

Determinants of Emerging Markets Companies Investment Economical Behavior

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Abstract

The research is devoted to a comprehensive assessment of factors and motives of the emerging markets companies' investment economical behavior. A number of hypotheses were tested related to the influence of macroeconomic determinants on companies' investments (degree of development of the country's financial market, inflationary stability, economic growth dynamics), as well as intra-corporate determinants on companies' investment activity (sources of internal financing, efficiency use of company capital, debt financing opportunities and the size of the company). The study uses two types of models: an individual country model to measure the influence of macroeconomic factors on the overall level of companies' investments, and a combined model to identify microeconomic patterns and motives in the companies' investment behavior. Model testing at the company level is an analysis of panel data, the specification of the model is the analysis of fixed effects for the purpose of assessing individual characteristics. Data is accumulated using Bureau Van Dijk Moody's Analytics databases. The final data sample consists of 29583 observations of 3983 companies from 8 non-financial sectors (mining, construction, manufacturing, transportation, information sector, trade and agriculture) of 23 emerging economies (macro-regions of Asia, EMEA, America) for the period from 2010 to 2017. The research has revealed the characteristics of incremental investments for individual countries in the context of a general decrease in investment activity of companies and the pace of economic development.

Moreover, the author has determined the relationship of corporate determinants, as well as determinants related to the macroeconomic status and level of financial development of economies with investment activity of emerging market companies. The investigation results have confirmed in quantitative terms the degree and nature of the reduction in economic activity during the analyzed period. In addition, the report considers the degree of external determinants influence on investments in different countries, establishes significant differences in the studied parameters between the geographic macro-regions of emerging markets and identifies industry patterns in the company's investment behavior, profitability indicators and capital structure. The study could be significant both for the scientific community as part of the study of issues related to emerging markets, as well as for representatives of the investment community considering potential asset investments in the jurisdictions of emerging countries.

Keywords: Emerging Markets, Financial Development, Investment Activity, Corporate Determinants, Sources Of Financing, Macroeconomic Determinants

I. INTRODUCTION

It is considered to imply a positive change in economic growth due to an increase in the efficiency of investment activity. In the face of the global economic slowdown, it is significant to determine the factors changing companies' investment behavior. Moreover, in recent decades, developing economies have been the driving force for the global economy, and

investments have been the main driver of this growth. Large companies in emerging markets played a decisive role in this process. In this regard, the study of the determinants of investment activity of companies that are the main economic agents within countries seems relevant.

This study attempted to assess the impact of various financial development factors of the countries, their macroeconomic status, as well as corporate factors on the companies' investment activity. Various researchers' opinions diverge in the interpretation of the impact of various indicators on investment; a relatively small amount of research is devoted to the impact of both macro and micro determinants of company investments. We will attempt to comprehensively assess the impact of both macroeconomic (financial development of economies) and microeconomic (financial capabilities of companies) factors on the investment activity of companies in emerging markets, with the goal of obtaining a comprehensive model containing estimates of both external and internal parameters of investment decision-making.

II. METHOD AND HYPOTHESES

It is considered to build individual models for each country from the group of emerging markets with a study of the influence of macroeconomic factors on the overall investment level of the largest public companies from leading sectors of the economy, which will allow us to draw conclusions about the influence of various factors in relation to a particular country and conduct a comparative analysis of investment activity and its factors in these countries. An aggregate model with data for all the largest public companies from leading industries in emerging markets without any distinction between countries will be built, in order to identify trends and patterns at the company level (micro level) of emerging markets. In this model, we will be able to include non-fundamental microeconomic factors, such as the company's profitability (availability of sources of internal financing), return on equity, financial leverage (capital structure of the company), size of the company. Thus, the external determinants of financial development and macroeconomic conditions for the implementation of investment activity in this model will be replaced by fundamental microeconomic determinants.

This approach seems fair, since the use of average indicators

for financial development for all companies would be incorrect - countries, as we found out earlier, although they are representatives of the same group, have strong differences in the dynamics and state of various indicators of macroeconomic and financial development, which is certainly differently affects the company's investments, depending on the location in a particular country. Differentiation of the analysis into two types of models will allow us to expand the analysis depth (and, accordingly, the quality of subsequent conclusions) and correctly assess the impact of both macroeconomic and microeconomic factors on company investments.

