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Influences on the Tobin's Q. Empirical Study on Companies Listed on Bucharest Stock Exchange and Warsaw Stock Exchange

Abstract. *The study aims, by means of a dynamic panel, to highlight the influence on Tobin's Q ratio of financial indicators of companies listed on the Bucharest Stock Exchange and Warsaw Stock Exchange. Tobin's Q is a modern indicator used to measure the financial performance of listed companies on stock exchanges. The most positive and constant influences on the dependent variable – Tobin's Q were found in the case of ROE, with higher significance for Romanian companies, which was also confirmed by the robustness tests performed. For the Polish companies, Solvency also showed increased significance. The results of the dynamic regression showed a positive and significant influence of past eigenvalues from the immediately preceding period of the Tobin's Q variable on its evolution. Leverage and current liquidity significantly influence the evolution of Tobin's Q ratio, in the case of both groups of companies, the influence being more pronounced for the Romanian ones. The PER variable has no significant influence on Tobin's Q.*

Keywords: *financial performance, Tobin's Q, stock exchange, return on equity, solvency, dynamic panel.*

JEL Classification: G10, C23, L25.

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1. Introduction

The most commonly used ratios in the process of evaluating financial performance are traditional financial measures, which are usually related to profitability. Traditional measures known to be as accounting-based financial performance measures have basically been used to evaluate the company's financial situation and performance. These measures provide useful financial information to both investors and analysts so that they can evaluate the operational activity of a company and analyse its position within a sector over time (Barauskaite & Streimikiene, 2021). Traditional financial measures can be classified as liquidity ratios, solvency ratios, leverage ratios, profitability ratios, growth ratios and return indicators with respect to the information they provide (Fali et al., 2020).

In contrast to past periods, when the assessment of the financial performance of companies was mainly carried out by banking institutions as a basis for providing credit, in the current modern environment, the assessment of the financial performance of companies has attracted the interest of both owners and investors. Based on these trends, the methods and indicators that assess financial performance have changed. The focus has shifted from assessing financial performance through sales and profit, to analysing return on invested capital and value created for investors (Omopariola &Windapo, 2018).

Modern value creation indicators are oriented towards the risk and cost associated with capital. Their main advantage is that they do not focus only on the historical financial performance of companies, assessed through traditional indicators, but also take into account both current and future performance (Narkunienė &Ulbinaitė, 2018).

The most widely used modern indicator for measuring the financial performance of listed companies is Tobin's Q ratio, introduced by economist James Tobin in 1969. Stock returns are used to evaluate company performance, with results geared towards highlighting the expected future performance as opposed to the current performance (Singh et al., 2018). This indicator is calculated as the ratio of the market value of a firm and the replacement cost of its assets (Moeen et al., 2023). A sub-unit value of this indicator shows that the value of the firm is lower than the sum of the value of its assets, thus, higher Q-ratios suggest that the market imputes superior financial performance to the company.

In this article, we followed the determination of the financial indicators that have an effect on the evolution of Tobin’s Q ratio, using a sample consisting of companies listed on the Bucharest Stock Exchange (BSE) and Warsaw Stock Exchange (WSE). The two stock markets were selected in order to see if the factors influencing Tobin's Q ratio are the same for a market classified as developed – Warsaw Stock Exchange, compared to Romania's stock market classified as secondary emerging (FTSE Russell, 2022), in order to highlight the differences between the two exchanges from this point of view.

2. Literature Review Regarding the Measurement of Financial Performance

Ștefănescu and Turlea (2005) claim that stakeholders are interested in various aspects of performance: company management is interested in the global performance, shareholders in the stock market performance, potential investors in the return on investment, employees and customers in the financial stability, and creditors in the solvency and liquidity rates of the company.

A paper by Hanousek and Filler (2000) indicates that stock markets in Hungary and Poland are not semi-strong efficient. The authors use a Granger causality framework to test whether 12 economic indicators can be used to explain changes in stock market prices. Unlike Hungary and Poland, the Granger causality test did not indicate that economic indicators influenced stock market returns for the Czech Republic and Slovakia during that period.

Also, for Romanian companies listed on the Bucharest Stock Exchange, the relationship between capital structure and financial performance was addressed (Vătavu, 2015), the period of analysis being eight years (2003-2010). Structure indicators refer to long-term liabilities, and short-term liabilities while ROA and ROE represented performance indicators. The study results reflect negative correlations between structure indicators and financial performance variables. Romanian companies use debt when they are in financial difficulties (owing to the existence of risks on the market or lack of liquidity) or when they want to expand.

In another study conducted by Vintilă and Nenu (2016), the authors analysed companies listed on the Bucharest Stock Exchange, over a period of 10 years, respectively 2005-2014, so as to capture the changes registered before the financial crisis and the subsequent evolution. The empirical study was performed by econometric analysis, using panel data regression models, the dependent variables being ROA and ROE, while factors that could influence the performance of companies focused on liquidity indicators. The results confirmed a negative correlation between liquidity and financial performance of companies.

