economies

Source: compiled by the authors.

Table 7. Comparison of the SOA for subsamples of countries compiled on the basis of the quality of law enforcement

Variable	First subgroup	Second subgroup	Variables	Third subgroup
MLEV_2(-1)	0.7077*** (0.0854)	0.5718*** (0.0727)	MLEV_3(-1)	0.8360*** (0.1254)
Const	-0.0019* (0.0012)	0.0071*** (0.0021)	Profitability_4	0.0655** (0.0272)
Profitability_3	0.0535 (0.0413)	-0.0050 (0.0371)	MB_4	0.0093*** (0.0028)
MB_3	0.0307*** (0.0059)	0.0291*** (0.0058)	GDPg_4	0.1900 (0.2476)
Size_3	-0.0095 (0.0149)	0.0193 (0.0142)		
Tangibility_3	-0.0107 (0.0394)	-0.0348 (0.0355)		
GDPg_3	0.4592*** (0.0932)	0.3625*** (0.1011)		
MC_3	0.0318** (0.0153)	-0.0097 (0.0156)		
Inst6_3	0.0658** (0.0300)	-0.0761* (0.0448)		
Additional limitations	-	2010, 2011, 2018 and 2019 are eliminated from the sample		2010 and 2011 are eliminated from the sample
P-value of the test for AR(1) errors	0.0000	0.0000	P-value of the test for AR(1) errors	0.0000
P-value of the test for AR(2) errors	0.0843	0.3634	P-value of the test for AR(2) errors	0.0919
P- value of the test for Sargan's overidentification	0.0256	0.0316	P- value of the test for Sargan's overidentification	0.0115
Number of observations	4179	2973	Number of observations	2135

*** significance at the 1% level, ** significance at the 5% level, * significance at the 10% level.

Source: calculated by the authors using Gretl.

We should note that for each subgroup a different form of equation (5) was chosen because in each individual case it was necessary to select a model that would meet the requirements of all quality tests (tests for AR(1), AR(2) errors, multicollinearity and the Sargan test). Furthermore, the models differ in the time period. This also stems from the specific features of data in each subgroup. The lag order is different, too, because in some cases the first lag failed to eliminate endogeneity. At the same time, the selected research periods for different country groups differ only slightly – no more than one or two years. The results are presented in Table 7.

As we see from Table 7, the first and second subgroups of countries have higher speeds of adjustment to the target capital structure indicators – 29.2% ($1 - 0.7077$) and 42.8% ($1 - 0.5718$), respectively – than the third subgroup (with a lower quality of law enforcement), where the SOA does not exceed 16%.

Thus, approaches 1 and 2 confirm that the quality of law enforcement significantly influences the speed of adjustment to the target capital structure of companies. We showed that higher-quality law enforcement entails a higher speed of adjustment of companies to their target structure. Thus, *hypothesis 1 is confirmed*.

Next, we test how the quality of laws influences the SOA. We replace the proxy variables of interest to check hypotheses 2–4 (Approach 3). This time, the company subsamples are compiled on the basis of indicators from the Doing Business database of the World Bank. These indicators characterize the laws themselves and have nothing to do with law enforcement.

We divide the 17 countries into three subsamples according to the indicators measuring the extent to which laws in a given country favour creditors (time and expenses of the bankruptcy procedure, amount of recovered borrowed funds in case of bankruptcy procedures, index of creditors' legal strength and depth of credit information about borrowers). In addition, we add indicators measuring the extent to which laws favour shareholders (the level of protection of minority shareholder rights and the degree of managerial responsibility).

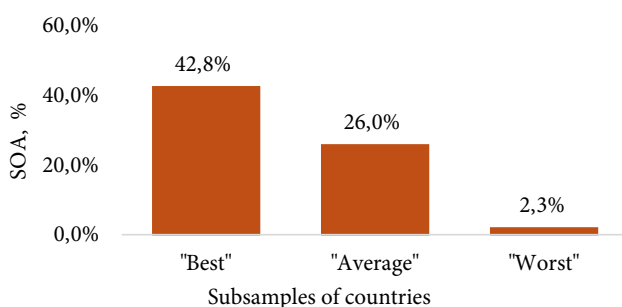
To analyse each of the seven indicated factors (Table 4), the 17 countries were divided into three approximately equal subsamples in terms of the quality of the external institutional environment (Figures 5–11). It was important to compile equal groups because of the limited number of countries. The results would be less reliable if the number

of countries in one group was reduced at the expense of an increase in another group.

