

3. STATISTICAL ASSESSMENT OF THE VALUE RELEVANCE OF FINANCIAL INFORMATION REPORTED BY ROMANIAN LISTED COMPANIES

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Abstract

Romanian listed companies must periodically report relevant financial information useful to all investors in the decision-making process. The purpose of this study is to statistically assess the value relevance of financial information reported by Romanian companies listed on the Bucharest Stock Exchange (BSE). The study was conducted on a sample of 67 BSE companies during 2006-2012. To assess the value relevance, we analyzed the influence of the principal indicators related to financial position and performance calculated using information from annual financial statements and the growth ratio of the daily share price. Panel data analysis was used to assess monthly the value relevance of financial information. Research results show that financial information has value relevance for investors but differs significantly in time and from one firm to another.

Keywords: financial information, value relevance, stock price, panel data analysis

JEL Classification: C23, C58, D53, G14, M41

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I. Introduction

It is well-known that investors' decision-making on the financial market is mainly based on the information provided by the financial reporting system of the listed entities (Jawabreh and Alrabei, 2012). Based on high quality of information from financial statements, it is considered that financial reporting contributes to significant reduction of the uncertainty degree that is associated with the events that occurred within the company (Casagrande, 1999).

According to the International Accounting Standard Boards (IASB), the main qualitative feature of financial information is its relevance and faithful representation, amplified through comparability, verifiability, timeliness and understandability (IASB, 2013). The relevance of information can be defined as its quality to significantly influence the users' decisions (IASB, 2013). Starting from the Conceptual Framework of IASB, Christensen and Demsky (2008) consider that relevant financial information can influence investors' decisions when it has predictive value and can stand at the basis of making estimations of future results, when it has the value of confirming the previous evaluation or both features.

The study provides the analysis and evaluation of the relevance of the financial information in time, during a whole financial year. To identify the critical moments of a financial year, when the financial information can affect the variation of the share price, we carried out a panel data analysis of the relevance of the reported financial information of the Romanian Bucharest Stock Exchange (BSE) listed companies.

The study was carried out on a sample of 67 BSE listed companies during 2006 and 2012. To study the value relevance, we analyzed, using the panel data analysis, the influence of financial position and performance on the average growth rate of the daily share price of the listed companies. A relation between financial indicators of the company's position and performance and the average growth rate of the daily share price has not been approached yet for the Romanian listed companies. Financial indicators that are considered in the study, regarding the financial position and performance of the company, have been calculated based on the information in the annual financial statements. The main research results show that financial information reported by the Romanian BSE listed companies is relevant to investors, but the degree of relevance is significantly different in time (from one month to another during a financial year) and from a company to another.

The structure of the paper includes 4 sections: a literature review (section 2), the presentation of methodology (section 3), results and discussions (section 4) and conclusions.

II. Literature review

II.1. The value relevance of financial information

The concept of value relevance of financial information was used for the first time by Amir *et al.* (1993) to describe how the information from financial statements influences the investors' decisions (Morais and Curto, 2008). The emergence of positive or

negative information on the market has influence on the variation of the share price and, implicitly, on the investors' decisions (Chirilă and Chirilă, 2015).

The value relevance of financial information considers the relation that is established between the share price of listed companies on the financial market (or the variation of these prices), on the one hand, and certain reported financial information from financial statements, on the other hand (Holthausen and Watts, 2001). Financial information has been viewed as more and more relevant to stakeholders, as long as it can establish its better correlation with the information transmitted to the financial market as share price (Filip and Raffournier, 2010; Pervan and Bartulović, 2014).

The value relevance of financial information has been especially studied through the analysis of data available for the stock exchanges in developed countries in the world (for which available data is easy to use and representative through the number of retained observations) (Barth *et al.*, 2008; Muller, 2011). There are also studies on the value relevance of financial information for the emerging countries (including countries in transition or countries that had gone through such a process), either from the Central and Eastern Europe (Morricone *et al.*, 2009; Filip and Raffournier, 2010; Albu *et al.*, 2014), or from Asia or South America (Jawabreth and Alrabei, 2012).