In their research paper, Sabău-Popa et al. (2021) using principal components analysis (PCA) have built a composite financial index for measuring companies' financial performance and have predicted the financial performance using the neural networks technique. The five experiments carried out led the authors to conclude that the neural network models designed for the prediction of the financial performance of listed companies are useful tools for managers in making decisions.

Naimi (2012) investigated the relationship between stock prices based on Tobin's Q, the ratio of market value to book value per share (MV/BV), and price per share, based on a sample of 10 companies listed on the Iraqi Stock Exchange. The study found that the modern measure of performance (using Tobin's Q) expresses the real situation of firms better and more accurately than traditional guidance (MV/BV), and confidence in the results achieved through Tobin provides investors with an adequate opportunity to predict future financial performance and profitability.

Tobin's Q can be viewed as an indicator that comes down to the incentive to invest. As mentioned before, if Q > 1, with a market value exceeding the replacement cost, there is an increase in investment opportunity. If Q < 1, the additional capital investment will decrease the value of the firm and thus the report indicates that the investment opportunity has decreased. It is also argued that the Q-ratio adjusts for risk. Tobin's Q also allows for a cross-sector comparison (Choi et al., 2021), as dividing the market value by the replacement cost of the firm's assets puts all firms on a similar scale.

Authors Jardak and Hamad (2022) empirically examined the effects of digital maturity (DM) on firm financial performance, using return on assets (ROA), return on equity (ROE), and Tobin's Q as variables. The authors used a sample panel data consisting of 92 observations from 23 Swedish listed firms over four years, 2015-2018. Using both static and dynamic regression models (GMMs) to solve the problem of endogeneity, the authors explored the impact of the DM index on ROA, ROE, and Tobin's Q. The results showed that DM has a negative effect on ROA and ROE, but a positive effect on Tobin's Q. This negative relationship can be explained by the fact that investments in information technology (IT) and DM could take years, implicitly, it would take time to materialise and find themselves in the performance indicators. The company's investment in IT will increase, and, basically, the ROA will be negatively affected because the higher value of IT assets is not amortised. However, in the long run, the company can maximise its performance. The positive effect on Tobin's Q captures the long-term effect of digital transformation.

Arhinful and Radmehr (2023) analysed the effect of financial leverage on the performance of non-financial companies listed on the Tokyo Stock Exchange. The sample included 263 companies from the automotive manufacturing and industrial sectors, for the period 2001 and 2021. The GMM estimator has been used to estimate the effect of leverage on financial performance due to its ability to overcome problems of endogeneity and autocorrelation. The study found that the equity multiplier has a positive and statistically significant effect on return on assets (ROA), return on equity (ROE), and earnings per share (EPS). In addition, the interest coverage ratio has a positive and statistically significant effect on ROA, ROE, EPS, and Tobin's Q. The results also showed that financial leverage and EBITDA have a negative and statistically significant effect on ROE, EPS and Tobin's Q, while firms' capitalisation rates have a negative and statistically significant effect on ROA, ROE, EPS, and Tobin's Q.

We believe that Tobin's Q ratio is of great relevance in the process of evaluating the financial performance of companies because it encompasses stock market performance. An analysis of the Q-ratio results over a period of time provides investors with relevant information to predict the future performance of the targeted companies.

3. Methodology, Variables and Data

3.1 Descriptive Analysis of the Variables Used

The sample used in this study consisted of 125 companies from both capital markets (55 Romanian listed companies and 70 Polish listed companies), belonging to the following sectors: production and distribution of petroleum products, gas and electricity; manufacturing and processing; construction; pharmaceuticals and hotels, restaurants and leisure services. A total of 7 variables were used: Tobin's Q ratio – as dependent variable, and ROA, ROE, PER, Current liquidity, leverage, solvency- as independent variables.

The financial performance indicators used in the analysis were calculated based on information taken from the individual financial statements of the selected companies, published on www.bvb.ro website (for Romania) and on www.biznesradar.pl website (for Poland), for the period 2009-2021.

Financial performance evaluation can be performed using a multitude of different methods such as: Granger causal analysis (Hanousek & Filler, 2000); Multi-criteria decision analysis (Kalogeras et al., 2005); models of structural equations (Sohn et al, 2007); data envelope analysis methodology – DEA (Kweh et al., 2019); Altman Z-score model of corporate bankruptcy (Kivuvo & Olweny, 2014); principal component analysis - PCA (Liu et al., 2020); an approach to neural networks (Sabău-Popa et al., 2021); or generalised method of moments (GMM) using the xtabond2 command (Ruqayya, 2023).