The obtained results show that country classifications depend on the considered factor. For example, for the bankruptcy procedure period, Russia was in the subgroup of "average" incomes (the second one), while in terms of minority investor protection it got into the "worst" group (the third one) among all considered emerging economies.

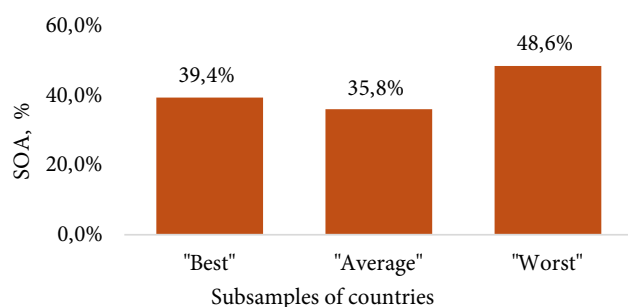
In this approach, we also assessed equation (5) for each of the three subgroups and for each of the seven factors which are indicative of quality of law (Table 4). This allowed us to obtain the speeds of adjustment to the target capital structure for each subgroup of countries depending on the impact of the characteristic features of the external institutional environment. The results are shown in Figures 5–11. Just as in the other approaches, these results are statistically significant and reliable, with a significance level of 10% or above. They take the form of a large number of tables that we shall not present here. Instead, we give comparative diagrams indicating the dependence of the SOA on the determinants of the quality of shareholder and creditor protection.

Figure 5. Dependence of the SOA on the rate of recovery of funds by creditors in case of bankruptcy



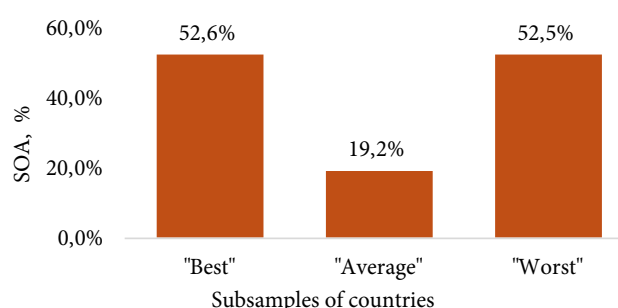
Source: compiled by the authors.

Figure 6. Dependence of the SOA on the expenses for repaying funds to creditors in case of bankruptcy

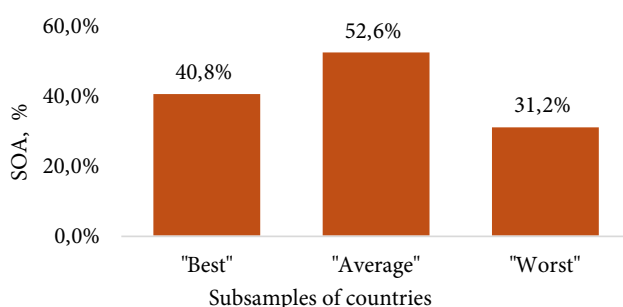


Source: compiled by the authors.

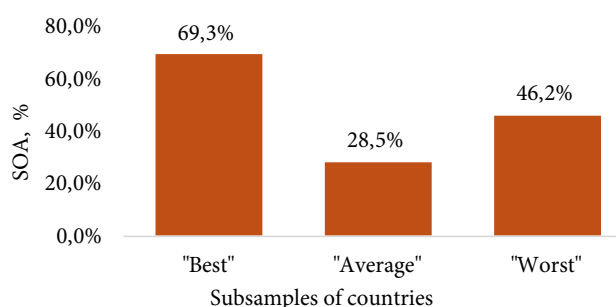
Figure 7. Dependence of the SOA on the amount of funds recovered by creditors in case of bankruptcy



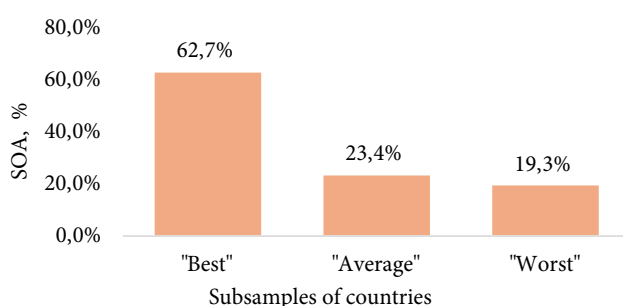
Source: compiled by the authors.