Accordingly, the hypotheses of this study will be divided into two groups: those related to country analysis and corporate analysis. Let us present hypotheses related to the macroeconomics and financial development of the countries in which the companies under study operate.

H1: the development of a country's financial market has a positive effect on the investment activity of a company operating in a given country.

Put differently, access to the equity and debt markets, as well as the effectiveness of the banking system, simplifies the solution of the company's investment financing tasks. We will test this hypothesis by analyzing the following proxy variables - the ratio of the country's stock market capitalization to GDP (MarketCap), the ratio of the total volume of domestic private debt securities in relation to GDP, or the debt market capitalization to GDP (BondCap), credit granted to the private sector by commercial banks, in relation to GDP (Credit). These variables should characterize the company's potential access to capital, which is subsequently used to expand the business through investment operations. The higher the availability of free capital, the greater the intention to finance various projects. However, this hypothesis does not take into account access conditions, but merely characterizes its presence.

H2: inflationary stability and economic growth of the country have a positive effect on the intentions of companies to invest.

In this case, we mean that inflationary stability removes important issues of price uncertainty and simplifies the forecasting of variables in the processes of financial planning and investment design of companies. In turn, the positive

prospects for economic growth have a favorable effect on the investment decisions of companies, as they indicate a positive mood of producers and signal an upward purchasing power of potential consumers. Variables for testing the hypothesis are the indicator of the GDP deflator (Infl) and the country's economic growth rate (GrowthGDP).

Let's move on to hypotheses related to corporate factors. We will test three hypotheses about the influence of fundamental corporate determinants and one hypothesis about the effect of non-fundamental corporate determinants on investment decisions of companies.

H3: the presence of significant internal sources of financing has a positive effect on the investment activity of the company.

As noted earlier, emerging market companies are striving to maintain business growth. As a result, most of the profits are reinvested in production processes rather than paid to shareholders in the form of income. Based on this, we assume that the greater the internal financial resources the company possesses, the greater part of them will be allocated to investments and expansion of the company. In addition, in imperfect capital markets (which is a characteristic of emerging markets), the role of domestic sources in investment processes is increasing; in other words, investments are more sensitive to domestic resources. The presence of financial restrictions for the company related to the increased cost of external sources of financing for companies in emerging markets due to risk factors and high emission costs also affects the sensitivity of investments to internal sources of financing. The traditional domestic source of financing is profit; a variable for testing this hypothesis is the rate of change in the company's net profit (NI).

H4: The company's capital efficiency and investment activity are correlated.

According to the theory of corporate finance, investment decisions of a company affect its financial decisions, and vice versa [14]. In this regard, we assume that the effectiveness of financial decisions will positively affect the company's investment decisions. To evaluate this hypothesis, we chose the profitability ratio of the capital used, or the ratio of net profit for the period to the capital of the company, consisting of debt and equity funds (ROCE).

H5: Debt-financing companies are more committed to investing.

The conditions of financial constraints inherent in companies operating in emerging markets, in addition to influencing companies' preferences for external and internal financing, are also significant for the company's capital structure. In the context of imperfect capital markets, financial and investment decisions are closely interrelated: information-poorly efficient and low-transparent markets, characteristic of emerging economies, are the prerequisites for low activity of companies in the public capital market (equity and debt). In these conditions, the attraction of credit resources from the banking system is preferable to other sources of financing. Therefore, it could be assumed that the financial leverage of companies in emerging markets will be higher, and debt obligations to banks will be more likely sources of financing. Also, it is mentioned that emerging markets are banking-oriented: the availability and depth of this sector is higher and more significant than the form of market financing for companies. Thus, investments will be made when management will be able to attract financing on favorable terms. The proxy-variable capital structure in this hypothesis will be the company's financial leverage ratio (DebtEq).

H6: company size is inversely correlated with investment activity.

On the one hand, large companies have wider access to the capital market, which can positively affect investment activity. However, in our opinion, smaller companies will be characterized by higher rates of incremental investments due to the need to expand production and enter new markets, as well as the fact that it is difficult for large companies to maintain high growth rates in the long run. Sustainable production growth and expansion of the company creates the need for additional investment costs, which often act as mandatory. The company logarithm of revenue (LnRev) is used as a proxy variable for company size.