The xtabond2 command in Stata, used by us in the present empirical study, is a user-written command that allows estimation of dynamic panel data models using the generalised method of moments (GMM) approach. It provides an effective way to manage endogeneity and serial correlation in panel data settings. The methodology underlying xtabond2 is based on the Arellano-Bond estimator, proposed by Arellano and Bond (1991) in their paper "Some Tests of Specification for Panel Data: Monte Carlo Evidence and an Application to Employment Equations".

The statistical approach chosen for the present research was that of the generalised method of moments (GMM) by xtabond2 command using Stata software, due to the peculiarity of the data sample, which is of dynamic panel type, with time series. As a dependent variable, we chose Tobin's Q ratio because it encompasses both stock market performance, due to the market capitalisation present in the numerator within the report, and financial performance through the presence of Total Asset in the denominator (a benchmark also used in calculating other variables used in the study). Therefore, the other variables used in the model are independent variables.

The first step of the analysis was the descriptive evaluation of the variables used. The second step involved the analysis of the most important properties of panel variables, namely stationarity and autocorrelation. Based on these results, the next steps were decided, as well as the typology of the estimation methods used.

Therefore, in this empirical study, we sought to answer 5 research questions related to the financial performance of companies, namely:

1. How and in what sense does the return on equity (ROE) influence the Tobin's Q variable for companies listed on BSE and WSE?

2. How and in what sense does financial leverage influence the Tobin's Q variable for companies listed on BSE and WSE?

3. How and in what sense does current liquidity influence the Tobin's Q variable for companies listed on BSE and WSE?

4. How and in what sense does the capitalisation multiplier (PER) influence the Tobin's Q variable for companies listed on BSE and WSE?

5. How and in what sense does the solvency variable influence the Tobin's Q variable for companies listed on BSE and WSE?

Regarding the dependent variable - Tobin's Q, in Figure 1 below, we can see a fairly similar trend for the two groups of companies analysed, with predominantly higher values for Polish companies, which can also be observed based on the median line (0.565 for Romanian companies and 0.737 for Polish companies).

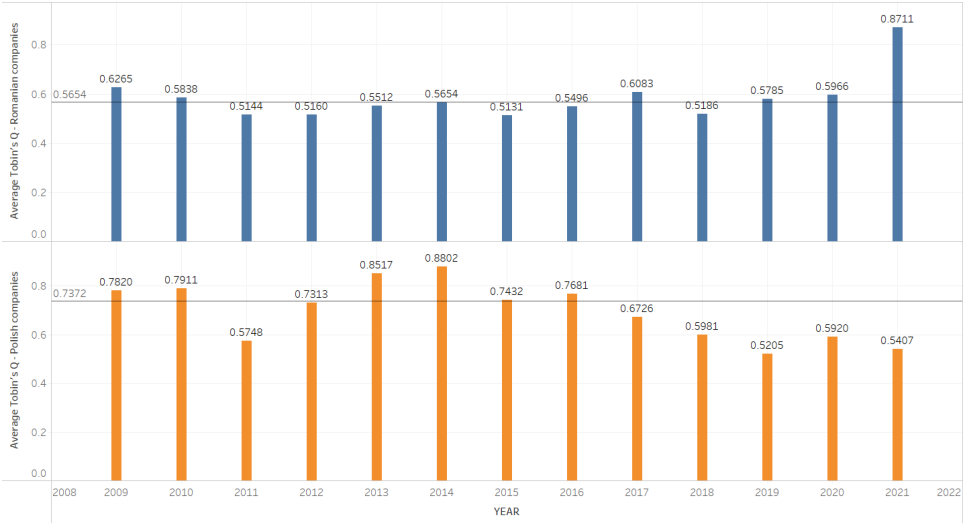

Figure 1. Evolution of the dependent variable Tobin's Q for Romanian and Polish companies in average values/year, for the period 2009-2021

Source: Created by the authors using Tableau 2023.2 software.

Starting with the year 2020, Romanian companies registered a better average value for Tobin's Q compared to the values recorded by Polish companies. The highest values were registered in 2014 by Polish companies and in 2021 by Romanian companies, while the lowest values were recorded in 2019 by Polish companies and in 2012 by Romanian companies.

For the first independent variable, return on equity (ROE), according to Figure 2 below, we can see a different trend between the two groups of companies. Between

the years 2011-2016, the average annual value of ROE decreased for Polish companies, while for Romanian companies this value showed a significant increase.