Figure 8. Dependence of the SOA on the index of creditor legal strength

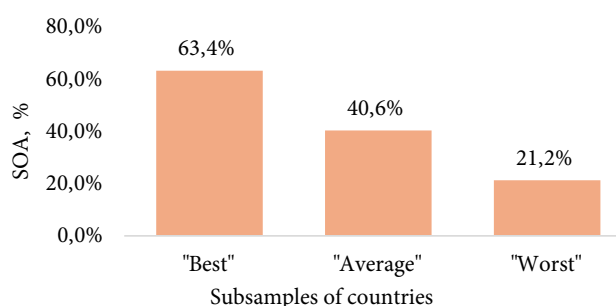
Source: compiled by the authors.

Figure 9. Dependence of the SOA on the depth of credit information about borrowers

Source: compiled by the authors.

Figure 10. Dependence of the SOA on the extent of managerial responsibility

Source: compiled by the authors.

Figure 11. Dependence of the SOA on the level of minority shareholder protection

Source: compiled by the authors.

As we see, the rate of recovery of funds by creditors in case of bankruptcy (Figure 5), the extent of managerial responsibility (Figure 10) and the level of minority shareholder protection (Figure 11) produce an unambiguous impact on the speed of adjustment to the target capital structure of the considered countries: the group with the "best" institutions has the highest speed of adjustment, the group with "average" institutions demonstrates a moderate speed, while the group with the "worst" institutions shows the slowest speed of adjustment. For example, if the managerial responsibility indicator shows that shareholders have excellent protection from managerial arbitrariness (for the group with the "best" institutions), then the SOA is higher than in other subgroups by 2.5–3 times. With regard to indicators of the rate of recovery of funds by creditors (Figure 7), the depth of credit information about borrowers (Figure 9) and the legal strength index (Figure 8), dependence was confirmed for the groups with the "best" and "worst" institutions: for each of these indicators the SOA in the group with the "best" institutions is always higher than in the group with the "worst" institutions. For example, with regard to the depth of credit information about borrowing companies, the SOA is 69.3% in the group with the "best" institutions and 46.2% in the group with the "worst" institutions.

Thus, we see that the indicators of the group with "average" institutions may both exceed the indicators of the group

with the "best" institutions and be lower than the indicators of the group with the "worst" institutions. The reason is that sometimes there is no significant difference in numerical values of institutional indicators of neighbouring groups. Besides, there may be certain inaccuracies in the values of the institutional indicators provided by the global agencies whose data is used in the present study. Therefore, we should compare the groups with the "best" and "worst" institutions, while the group with "average" institutions functions as an interlayer which separates clearly the countries from the other two groups. If we were to divide the entire sample of countries into two groups, it would be difficult to attain such an effect. A negative relationship between the external institutional environment and the SOA of companies was revealed only for the indicator of the expenses of fund recovery by creditors in case of bankruptcy (Figure 6). For this indicator, the SOA in the group with the "best" institutions is 39.4%, which is less than the SOA of 48.6% in the group with the "worst" institutions.

Thus, hypothesis 4 about the positive impact of managerial responsibility and minority investor rights on the SOA is fully confirmed. Hypothesis 3 about the positive impact of the index of creditor legal strength and depth of credit information on the SOA is confirmed upon the assumption that the results of the group with "average" institutions may be disregarded. The results for hypothesis 2 are mixed.

The positive influence of the rate of credit recovery on SOA is fully confirmed. The positive relationship between the share of recovered funds and the SOA is also confirmed (upon the assumption that the results of the group with “average” institutions may be ignored). Nevertheless, hypothesis 2 is disproven with regard to the relationship between the expenses of fund recovery by a creditor in case of bankruptcy procedures (bankruptcy expenses) and the speed of adjustment to the target capital structure.