It is advisable to assess the dependence of the indicator of investment activity on independent variables at the country level using the multiple regression equations. The dependent variable in these models will be an indicator of the average level of change in fixed assets of companies in a given country, calculated as the average value for the year of the relationship of changes in fixed assets of companies to the

previous period (\overline{Inv}). In other words, the dependent variable will represent the rate of change of fixed assets of a sample of companies in a given country. As noted, macroeconomic variables and their impact for the overall level of investment activity will be analyzed, therefore, the dependent variable is averaged over all companies in the sample.

The general equation has a linear specification and is a classic linear multiple regression model:

$$y = \alpha + \beta_1 x_1 + \dots + \beta_k x_k + \varepsilon \quad (1)$$

To obtain estimates of such a regression model, we will use the least squares method, which allows us to obtain such parameter estimates for which the sum of the squares of the deviations of the actual values of the dependent variable from the theoretical ones is minimal.

Since many variables can be strongly correlated with each other (the correlation coefficient is greater than 0.7), when choosing the most suitable model specification, we will check for multicollinearity using the method of inflation factors (VIF). If it is necessary to eliminate multicollinearity, we will use the step-by-step regression method with the sequential exclusion of excess factors from the model. The significance of the model will be verified using the Fisher test and P-value estimation. We will test the explanatory ability of the model using the determination coefficient R^2 , which shows how much of the variance of the dependent variable is explained by the regression equation.

Thus, testing the degree of influence of external factors (macroeconomic and financial development), presented in the first two hypotheses, on the dependent variable that evaluates investment activity will be an assessment of the parameters of the following model:

$$\overline{Inv} = a_0 + b_1 * (MrketCap) + b_2 * (BondCap) + b_3 * (Credit) + b_4 * (Infl) + b_5 * (GrowthGDP) + \varepsilon \quad (2)$$

Unlike the above model, testing of assessments at the company level will be an analysis of panel data. Baltagi [4] identifies several advantages of using panel data instead of cross-sectional data or time-series data: 1) they allow you to control unobserved variables, different at the level of

individual company groups, or variables that change in time, but not among observed objects - in other words, this type of data allows you to take into account individual heterogeneity; 2) panel data is more informative, they use a large number of statistical observations, which allows to increase the number of degrees of freedom and reduce the collinearity of variables, and therefore, increase the efficiency of the estimates obtained; 3) this type of data is more effective for studying the dynamics of changes in various economic processes, as it is based on repeated cross-sectional observations; 4) panel data minimizes the effects of bias arising if we aggregate (generalize or average) the studied objects according to certain characteristics.

Since this model also deals with the study of the company's capital investments, which are an indicator of its investment activity, so far as the dependent quantitative variable was taken the indicator of the rate of change of the company's fixed assets for the period (Inv).

In addition to analyzing the influence of selected factors that potentially affect the investment activity of the company, we will attempt to evaluate the temporary effects of changes in investments. The solution to this problem will involve the use of dummy variables (time).

Considering that we analyze panel data, which is a nonrandom set of objects (emerging markets), the composition of which (companies) does not change over time, and the nature of the tested variables, a model with fixed effects seems to be an appropriate regression analysis model, which allows identifying immeasurable individual differences (effects) of objects [4]. We also confirmed the advantage of using models with fixed effects (rather than models with random effects) using the Hausman test, built on checking the estimates of each model [5].

A generalized model with fixed effects is presented as follows:

$$Y_{it} = \beta X_{it} + \alpha_i + u_{it} \quad (3)$$

Where Y_{it} – is the dependent variable, in which i – is a object, t – is the moment of time; X_{it} is an independent variable; β – is the coefficient for a given variable in the equation; α_i – are

unobservable individual characteristics for each object, (i can take values from 1 to n (number of objects)); u_{it} – corresponding errors.

Another way of representing the model can be illustrated using binary (dummy) variables (both models are identical). Thus, we get a regression model with temporary and individual fixed effects:

$$Y_{it} = \beta_0 + \beta_1 X_{1,it} + \dots + \beta_k X_{k,it} + \gamma_2 E_2 + \dots + \gamma_n E_n + \delta_2 T_2 + \dots + \delta_t T_t + u_{it} \quad (4)$$

Where Y_{it} – is the dependent variable, in which i – is the object, t – is the moment in time; $X_{k,it}$ represents independent variables; β_k – coefficients for independent variables; u_{it} – errors; E_n – objects of observation (company), since this variable is fictitious, we have $n-1$ objects included in the model; γ_n – coefficients for binary regressors of objects of observation; T_t – time as a dummy variable, in this case we also have $t-1$ time periods; δ_2 – coefficients for binary time regressors.