II.2. Econometric models used for the assessment of value relevance of financial information

In literature, the study of the value relevance of financial information has been mostly carried out either for a single country, namely on listed companies that use a series of national accounting standards (Morais and Curto, 2008; Filip and Raffournier, 2010), or for more countries that use the same accounting regulation (Barth *et al.*, 2008), or for companies that use different reporting standards or belong to different economic or accounting frameworks (Amir *et al.*, 1993; Callao *et al.*, 2007). Generally, testing the value relevance of financial information has been carried out by studying the relation between the market value of the company (reflected by the market capitalization) and the information provided by annual financial statements (considering the net result and/or the equity) (Ohlson, 1995).

The purpose of the econometric models used to assess the value relevance of financial information for investors' decisions (as main actors of the stock market) is to estimate the significant influence of financial information on the market value of listed companies. Depending on the nature of the information included in the analysis (on the factors section), these models may include information regarding the financial performance (Easton and Haris, 1991) or information regarding both financial position and performance (Ohlson, 1995). Regarding the method of factors calculation (calculated based on the information from the reported financial statements), Holthausen and Watts (2001) rank the models into three main categories: models used to study the link between the variation of the share price and the variation of the indexes regarding the financial position and performance; models used to study the variation of the stock exchange price under the influence of the information regarding the financial position and performance as well as other non-financial information; models that study the influence of the marginal informational content on the market, which studies what a

certain piece of reported financial information adds to the information that is already held by investors.

The Ohlson model (1995) considers the share price, the net result and the equity. This model is used to study the influence of the reported net result and the equities for the previous year on the share price or on the market capitalization, obtained after the reporting of the financial statements (for example, 4 months after the closing of t year) (Elshandidy, 2014). To give results more credibility and robustness, control variables are also introduced into the analysis.

II.3. Studies regarding the value relevance of financial information, before and after IFRS

Beginning with the mandatory adoption of the *International Financial Reporting Standards – IFRS*, Europe was expected to experience an increase in the quality of accounting information, and implicitly, a decrease in the cost of capitals available to companies. In the literature, such studies aimed to analyze the effect of IFRS on the improvement of the accounting quality, including in what regards the relevance (Barth *et al.*, 2008).

Clarkson *et al.* (2011) analyze, using the Ohlson model, the effects of the transition to the IFRS in 2005 of 14 EU member states, to which they add Australia, classifying them into *common law countries* (Australia, Ireland, Great Britain) and *code law countries* (Denmark, Finland, France, Germany, Greece, the Netherlands, Italy, Norway, Portugal, Spain, Sweden). To assess the value relevance of the financial information, we use the modified Ohlson model, which includes the earnings per share and the equities per share as independent variables, and as the dependent variable, we consider the stock price from the end of the sixth month after the closing of the financial year, to be sure that investors have had access to the information reported according to the IFRS. The results reported by Clarkson *et al.* (2011) show that in the *common law countries*, the implementation of the IFRS has had a low impact on the value relevance of the equities or of the results. In the case of the *code law countries*, the results reported by Clarkson *et al.* (2011) do not allow the setting of a general common trend: for some countries (especially France and Germany), the *value relevance* increases, for other countries (Italy), we see a decrease in the *value relevance* as a result of the IFRS implementation (Moricone *et al.*, 2009).

Klimczak and Szafranski (2013) analyze two components of the financial information relevance - the *coincident relevance and forecast relevance* – for the listed companies in Germany and France between 1989 and 2008. Reported results of Klimczak and Szafranski (2013) show that, on the whole, information value relevance grows when the market price before closing is used, or nearly of closing and that the information value relevance is significantly different depending on the use of the national standards or the IFRS.

Pervan and Bartulovic (2014) analyze the relevance of the information in the financial statements for each country in the South-Eastern Europe (Croatia, Slovenia, Serbia and Bosnia and Herzegovina). The study keeps the listed companies whose shares were actively transacted in 2005, after the exclusion of the companies operating in the banking-financial field (thus creating a sample of 97 companies). The study uses

Ohlson's modified model, which considers the net income and equities, and concludes that the financial information he analyzes has value relevance to investors, with a higher value of equities compared to the value of the net result.