The conclusions of our research are in line with previously published results about the impact of the quality of law enforcement on the SOA of companies in emerging markets. For example, Matemilola et al. [10] proved that there exists a significant positive relationship between the aforementioned indicators for countries in Asia, Latin America and Eastern Europe yet not for African companies. Given that we consider only one African country – South Africa – in our research, we may assert that our conclusions are generally consistent with Matemilola’s study. Our results are also in line with earlier papers concerning the impact of creditor protection on long-term debt in companies. In particular, Awartani et al. [14] argued that the relatively better protection of creditors in MENA countries is related to the higher share of long-term debt in companies. Here, one can apply chain-of-thought reasoning: in the circumstances of higher protection of creditor rights, creditors provide funds to companies more readily, increasing the share of long-term capital and probably affording more opportunities to achieve the target capital structure.

Conclusions

Today, the external institutional environment is receiving increasing attention in the field of financial governance. The reason is that the efficiency of economic transactions and the rapid achievement of financial results are not exclusively determined by financial factors but are also defined by the quality of institutions in a given country. The external institutional environment assumes special importance for emerging economies because they have to catch up with developed countries. One way to achieve this is to improve the institutional conditions in these countries.

We chose the linear partial adjustment model with fixed company effects as our main methodological approach for assessing the impact of the external institutional environment on SOA. This model was estimated by the Blundell-Bond method.

In our study, we put forward four main hypotheses, one of which concerned the influence of law enforcement quality, while the other three focused on the impact of the external institutional environment from the perspective of quality of law. None of the hypotheses were rejected outright. Indeed, two hypotheses about the positive influence of law enforcement and shareholder rights on the SOA were fully confirmed. The other two hypotheses about the positive impact of shareholder and creditor protection on the SOA were confirmed only for groups of countries with the “best” and “worst” institutions (we made the well-ground-

ed assumption that groups of countries with “average” institutions may be disregarded here).

Our empirical study was based on data for 17 countries with emerging markets. Approximately 200 listed companies from each country were included in the sample.

The results showed that the SOA of companies is influenced by the quality of law enforcement and by most of the factors describing the quality of law, including the time period within which bankruptcy procedures are conducted, the share of funds recovered in case of bankruptcy, the index of creditor legal strength, the depth of creditor information on borrowers, the extent of managerial responsibility, and the level of minority investor protection.

The results indicate that it is important to create a favourable institutional environment for companies to allow them to raise additional financing and attain their target capital structures more quickly. Such an environment makes it possible to bring the capital structure up to the target level in a more flexible and rapid manner. This helps companies to maximize their value and enhance efficiency. Moreover, the ability to raise capital and attain the optimal cost of capital within a shorter period of time allows companies to implement their development strategies and deliver on their investment potential.

References

1. Myers S.C. The capital structure puzzle. *The Journal of Finance*. 1984;39(3):575–592. <https://doi.org/10.2307/2327916>
2. Booth L., Aivazian V., Demircuc-Kunt A., et al. Capital structure in developing countries. *The Journal of Finance*. 2001;56(1):87–130. <https://doi.org/10.1111/0022-1082.00320>
3. Getzmann A., Lang S., Spremann K. Target capital structure and adjustment speed in Asia. *The Asia-Pacific Journal of Financial Studies*. 2014;43(1):1–30. <https://doi.org/10.1111/ajfs.12038>
4. Gungoraydinoglu A., Öztekin Ö. Firm-and country-level determinants of corporate leverage: Some new international evidence. *The Journal of Corporate Finance*. 2011;17(5):1457–1474. <https://doi.org/10.1016/j.jcorpfin.2011.08.004>
5. La Porta R., Lopez-de-Silanes F., Shleifer A., et al. Law and Finance. *Journal of Political Economy*. 1998;106(6):1113–1155. <https://doi.org/10.1086/250042>
6. Qian J., Strahan P.E. How laws and institutions shape financial contracts: The case of bank loans. *Journal of Finance*. 2007;62(6):2803–2834. <https://doi.org/10.1111/j.1540-6261.2007.01293.x>
7. Levine R. Law, Finance, and Economic Growth. *Journal of Financial Intermediation*. 1999;8(1-2):8–35. <https://doi.org/10.1006/jfin.1998.0255>