A model with fixed effects controls all time-invariant (constant, stationary) differences between objects, so the estimated coefficients of such a model cannot be biased due to these omitted time-invariant characteristics [37]. In other words, the characteristics of the objects under observation that do not change slightly or completely over time (industry, level of state participation, country, and other indicators for companies) will be incorporated into the model, allowing us to obtain the net effect of the selected determinants due to the fact that each dummy variable the company will absorb its inherent characteristics.

Extrapolating the above model to the analysis of the determinants of investment activity of companies in emerging markets, imagine the model according to which hypotheses 3-6 will be tested:

$$Inv = \beta_0 + \beta_1 * (NI) + \beta_2 * (ROCE) + \beta_3 * (DebtEq) + \beta_4 * (LnRev) + \gamma_2 * (timedummy_{2011}) + \gamma_3 * (timedummy_{2012}) + \gamma_4 * (timedummy_{2013}) + \gamma_5 * (timedummy_{2014}) + \gamma_6 * (timedummy_{2015}) + \gamma_7 * (timedummy_{2016}) + \gamma_8 * (timedummy_{2017}) + u \quad (5)$$

$$Inv = \beta_0 + \beta_1 * (NI) + \beta_2 * (ROCE) + \beta_3 * (DebtEq) + \beta_4 * (LnRev) + \gamma_2 * (timedummy_{2011}) + \gamma_3 * (timedummy_{2012}) + \gamma_4 * (timedummy_{2013}) + \gamma_5 * (timedummy_{2014}) + \gamma_6 * (timedummy_{2015}) + \gamma_7 * (timedummy_{2016}) + \gamma_8 * (timedummy_{2017}) + u$$

Additionally, to obtain estimates of the generalized equation for emerging economies with the inclusion of macroeconomic determinants, we will formulate a similar model with fixed effects, where the dependent variables will be the determinants of the financial development and macroeconomic status of countries. The model will be presented as follows:

$$Inv = \beta_0 + \beta_1 * (MarketCap) + \beta_2 * (BondCap) + \beta_3 * (Credit) + \beta_4 * (GrowthGDP) + \beta_5 * (GrowthGDP) + u \quad (6)$$

Thus, to assess the impact of the external and internal characteristics of emerging market companies on their investment activity, we will use three specifications of econometric models: a model with fixed effects with the inclusion of corporate determinants, a model with fixed effects with the inclusion of macroeconomic determinants, and a multiple regression model to obtain individual estimates regressors under macroeconomic factors for each emerging market.

It is important to note for the subsequent interpretation of the analysis results that regression analysis establishes a correlation, but not a causal relationship.

III. DATA AND DESCRIPTIVE STATISTICS

The data for this study were accumulated using the databases of Moody's Analytics Bureau Van Dijk [30]. Bureau Van Dijk is a global aggregator and provider of corporate information, the aggregate database of the division contains detailed information on 300 million companies worldwide. We used a specialized service product of the company - Orbis, intended to conduct a comparative analysis of companies at a global level.

As a result of the selection and sampling procedures, we obtained data that included 29583 observations for 3983 companies from 8 non-financial sectors, representing 23 emerging economies from three macro-regions - Asia, EMEA,

America, for the period of 8 years - from 2010 to 2017.

We used the NAICS 2017 North American Economic Activity Classification System to select the analyzed industries [31]. In total, as part of the sampling, 8 grouped largest industries of emerging markets were selected: 1) mining, quarrying, oil and gas production (3.1% of the companies in the sample); 2) construction (4.2%); 3) manufacturing industries (75.5%); 4) transportation and storage (3.9%); 5) information sector

(3.5%); 6) wholesale trade (4.7%); 7) retail trade (3.1%); 8) agriculture, forestry, fishing and hunting (1.9%).

The calculation and analysis of variables and econometric models for the purposes of this study were performed using the GRET software package.

Let us present a generalized table with descriptive statistics of the studied variables for a model with fixed effects.