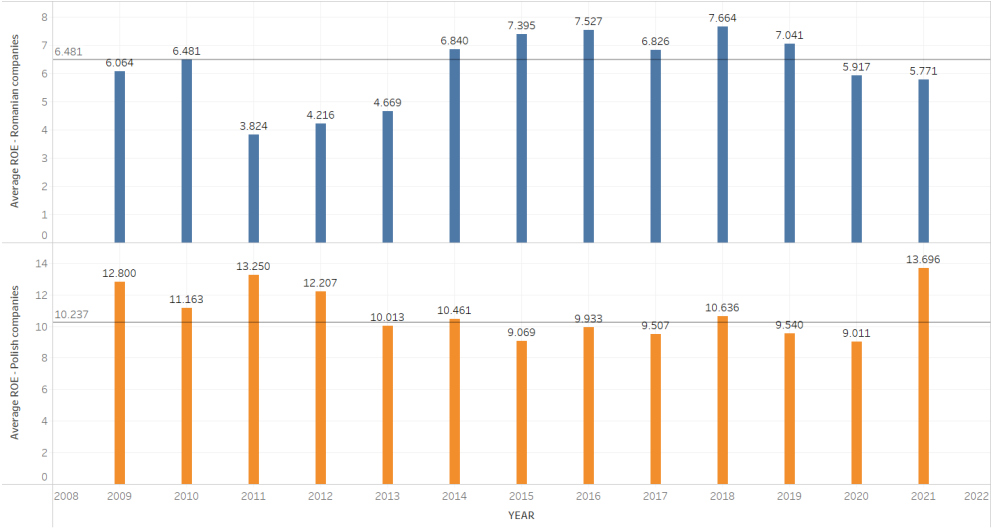

Figure 2. The evolution of the independent variable ROE for Romanian and Polish companies in average values/year, for the period 2009-2021
Source: Created by authors using Tableau 2023.2 software.

In 2010, we could observe the effect of the financial crisis on the values recorded by Polish companies, while Romanian companies showed growth. Also, the pandemic from 2020 also affected both groups of companies. The highest values were recorded in 2021 by Polish companies and in 2018 by Romanian companies. The lowest values were recorded in 2020 by Polish companies and in 2011 by Romanian companies. According to the median line, higher values were recorded by Polish companies for the analysed period (6,481 for Romanian companies and 10,237 for Polish companies).

In the case of the PER variable, according to Figure 3, we see a different trend between the two groups of companies. The trend registered by Romanian companies was downward between the years 2010-2017, with the rest of the period being relatively constant. Polish companies showed an upward trend in terms of the average annual values of PER for the period 2011-2014, followed by a downward trend for the period 2015-2017. There was a significant decrease in 2020, year marked by the pandemic, followed by an increase in 2021, year in which Polish companies registered the highest average value of PER.

For Romanian companies, the highest average value for PER was recorded in 2010, while the lowest values were recorded in 2017. For Polish companies, the lowest values were recorded in 2011. Based on the median lines, we note that higher values were recorded by Romanian companies for the analysed period (35.60 for Romanian companies and 19.87 for Polish companies).

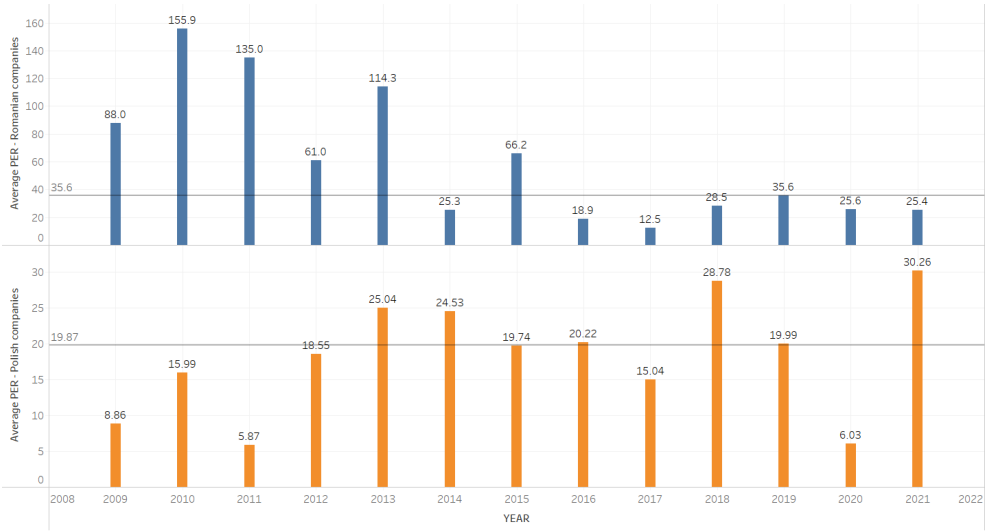

Figure 3. The evolution of the independent variable PER for Romanian and Polish companies in average values/year, for the period 2009-2021
Source: Created by authors using Tableau 2023.2 software.

In the case of current liquidity, according to figure 4, we observe a similar trend for the two groups of companies, with significantly higher values for Romanian companies - with values almost twice as high.

We notice an increase in the case of both groups in 2020, representing the safety measures taken by companies to overcome the financial difficulties caused by the coronavirus pandemic. The growth trend was also maintained in 2021 for Romanian companies, a year in which the highest values were also recorded for the variable. Polish companies, however, showed a slight decrease in terms of average values for current liquidity in 2021. The highest value was recorded in 2009 by Polish companies, while the lowest values were recorded in 2017 by Polish companies and in 2018 by Romanian companies. Based on the median line, we also notice that higher values were recorded by Romanian companies for the whole period (3,591 for Romanian companies and 1,883 for Polish companies).