8. Öztekin Ö., Flannery M.J. Institutional determinants of capital structure adjustment speeds. *Journal of Financial Economics*. 2012;103(1):88–112. <https://doi.org/10.1016/j.jfineco.2011.08.014>
9. Öztekin Ö. Capital Structure Decisions around the World: Which Factors Are Reliably Important? *Journal of Financial and Quantitative Analysis*. 2015;50(3):301–323. <https://doi.org/10.1017/S0022109014000660>
10. Matemilola B.T., Bany-Ariffin A.N., Azman-Saini W.N.W., et al. Md Impact of institutional quality on the capital structure of firms in developing countries. *Emerging Markets Review*. 2019;39:175–209. <https://doi.org/10.1016/j.ememar.2019.04.003>
11. Rajan R.G., Zingales L. What Do We Know About Capital Structure? Some Evidence From International Data. *The Journal of Finance*. 1995;50(5):1421–1460. <https://doi.org/10.1111/j.1540-6261.1995.tb05184.x>
12. Demirguc-Kunt A., Maksimovic V. *Institutions, financial markets, and firms' choice of debt maturity*. Washington, D.C.: World Bank Group; 1996. Research working paper; no. WPS 1686. (accessed on 03.05.2025) URL: <http://documents.worldbank.org/curated/en/507371468739460178>
13. Fan J.P.H., Twite G.J., Titman S. An International Comparison of Capital Structure and Debt Maturity Choices. *The Journal of Financial and Quantitative Analysis*. 2012;47(1):23–56. <https://doi.org/10.1017/S0022109011000597>
14. Awartani B., Belkhir M., Boubaker S., et al Corporate debt maturity in the MENA region: Does institutional quality matter? *The International Review of Financial Analysis*. 2016;46:309–325. <https://doi.org/10.1016/j.irfa.2015.10.002>
15. Makarova S.G., Merkulov K.A. Influence of external institutional environment on Russian companies' capital structure forming. *Audit and financial analysis = Audit i finansovyi analiz*. 2014;(1):357–369. (In Russ.)
16. Berkowitz D., Pistor K., Richard J.-F. Economic development, legality, and the transplant effect. *European Economic Review*. 2003;47(1):165–195. [https://doi.org/10.1016/S0014-2921\(01\)00196-9](https://doi.org/10.1016/S0014-2921(01)00196-9)
17. Worldwide Governance Indicators. (Accessed on 03.05.2025) URL: <https://www.worldbank.org/en/publication/worldwide-governance-indicators/interactive-data-access>
18. Global Insight. (Accessed on 03.05.2025) URL: <https://global-insight.net/>
19. The European Bank for Reconstruction and Development (EBRD). (Accessed on 03.05.2025) URL: <https://www.ebrd.com/corporate-and-investor-information.html>
20. Kaufmann D., Kraay A., Mastruzzi M. The worldwide governance indicators: Methodology and Analytical issues. *Hague Journal on the Rule and Law*. 2011;3(2):220–246. <https://doi.org/10.1017/S1876404511200046>
21. Belkhir M., Maghyreh A., Awartani B. Institutions and corporate capital structure in the MENA region. *Emerging Markets Review*. 2016;26:99–129. <https://doi.org/10.1016/j.ememar.2016.01.001>
22. Djankov S., Lopez-de-Silanes F., La Porta R., et al. *The law and economics of self-dealing*. Working paper, Harvard University, 2005.
23. Levine R., Zervos S. Stock Markets, Banks and Economic Growth. *The American Economic Review*. 1998;88(3):537–558. (Accessed on 03.05.2025) URL: <https://www.jstor.org/stable/116848>
24. Flannery M.J., Hankins K.W. Estimating dynamic panel models in corporate finance. *Journal of Corporate Finance*. 2013;19:1–19. <https://doi.org/10.1016/j.jcorpfin.2012.09.004>
25. Jong A. de, Kabir R., Nguyen T.T. Capital structure around the world: The roles of firm- and country-specific determinants. *Journal of Banking and Finance*. 2008;32(9):1954–1969. <https://doi.org/10.1016/j.jbankfin.2007.12.034>
26. Bond, S., *Dynamic Panel Data Models: A Guide to Micro Data Methods and Practice*. *Portuguese Economic Journal*. 2002;1:141–162. <https://doi.org/10.1007/s10258-002-0009-9>
27. Nickell, S. Biases in Dynamic Models with Fixed Effects. *Econometrica*. 1981;49(6):1417–1426. <https://doi.org/10.2307/1911408>
28. Arellano M., Bond S. Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations. *The Review of Economic Studies*. 1991;58(2):277–297. <https://doi.org/10.2307/2297968>
29. Blundell R., Bond S. Initial conditions and moment restrictions in dynamic panel data models. *Journal of Econometrics*. 1998;87(1):115–143. [https://doi.org/10.1016/S0304-4076\(98\)00009-8](https://doi.org/10.1016/S0304-4076(98)00009-8)
30. Hahn J., Hausman J., Kuersteiner G. Long difference instrumental variables estimation for dynamic panel models with fixed effects. *Journal of Econometrics*. 2007;140(2):574–617. <https://doi.org/10.1016/j.jeconom.2006.07.005>
31. Huang R., Ritter J.R. Testing Theories of Capital Structure and Estimating the Speed of Adjustment. *Journal of Financial and Quantitative Analysis*. 2009;44(2):237–271. <https://doi.org/10.1017/S0022109009090152>
32. Kiviet J.F. On bias, inconsistency, and efficiency of various estimators in dynamic panel data models.