Table 1. Corporate determinants descriptive statistics

Variable	Variable description	Average	St. dev	Var. coeff	Range of changes	Observations
Inv	Fixed assets rate of change	17.4	42.6	2.4	[-59.8;493.8]	29583
NI	Net profit rate of change	-0.19	109.6	573.8	[-499.9;498.7]	29583
ROCE	Return on equity	8.9	8.6	0.9	[-49.9;49.9]	29583
DebtEq	Debt to equity ratio	63.7	78.4	1.2	[0;990]	29583
LnRev	The natural logarithm of revenue	5.6	1.6	0.3	[0.1;12.8]	29583

Let us turn to the description of the variables of the first model, the purpose of which is to test the macroeconomic determinants of investment activity of companies in emerging markets. The dependent variable in this case is the average rate of change of fixed assets of companies in a certain country for each period. According to hypotheses 1-3, the independent variables are represented by the following indicators: the ratio of the country's stock market capitalization to GDP (MarketCap), the ratio of the total volume of domestic private debt securities in relation to GDP

(BondOutst), credit provided to the private sector by commercial banks in relation to GDP (Credit), GDP deflator (Infl) and economic growth rate (GrowthGDP).

The resources for the analysis of these variables were: the World Bank database on financial development of countries [39], the International Monetary Fund database on economic development of countries [23; 24].

The following table provides descriptive statistics for each indicator for 23 emerging markets from 2010 to 2017:

Table 2. Macroeconomics determinants descriptive statistics

Variable	Variable description	Average	St. dev	Var. coeff	Range of changes	Observations
<i>Inv</i>	The average rate of change of fixed assets by country	8.4	14.2	1.7	[-36.4;62.9]	183
MarketCap	The ratio of stock market capitalization to GDP	61.5	52.7	0.9	[12.1;328.1]	169
BondOutst	The ratio of capitalization of the corporate debt market to GDP	18.8	17.7	0.9	[0.2;64.9]	105
Credit	The ratio of credit from commercial banks to the real sector to GDP	57.3	31.5	0.5	[14.8;149.1]	154
Infl	GDP deflator	4.36	5.1	1.2	[-22.9;23.6]	176
GrowthGDP	GDP rate of change	3.91	3.2	0.8	[-9.1;18.1]	184

We present here some interesting observations on the indicated data. First of all, we note that the variables that reflect inflation and economic growth rates (correlation coefficient above 70%) are most correlated with dependent ones. The indicator of credit to the private sector turned out to be negatively correlated with the dependent variable. Weak correlation coefficients with other analyzed indicators also indicate that the dynamics of the dependent and these independent variables were different. Thus, the stock market capitalization rate from 2013 to 2016 remained generally stable, while investments for this period initially had a negative trend and fell from a level of 5%, and then rose to a level slightly above the previous value of 5.6%. Other indicators of financial development — credit to the private sector and capitalization of the debt market — were also characterized by different dynamics. The loan showed a steady upward movement and increased by 22% over the analyzed period; while the debt market remained virtually unchanged during the period and varied near the level of 18% of GDP. The inflation rate and GDP, as already noted, showed approximately similar dynamics with the dependent variable.

In the context of countries, we note a relatively high ratio of stock market capitalization to GDP in countries such as South Africa, Malaysia, Chile (above 100%). Thailand, Malaysia, Greece and China are characterized by a relatively high rate of credit provided by commercial banks (above 100%). The

highest ratio of the debt market to GDP is characterized by the countries of the Asian region - China, Thailand and Malaysia (38.2%, 46.4%, 54.4%, respectively). High inflation is typical for countries such as Egypt, Russia, Brazil and Turkey (12.5%, 9.6%, 7.9%, 7.5%, respectively), and the highest GDP rates are inherent in China and India (8% and 7.3%, respectively).

Quantitative estimates for the coefficients in the determinants of financial development and macroeconomic characteristics for all emerging markets will also be obtained as part of testing the model with fixed effects. The source data will provide data for the analysis of corporate determinants, adjusted for available data on macroeconomic determinants.

IV. RESULTS AND DISCUSSION

As a result of testing previously selected models on the basis of data on companies in emerging markets, we obtained valuable results, some of which confirm the hypotheses put forward about the impact on the investment activity of companies or indicate the uncertainty and impossibility to draw reliable conclusions based on the analysis.

We begin by describing the results of testing hypotheses about the impact of corporate determinants on investment activity of companies. The following table shows the coefficients of the variables obtained by econometric analysis of the data.