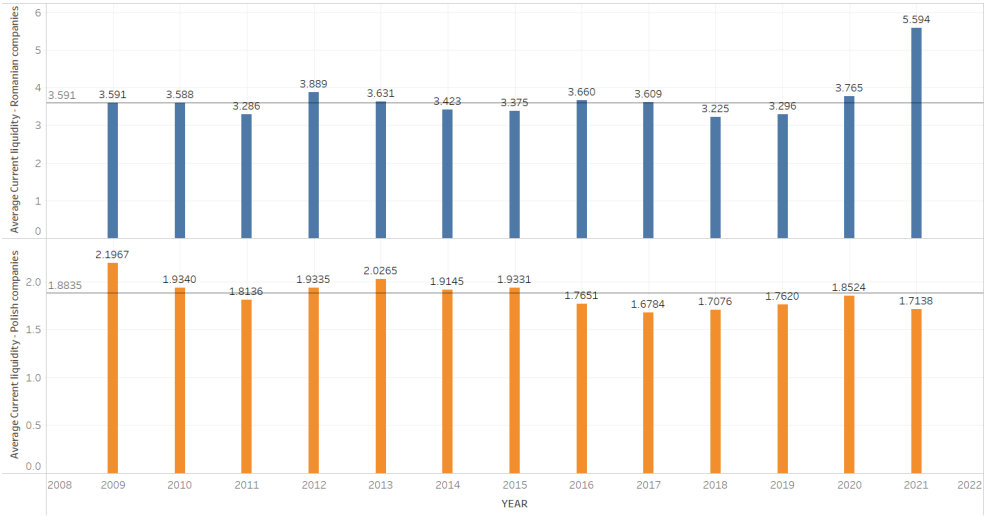

Figure 4. The evolution of the independent variable Current liquidity for Romanian and Polish companies in average values/year, for the period 2009-2021
Source: Created by authors using Tableau 2023.2.

For the leverage variable, according to Figure 5, we again observe a different trend between the two groups of companies. The trend registered by Romanian companies was upward between the years 2009-2013, followed by a decrease during 2014-2016, to finally show a slight increase until 2021. Polish companies showed an upward trend throughout the whole analysis period.

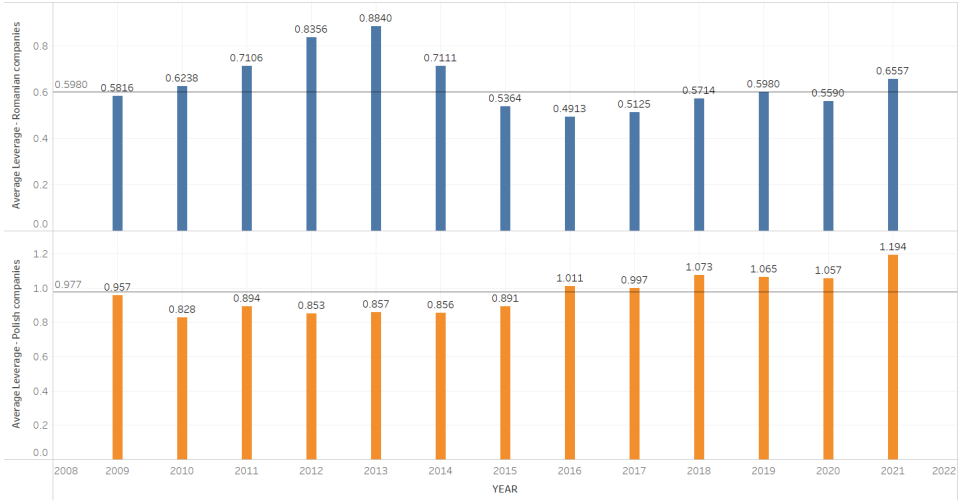

Figure 5. The evolution of the independent variable Leverage for Romanian and Polish companies in average values/year, for the period 2009-2021
Source: Created by authors using Tableau 2023.2 software.

The highest values were recorded in 2021 by Polish companies and in 2013 by Romanian companies. The lowest values were recorded in 2010 for Polish companies and in 2016 for Romanian companies. These results are also emphasised by the trends and values of the median line (0.598 for Romanian companies and 0.977 for Polish companies).

In the case of the last independent variable chosen for the study, namely Solvency, according to Figure 6, we observe a similar trend between the two groups of companies. There was a decrease for both between 2009 and 2011, as a negative effect of the financial crisis. For the rest of the analysis period, we note a slight downward trend in the case of Polish companies, the most visible decrease being in 2021, when the lowest value was also recorded. For Romanian companies, the trend was slightly upward during the rest of the analysis period, the lowest value being recorded in 2013. The highest values were recorded in 2010 by Polish companies and in 2009 by Romanian companies.