- Journal of Econometrics*. 1995;68(1):53–78. [https://doi.org/10.1016/0304-4076\(94\)01643-E](https://doi.org/10.1016/0304-4076(94)01643-E)
33. Kurennoy A. On the bias of the LSDV estimator in dynamic panel data models with endogenous regressors. *SSRN Electronic Journal*. 2014. <https://doi.org/10.2139/ssrn.2530523>
34. Kokoreva M.S., Yulova S.M. Internal and Institutional Factors of Speed of Adjustment to the Target Capital Structure: Evidence from Developed and Emerging Capital Markets. *Journal of Corporate Finance Research*. 2013;4(28):5–22. (In Russ.)
35. Pavlova Y. Dataset for research thesis Influence of Company Intangible Assets on its Market Capitalization. *Mendeley Data*. 2023;V1. <https://doi.org/10.17632/vxgfm2p5md.1>

Appendix

Speed of Adjustment to the Target Capital Structure for Public Companies in the Countries from the Sample

Country	Lag order	Value	SOA, years
Russia	MLEV(-1)	0.7845*** (0.0657)	0.2155
Argentina	MLEV(-1)	0.7358 *** (0.0247)	0.2642
Brazil	MLEV_3(-1)	0.7014*** (0.0247)	0.2986
Hungary	MLEV_1(-1)	0.3715*** (0.0265)	0.6285
Greece	MLEV(-1)	0.6734*** (0.0781)	0.3266
Indonesia	MLEV(-1)	0.4609*** (0.0490)	0.5391
China	MLEV(-1)	0.7442*** (0.0239)	0.2558
Malaysia	MLEV_3(-1)	0.4094*** (0.1033)	0.5906
Mexico	MLEV(-1)	0.7642*** (0.0538)	0.9462
UAE	MLEV(-1)	0.4081*** (0.0173)	0.5919
Pakistan	MLEV_1 (-1)	0.6258*** (0.0495)	0.3742
Poland	MLEV_1 (-1)	0.6303*** (0.0631)	0.3697
Saudi Arabia	MLEV(-1)	0.4316*** (0.0356)	0.5684
Thailand	MLEV_2(-1)	0.6031*** (0.0498)	0.3969
Philippines	MLEV(-1)	0.5066*** (0.0567)	0.4934
Chile	MLEV_2(-1)	0.7272*** (0.1231)	0.2728
Republic of South Africa	MLEV(-1)	0.6125*** (0.0351)	0.3875

Source: calculated by the authors using model (5).

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