Table 3. FE-model outcomes for Corporate determinants

Variable	Coefficient	St. dev.	t-statistics	p-value	Sign. level
const	24,6140	3,46155	7,111	1,18e-012	***
NI	0,0275	0,00237193	11,59	5,25e-031	***
ROCE	0,2379	0,0395652	6,014	1,84e-09	***
DevEq	0,0180	0,00548601	3,292	0,0010	***
LnRev	-1,8759	0,618374	-3,034	0,0024	***
dt_2	-4,1806	0,918492	-4,552	5,35e-06	***

dt_3	-5,1401	0,934962	-5,498	3,88e-08	***
dt_4	-11,2052	0,945230	-11,85	2,48e-032	***
dt_5	-13,7529	0,954543	-14,41	7,05e-047	***
dt_6	-17,6652	0,957162	-18,46	1,45e-075	***
dt_7	-16,6435	0,958012	-17,37	3,22e-067	***
dt_8	-8,3159	0,993189	-8,373	5,90e-017	***

Companies: 3983

Time Period: 2010-2017

N=29583

*Asterisks indicate the significance level of estimates: *** - 1%, ** - 5%, * - 10%*

The presented results allow us to conclude that the hypotheses put forward (3-6) about the influence of internal factors on the investment activity of companies; in addition, dummy variables make it possible to trace how the time factor affected the dependent variable that describes the investment activity of companies. However, the explanatory ability of the model is relatively low (about 30%), which on the one hand is quite objective (and in the field of modeling economic and financial processes it is normal), since the sample consisted of a significant number of analyzed objects from different regions and sectors of economic activity (and a priori is a multifactorial phenomenon), but on the other hand it does not allow to fully verify the correctness of the results obtained. In this regard, further interpretation of the model results will be limited - with the assumption that the model describes only 30% of the impact on the dependent indicator.

So, as a result of econometric analysis, we have received confirmation of the correctness of the hypotheses put forward. Internal fundamental and non-fundamental determinants are interconnected with the process of making investment decisions of companies.

So, we have received confirmation that the availability of internal sources of financing for investment activity is correlated with the indicator of capital investments. With an increase in the growth rate of the company's net profit by 10%,

we can say that the company's investments will increase by 0.28% (the significance level of the coefficient is 1%, as for all subsequent variables). Hypothesis 3 is supported by similar results.

The used capital efficiency indicator has a higher (than net profit) impact on the predisposition to the company's investment activity. So, an increase of this indicator by 10% leads (according to our model) to an increase in investment activity by 2.4%. Thus, hypothesis 4 is also true.

According to hypothesis 5, companies with a higher indicator of debt capital in the structure of liabilities are more prone to investment. According to the results of our model, this statement is true - an increase in the debt-capital ratio by 10%, although slightly, has a positive effect on investment and leads to a 0.18% increase in the company's investment.

On the contrary, as we expected, the size of the company is negatively correlated with the rate of investment. The empirical results of testing hypothesis 6 about this effect are reflected in our model. The results of the analysis indicate a multiple coefficient for the variable - an increase in the size of the company (its revenue) by a conventional unit leads to a reduction in investment activity by a value times a factor of - 1.88.

Interesting conclusions can be made based on the coefficients

of dummy time variables. Values at time indicators reflect well the dynamics of the indicator of the general level of investment activity of companies from 2010 to 2017. The reference period in this model was 2010 - the year of recovery after the global crisis of 2007-2009, characterized by high investment activity of companies in the post-crisis period and the increase in production capacity. One of the drivers of investment growth in the post-crisis period was the factor of monetary easing and the injection of high volumes of liquidity into the economy by regulators. However, our data in this regard allow us to draw a very interesting conclusion - the relationship between the real and financial sectors is rather weak. The first results of quantitative easing programs had a positive impact on the restoration of economic growth in the world economy, but we can further argue that the estimated impact on the real sector has become limited - companies have not invested at the same pace as in the first years of the post-crisis recovery (ratios for dummy This is confirmed by the variables: in 2011, the level of investment was lower by 4%, in 2012 - by 5%, then even lower numbers), and the growth rate of the global economy as a whole, of economies developing world and developing economies began to slow with only about 2014-2015, (It is interesting to note anticipatory indicator of investment activity - investments

began to decline in 2011, and the economy is about 1-3 years after the onset of compression in the corporate sector). On the contrary, the growth of prices for financial assets continues until today, starting in 2009. Of course, the main argument “against” may be a reference to the fact that quantitative easing was carried out by the American and European central banks, however, dependence on QE programs was especially acute in emerging markets, which can be seen against the background of the influence of decisions on monetary policy parameters of the main regulators on stock markets indices of developing countries.