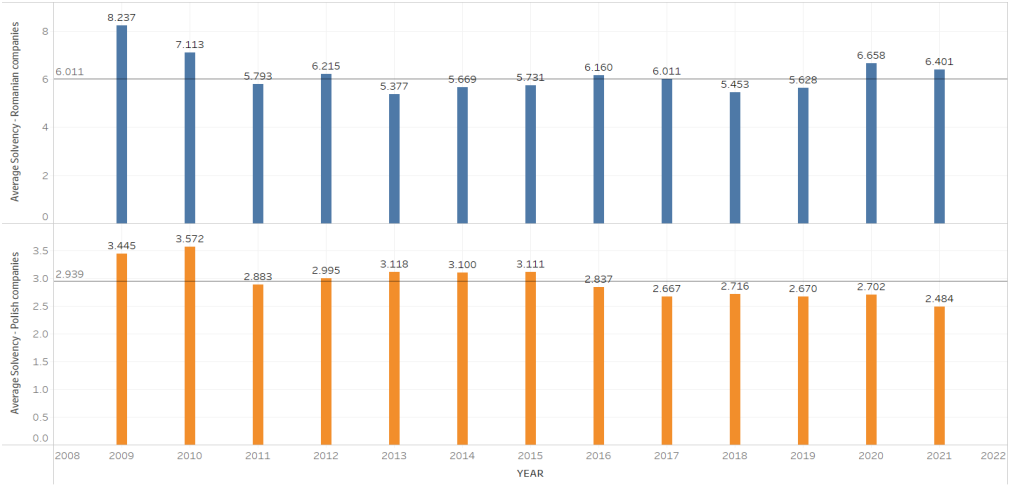

Figure 6. The evolution of the independent variable Solvency for Romanian and Polish companies in average values/year, for the period 2009-2021
Source: Created by authors using Tableau 2023.2.

Once again, based on the median lines, we notice that higher values were recorded by Romanian companies for the analysed period (6,011 for Romanian companies and 2,939 for Polish companies).

Based on descriptive analyses we can draw the following conclusions about the evolution of the selected variables:

- The individual values of the dependent variable Tobin's Q were higher for Polish companies. The average subunit values for both groups of companies, listed on BSE and WSE, recorded throughout the analysis period, indicate that on both capital markets, the analysed companies are undervalued, i.e. their market value is lower than their intrinsic value/asset replacement cost. However, as average values, for the last 5 years, Romanian companies showed

an upward trend, while Polish companies showed a downward trend, higher individual values being recorded by Romanian companies;

- For the dependent variable ROE, both individual values registered at company level and average values per year, were higher in the case of Polish companies;
- PER variable showed higher individual values in the case of Polish companies, but, in terms of average values per year, trend has been relatively constant over the last 4 years in the case of Romanian companies, indicating a stability in assessing the value of shares;
- In terms of current liquidity, the trend based on average values was relatively constant for Romanian companies, with significantly higher individual values recorded compared to Polish companies. For recent years, the trend has been upward for Romanian companies, compared to the downward trend registered by Polish companies; however, the indicator exceeded the minimum recommended level (at least 1.2) for the whole analysis period;
- In the case of financial leverage, both individual values registered at company level and average values per year, were lower in the case of Polish companies compared to Romanian companies, in the last 5 years, the leverage being even greater than 1 in their case, which shows a high level of indebtedness for companies listed on WSE;
- In terms of solvency, much better values (almost two times greater) were recorded by Romanian companies, both at individual values and average values per year. However, on average, Polish companies recorded a solvency above the level considered optimal (above 2) throughout the analysis period.

3.2 Generalised Method of Moments (GMM) using xtabond2 Command

The first step consisted of testing the stationarity of the variables used in the analysis with the Harris-Tsavalis test (HT). The Harris-Tsavalis test methodology (Harris & Tzavalis, 1999) allows detection of unit roots in panel data, taking into account individual heterogeneity and cross-sectional dependence. Incorporating fixed effects and trends, the test provides a more robust analysis compared to traditional unit root tests that treat panel data as a single entity.

Since the HT test is designed for cases where N is relatively large, here we test whether variables contain a unitary root using all 55 Romanian and 70 Polish companies in the datasets.

Table 1. HT stationarity test for variables

Command: **xtunitroot ht** ***variable***	
Ho: Panels contain unit roots	
Ha: Panels are stationary	Number of periods = 13
AR parameter: Common	Asymptotics: N -> Infinity
Panel means: Included	T Fixed Time trend: Not included

Variable	Statistical (Romanian companies)	p-value (Romanian companies)	Statistical (Polish companies)	p-value (Polish companies)
Tobin's Q	0.5184	0.0000	0.3902	0.0000
ROA	0.3595	0.0000	0.3409	0.0000
ROE	0.4245	0.0000	-0.0515	0.0000
PER	-0.0633	0.0000	-0.0314	0.0000
Current liquidity	0.3514	0.0000	0.5071	0.0000
Leverage	0.6634	0.0000	0.6133	0.0000
Solvency	0.5010	0.0000	0.4942	0.0000

Source: Authors's calculations using Stata 14.2 software.