In terms of Romanian companies, Filip and Raffournier (2010) deliver one of the most complete studies on the value relevance of the information from financial statements reported by the Romanian listed companies. In their study, they analyze the period between 1998 and 2004, before the moment of the harmonization of the Romanian accounting standards with the regulations from the European directives, and implicitly, with the IFRS. The retained sample has 48 listed companies and, due to high inflation in the first part of the studied period, Filip and Raffournier (2010) deflate the data by applying the general official index of prices. The results obtained by Filip and Raffournier (2010) are, as follows: there is some kind of correlation between the net income and the share price, while the correlation coefficient between the evolution of the net income and the evolution of the share price is negative. The conclusions of the two authors is that, if we maintain all the observations in the model, than there is a very strong correlation between the evolution of the net income and the evolution on the stock market of the shares price, while if after the exclusion of the extremes, the link between the two variables is similar to the one on the more developed and more mature markets. Also, after excluding the effects of inflation, the link becomes weaker, but it still remains within the normal limits.

Quantitative studies that evaluate the impact of the IFRS on the quality of financial information are doubled by qualitative studies. According to Săcărin *et al.* (2013), the use of IFRS has been supported by the accounting experts due to the need of raising the quality of reported information. Based on the answers provided by the representatives in the Romanian banks (as main capitals providers), Gîrbină *et al.* (2012) argue that the use of the IFRS in Romania has had positive effects, considering the costs-benefits ratio. Albu *et al.* (2014) evaluate, in the case of the Romanian companies listed in the I category of the BSE in 2012 (after the exclusion of banks, insurance institutions and financial intermediates), an average level of transparency and quality of financial information, given the existence of a positive correlation between some variables (for example, the size of companies or the existence of institutional investors) and the transparency and quality scores. Another interesting conclusion offered by Albu *et al.* (2014) is that the scores regarding the transparency and quality are not inter-correlated.

III. Research methodology

The study provides a statistical assessment of the value relevance of the financial information reported annually by Romanian BSE listed companies. For this purpose, we use the panel data analysis of the share price for the BSE listed companies, under the influence of the proposed factors (indicators of the financial position and performance), between 2006 and 2012.

Using the outcomes found in literature, the main research hypothesis used for testing in the study assumes that reported financial information in the annual financial statements

of the Romanian listed companies has a value relevance that fluctuates in time, monthly during the financial year.

To validate this research hypothesis, we suggest a statistical approach, based on the panel data analysis, starting from a series of data registered within a sample of companies.

III.1. Target population and analyzed sample

The target population of the study is represented by the Bucharest Stock Exchange (BSE) listed companies, BSE section. The analyzed period considers the financial years between 2006 and 2012, resulting in 7 financial reporting periods

At the end of the 2012 financial year (the financial years for which the IFRS was firstly applied in Romania), on the BSE section, 78 companies were listed in the three categories, from which we excluded 11 companies (representing financial and monetary intermediates, mutual funds and other similar financial entities), to avoid a very high heterogeneity of the sample. The final sample, introduced into analysis, includes a number of 67 BSE listed companies that meet the standards of the Securities Exchange Commission of the Romanian Financial Market (Romanian SEC). The 67 observed companies have been monitored during the 7 financial reporting periods, so a balanced sample was obtained.

In the value relevance analysis of financial information, we also need to consider the calendar of financial statements issuance because it explains the strong correlation moments of the variables. According to Rule no. 1/2006 of Romanian SEC and Law 297/2004, financial reporting obligations of the listed companies take shape in quarterly reports, a half-year report and an annual report. Listed companies included in the analyzed sample have December 31st as the closing date, and the main calendar of the financial statements issuance is the following: until April 30th (4 months after the end of the year), annual financial statements are issued for the previous year, until May 15th (45 days after the end of the first quarter), the first quarter report is issued; until August 31st (2 months after the end of semester 1) the half-year report is being published; until November 15th (45 days after the end of third quarter), the third semester report is published. In fact, many companies also choose to also publish data for fourth quarter, even if it is the same with the end of the year. The data in the 4th quarter are issued until the half of February (45 days after the closing) as preliminary financial statements for the previous year.

Alongside these financial reports, listed companies also have to present current reports regarding each important event appearing in their activity and which can lead to changes in the share price, due to the effect of these events on the patrimonial and financial situation or on the general activity of the issuer.