Despite the continued infusion of liquidity into the global financial system, the investment activity of companies decreased from 2010 to 2015 and only began to recover in 2016 and 2017, however, it was below the reference year (by 16% and 8%, respectively).

To determine the degree of relationship between the company's investments and the level of financial development of the economy, as well as the macroeconomic state (hypotheses 1 and 2), we also used a model with fixed effects; The results of the econometric analysis of this model are presented in the following table:

Table 4. FE-model outcomes for external determinants

Variable	Coefficient	St. dev.	t-statistics	p-value	Sign. level
const	75,1853	7,06631	10,64	2,39e-026	***
Infl	-0,0032	0,176100	-0,01828	0,9854	
GrowthGDP	1,0521	0,305762	3,441	0,0006	***
MarketCap	0,1342	0,0413945	3,243	0,0012	***
BondCap	0,1052	0,0777155	1,354	0,1757	
Credit	-0,6721	0,0658610	-10,21	2,23e-024	***

Comp.: 3039

Time periods: 2010-2016

N=18920

*Звездочками обозначен уровень значимости оценок: *** - 1%, ** - 5%, * - 10%*

The data indicate that we obtained slightly different results from expectations — some variables turned out to be statistically insignificant, one of the variables was negatively correlated with the dependent variable (although a different relationship was assumed).

First, we note that the indicator of the rate of change in the GDP of the economy turned out to be the most significant among the external variables interconnected with the investment activity of the company. So, with a 1% significance level, it can be argued that with an increase in GDP by 10%, the dependent variable will follow in the same direction, but with a big step - increasing by 10.5% (we previously assumed that investments have a leading effect on GDP, as they are its integral part).

However, another macroeconomic variable - the inflation indicator - was not reflected in our model, in that part, which turned out to be statistically insignificant in this sample of companies; at the same time, the sign with the coefficient is consistent with the hypothesis put forward earlier about the negative impact of inflation on the investment disposition of companies (but again we cannot confirm this). Thus, hypothesis 1 about the positive impact of macroeconomic stability and development on the company's investments was partially reflected in the results of our model analysis.

Hypothesis 2 was based on the assumption that the development of the financial system has a positive effect on the company's investments - therefore, indicators characterizing the depth of the financial market will be positively correlated with the dependent variable. The results of an econometric analysis of the presented sample of companies showed the following: a statistically significant relationship between the level of investment was established only with the capitalization index of the stock market of the country's economy - a coefficient with a variable indicates that a 10% market growth will lead to an increase in the company's investment intentions by 1.3% (from reliability at 1%

significance level). The capitalization of the debt market according to the established ratio also leads to a 1% increase in the company's investments, but we cannot confirm this. It is interesting that in this sample of companies, the credit provided by commercial banks to the private sector has a negative relationship with the level of investment activity - for example, with credit growth of 10%, investment intentions will decrease by 6.7%. There are several options for explaining this negative correlation. Firstly, the share of loans in the structure of selected companies may not be so significant, and accordingly, the impact of the dynamics of this indicator may be limited; secondly, lending in the post-crisis and crisis periods can be used for other than investment purposes of companies (it is possible to refinance previous credit lines, replenish the company's working capital, and invest in directions other than fixed capital); thirdly, as we saw in Section 2.2., the dynamics of this variable was upward throughout the analyzed period, while companies' investments fell more time (the correlation coefficient between the indicators is -0.79). Another explanation is the assumption that the growth and development of the financial market contribute to the process of gradually replacing capital with debt as sources of financing the company (to a similar conclusion in their studies came Booth et. al (2001) [10], Giannetti (2003) [20]). Thus, hypothesis 2 according to the results of the econometric analysis of the model is partially confirmed.

In addition to the general model reflecting the influence of external determinants on company investments, we decided to build individual country models to determine the most significant factors at the level of economies of different countries. The following table shows the results of the regression analysis for the three largest economies in our sample - China, Russia and Brazil, which also represent three different geo-economic regions - Asia, Europe and America.