Therefore, as shown in the table 1, we strongly reject the null hypothesis of a unitary root (p-value = 0.000) for all considered variables, for both groups of companies analysed; all analysed variables, both dependent and independent, are stationary.

Further, we proceeded to test autocorrelation for panel data using the Wooldridge serial correlation test, which is based on Durbin-Watson statistics, and measures the degree of self-correlation of residues. The test shall assess whether residues show a significant positive or negative serial correlation, indicating a violation of the independent error hypothesis.

The xtserial command will estimate the test statistic and provide the associated p-value, indicating whether there is evidence of serial correlation in the residues. After testing, the null hypothesis (that "There is no first-order autocorrelation") is rejected on all specifications with a probability less than 0.05 for both capital markets. We believe that a random-effects specification is appropriate for individual-level effects in our model. For the present analysis, we apply a fixed effect model to capture all effects at the individual level constantly over time. Next, we choose a random-effects model as a fully effective specification of individual effects under the assumption that they are random and follow a normal distribution. Finally, we compare the estimates with previously stored results by using the Hausman command (Hausman, 1978).

Our initial hypothesis that individual-level effects are adequately modelled by a random-effects model is supported, with the $\chi 2$ statistic actually being negative. This is strong evidence that we cannot reject the null hypothesis. Such a result is not an unusual result for the Hausman test, especially when the sample is relatively small - there are only 55 Romanian and 70 Polish companies in this data set.

Therefore, an estimated model was obtained according to the formula below, model that was calculated separately for each group of companies, thus obtaining 2 equations (1 for Romanian companies and 1 for Polish companies), in which ROE and solvency variables are explanatory variables and PER and LC variables are control variables:

$$Tobin's\ Q = const. + \alpha*L.\ Tobin's\ Q_i + \beta1*ROE_i + \beta2*PER_i + \beta3*CurrentLiquidity_i + \beta4*Leverage_i + +\beta5*Solvency_i + \varepsilon_{IT}$$

where const. represents the constant of the equation, L indicates the first offset of the variable (t-1), i represents the individual (company) and ε_{it} represents the term of error, with all assumptions given by the applied methodology, and Tobin's Q is the dependent variable of the equation.

From Table 2, it observes that the dependent variable - Tobin's Q is influenced significant and positive by past eigenvalues from the immediately preceding period. The evolution of the independent variable - ROE has a more pronounced effect on the stock market performance measurement indicator – Tobin's Q, in the case of the Romanian companies. The Solvency variable has a significant effect on the dependent variable, only for the Polish companies. The probabilities of the post-estimation tests are higher than the critical thresholds, implicitly, the autocorrelation was treated in this case also by applying the model.

Table 2. BSE vs. WSE dynamic regression

	BSE companies	**WSE companies**
Tobin's Q	**Coef. (Er. Std.)**	**Coef. (Er. Std.)**
Tobin's Q L1.	0.7586 (0.0648) ***	0.6310 (0.0974) ***
ROE	0.0083 (0.0035) **	0.0054 (0.0024) **
PER	0.0000 (0.0000)	0.0002 (0.0002)
Current Liquidity	0.0030 (0.0021)	0.0168 (0.0201)
Leverage	0.0142 (0.0228)	0.0076 (0.0121)
Solvency	0.0001 (0.0017)	0.0222 (0.0127) *
_cons	0.0822 (0.0386) **	0.0939 (0.0622)
Post-estimation validation tests	Arellano-Bond test for AR(1) in first differences: z = -2.85 Pr > z = 0.004 Arellano-Bond test for AR(2) in first differences: z = 1.36 Pr > z = 0.173	Arellano-Bond test for AR(1) in first differences: z = -2.33 Pr > z = 0.020 Arellano-Bond test for AR(2) in first differences: z = 0.70 Pr > z = 0.486

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

Source: Authors's calculations using Stata 14.2.

The Wald test is commonly used in various statistical models, including linear regression, logistic regression, and generalised linear models, among others. It provides a simple way to test assumptions about individual parameters in these models and assess their significance.

Therefore, the estimates obtained by the dynamic panel method were then subjected to robustness analyses. To do this, we modified the dynamic estimation methods and evaluated the stability of the results. One problem that appears in the

literature regarding panel data is the static dependence between observed units. Although this is predominantly found in samples or populations of administrative units, effects may also occur in samples such as these. Estimation methods are conditioned by the existence of this property. Therefore, to assess robustness, the first step was to apply the cross-dependence tests.