Table 5. Country LSM-models outcomes

Brazil					
Variable	Coefficient	St. dev.	t-statistics	p-value	Sign. level
MarketCap	2,09	0,311053	6,721	0,0026	***
BondCap	4,29	1,23962	3,461	0,0258	**
Time periods: 2010-2016					
R-squared=0,92					
China					
Variable	Coefficient	St. dev.	t-statistics	p-value	Sign. level
Infl	2,35235	0,646214	3,640	0,0149	**
Time periods: 2010-2016					
R-squared=0,73					
Russia					
Variable	Coefficient	St. dev.	t-statistics	p-value	Sign. level
Credit	-3,38433	0,572157	-5,915	0,0041	***
BondCap	13,0397	1,99218	6,545	0,0028	***
Time periods: 2010-2016					
R-squared=0,92					

*Звездочками обозначен уровень значимости оценок: *** - 1%, ** - 5%, * - 10%*

Data show that in different countries, macroeconomic determinants are interconnected in different ways with company investments. Based on the estimates we have with high confidence (the explanatory power of the model is 92%), we can state that during 2010-2016, the investment activity of Brazilian companies was closely correlated with the capitalization of the local stock market (an increase of 1% was accompanied by a twofold increase in investment activity), as well as the size of the public debt market (here, the change in the indicator was accompanied by a four-fold increase in the

investment of companies).

During 2010-2016, the investment activity of Chinese companies was closely correlated with the inflation rate of the Chinese economy; so its growth of 1% was accompanied by a 2.35% increase in investment activity of companies.

Data on investments of Russian companies and the dynamics of the debt market indicate that the latter had a significant impact on the investment intentions of companies - with an increase in the capitalization of the bond market by 1%, investments of companies increased by 13% during the

analyzed period. Such results allow us to at least talk about the need to develop the financial market in Russia and its further integration with the real sector, despite the fact that most investment operations of companies are still financed using the traditional banking sector. As a result of model testing based on emerging markets companies' data, we obtained valuable results, some of which confirm the research hypotheses about the impact on the companies investment activity or indicate the uncertainty and impossibility to draw reliable conclusions based on the analysis. In general, we have received the confirmation of the research hypotheses. Internal fundamental and non-fundamental determinants are interconnected with the process of companies' investment decisions-making.

V. CONCLUSION

The main conclusion of the study is the established relationship of corporate determinants, as well as determinants related to the macroeconomic status and level of financial development of economies with investment activity of companies in emerging markets. We determined that the greatest impact among internal determinants is exerted by the profitability ratio of the capital used (in case the factor of the company's size is not considered). Among external factors, the most strongly interrelated indicator was the indicator of the rate of change in the country's domestic product. In addition, we quantitatively confirmed the assumptions made that the period since 2012 was characterized by a decrease in the economic activity of economic entities. Individual models by country allowed us to draw conclusions about the degree of influence of various external determinants in different countries - this is how investments of Russian companies are closely correlated with the debt market, while Chinese - with the inflation factor. We also found differences between the geographic regions of emerging markets - financial development and economic growth is higher in the Asian region, while price stability is most present in the EMEA region. Conclusions on the parameters of internal determinants in the size of the regions are worth considering - while the companies in the American region take on a large debt burden, the efficiency of capital used is higher in Asian companies, and the level of decline in the rate of change in net profit was the highest in the region uniting Europe, the Middle East and

Africa. The investment activity of companies differs depending on industry affiliation. This, we have established a higher sensitivity of the mining, construction and agricultural sectors to crisis phenomena - companies in these sectors have most actively reduced their investment over the period. The profitability and capital structure of the company also differ depending on its industry sector.

Further investigation of the problems of companies' investment activity seems promising in the light of increasing global competition for limited economic resources. Expanding the boundaries of the study in terms of research objects (companies of developed countries), increasing the range of analyzed factors affecting the behavior of companies (non-fundamental corporate, market, industry), a comprehensive comparative analysis of the results of this study with the results of research on developed markets are the issues which are worth considering.

This study is of considerable interest both for the scientific community in the light of the accumulation of multilateral characteristics of investment activity of companies in emerging countries and for representatives of the real sector and the external environment (both at the level of state economic policy and at the level of decision-making in corporate finance management) in terms of application of the obtained quantitative assessments of the investment behavior of companies, recommendations for improving the efficiency of investment policy, as well as the results of a comprehensive analysis of the level of financial development of emerging markets economies.

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