The CD-Pesaran test (2004) was insignificant for all specifications, telling us that there is no cross-section dependency; therefore, we applied the method of feasible generalised least squares (FGLS) only for heteroskedastic panel.

Regarding the dynamic regression equation, we obtained the following robustness results:

Table 3. BSE vs. WSE robustness

Tobin's Q	**BSE**	**WSE**
ROE	0.0038 (0.0010) ***	0.0019 (0.0007) ***
Solvency	0.0003 (0.0015)	0.0273306 (0.0073) ***
PER	0.0000 (0.0000)	-0.0000 (0.0000)
Leverage	-0.08445 (0.0159) ***	-0.0253 (0.0123) **
Current Liquidity	0.0054 (0.0018) ***	0.0216 (0.0098) *
_cons	0.5184 (0.0207) ***	0.4469 (0.0328) ***
	Wald chi2(5) = 61.04 Sample > chi2 = 0.0000	Wald chi2(5) = 78.81 Sample > chi2 = 0.0000

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

Source: Authors's calculations using Stata 14.2.

From Table 3, we notice that Tobin's Q ratio is also influenced by ROE, whose effect are significantly positive for both capital markets, the effect being more pronounced in the case of the Romanian companies analysed. At the same time, for Polish companies, the effect of the Solvency on the dependent variable is positive and significant, while for Romanian companies, the effect of Solvency is not significant.

The effect of leverage on the dependent variable is also negative for both groups of companies, with greater significance for the Romanian ones. Regarding Current Liquidity, we notice a positive and significant effect on Tobin’s Q ratio for both groups of companies, being more pronounced in the case of Romanian ones.

The Wald tests tell us that there is enough evidence to suggest that the parameter is significantly different from the hypothetical value of 0.

3.3 Interpretation of Results and Their Informational Role

In the case of the dynamic regression, the dependent variable Tobin's Q is influenced by eigenvalues recorded in the immediately preceding period. Furthermore, the evolution of the independent ROE variable has a more pronounced effect on the stock market performance measurement indicator – Tobin's Q, in the case of the Romanian companies analysed. At the same time, the Solvency variable has a significant effect on the dependent variable, only for the Polish companies analysed;

- How and in what sense does the return on equity (ROE) influence the Tobin's Q variable for companies listed on BSE and WSE?
  Within the dynamic regression, and also confirmed by the robustness tests, we found a significant positive influence of ROE on the dependent variable – Tobin's Q with a more significant effect in the case of the Romanian companies analysed.
- How and in what sense does financial leverage influence the Tobin's Q variable for companies listed on BSE and WSE?
  Within the dynamic regression, we found a significant negative influence of leverage in the case of both groups of companies, with greater significance for the Romanian ones.
- How and in what sense does the current liquidity influence the Tobin's Q variable for companies listed on BSE and WSE?
  Regarding the Current Liquidity variable, we found a positive and significant influence on the dependent variable – Tobin's Q for both groups of companies, being more pronounced in the case of the Romanian ones.
- How and in what sense does the capitalisation multiplier (PER) influence the Tobin's Q variable for companies listed on BSE and WSE?
  In the case of PER, we did not find a significant influence on the dependent variable – Tobin's Q for the dynamic regression, results also confirmed by the robustness tests performed.
- How and in what sense does the solvency variable influence the Tobin's Q variable for companies listed on BSE and WSE?

From the tests carried out, it appears that the Solvency variable has a significant effect on the Tobin's Q dependent variable, only in the case of the analysed Polish companies, while for the Romanian ones, the Solvency has no significance.

The probabilities of the post-estimation tests are higher than the critical thresholds, implicitly, the autocorrelation was treated in this case also by applying the model

4. Conclusions

In conclusion, we notice that the most constant influences on the dependent variable - Tobin's Q were found in the case of the variable ROE (with greater significance in the case of Romanian companies). For the Polish companies

analysed, Solvency also showed increased significance. Leverage and current liquidity significantly influence Tobin's Q ratio, in the case of both groups of companies, the influence being more pronounced for the Romanian ones. PER variable does not have a significant influence on Tobin's Q, which is also confirmed by the robustness tests performed. In addition, the results of the dynamic regression showed a positive and significant influence of past eigenvalues from the immediately preceding period of the Tobin's Q variable on its evolution.

Regarding the informational role, we find the influence of several indicators that could contribute to shaping a more accurate picture regarding the evaluation of the financial performance of the analysed Polish companies, to the detriment of Romanian companies, where the anticipation of future evolution in terms of performance analysed by Tobin's Q would be limited to a smaller number of variables.

The results of the analysis are of interest both for company management and for investors in terms of investment decisions. Also, this paper can represent a starting point for future analyses for a more in-depth representation of both the effects of the pandemic that started in 2020 and the possible effects of the war that broke out in 2021 between Russia and Ukraine to see if the crisis of raw materials affected the activity or performance achieved by the companies listed on the stock exchanges.

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