Such an event with impact on the share price is represented by the *registration date*, date in the calendar, which is established by the General Meeting of Shareholders (GMS) which is used to identify the shareholders that are going to gain dividends or other right and on whom the effects of the GMS decisions are reflected. Rule no. 1/2006 of Romanian SEC also defines *ex date* as the previous date to the date of registration with a discount cycle minus a working day, from which financial instruments, object of the company authority's decisions, are traded without the rights that arise from a certain

decision. Obviously, after this date, shares do not lead any more to pay dividends, which means that their market price will lower.

Compared with other Stock Exchanges of the region (Central and Eastern Europe), BSE has a low-level of liquidity, in which short-term trading prevails over long-term investments (Filip and Raffournier, 2010). Still, there is a demand for concentrated financial information, especially from already reported financial statements, aimed to support investors' decision-making. (Filip and Raffournier, 2010)

III.2. Analyzed variables and source of data

Starting from the models used by Eastorn and Haris (1991) and Ohlson (1995), the study aims to analyse the influence of the information regarding the financial position and performance of the company on the variation of the closing stock price. The stock price is daily registered and, on their basis, the daily variation of the stock price is calculated as a growth rate ($r_{d/d-1}$), as formula:

$$r_{d/d-1}^P = \frac{P_d - P_{d-1}}{P_{d-1}} \tag{1}$$

where: P_d and P_{d-1} represent the closing stock price registered for two consecutive days (d and $d-1$).

The average growth rate (\bar{r}_P) is calculated by the following relation (Jaba, 2002):

$$\bar{r}_P = \bar{R} - 1 \tag{2}$$

$$\bar{R} = \sqrt[n]{\prod_{d=0}^n R_{d/d-1}} = \sqrt[n]{R_{n/0}} = \sqrt[n]{\frac{P_n}{P_0}} \tag{3}$$

where: n is the number of time periods between the first and the last registration. The annual average growth rate is also known as the Compound Annual Growth Rate (CAGR).

Variables used in the analysis are shown in Table 1.

Table 1

Analyzed variables

Symbol	Variable description	Calculus formula	Data source*
\bar{r}_P	Average growth rate of the share list	equation (2)	[P]
ROA	Return on Assets: measures the profitability of the company relative to its total assets	Operating Income/ Total Assets	[WC01250]/ [WC02999]
ROE	Return on Equities: measures the profitability of the company revealing the profit that was generated using the funds from the shareholders	Net Income/ Equities	[WC08301]
NM	Net margin ratio: indicates the percentage of revenues that is translated into revenues	Net margin/ Turnover	[WC08366]
FL	Financial Leverage: indicates the proportion of liabilities and equities that is used by the company to finance its assets	Total debts/ Equities	[WC08231]

* Datastream code (Thomson Financial).

For the analyzed sample, for the proposed variables, data has been collected from the Thomson Financial database, using Datastream Advanced 4.0.

III.3. Data analysis methods

The time-varying influence of the information regarding financial position and performance of the company, presented in financial statements, on the average growth rate of the stock prices is analysed using panel data analysis (Jaba *et al.*, 2013). Applying the *panel data analysis*, we can assess in time the evolution of the share price for one company under the influence of certain factors as well as the existence of possible significant differences between companies. The main advantages of using the data panel analysis are: the increase of the accuracy of the estimations for the regression models parameters, the improvement of the analysis of one phenomenon by the simultaneous inclusion in the model of the cross-section and time dimensions, the simplification of the statistical inference process (respecting the classical hypotheses of the regression analysis not being mandatory any more) (Hsiao, 2007).

The general model for a series of data registered for N companies, observed during a T period of time, based on which we analyze the influence of the determining factors on a resultant variable is as follows:

$$Y_{it} = \beta_{0it} + \sum_{k=1}^K \beta_{kit} X_{kit} + \varepsilon_{it} \quad (4)$$

where: Y_{it} represents the resultative variable; X_{knt} , the K explanatory variables; β_{0it} is the model constant, and ε_{it} represents the error component of the model, or random variable, with $i = 1, \dots, N$ and $t = 1, \dots, T$. The coefficients β_{kit} , $k = 1, \dots, K$, vary, from case to case, in time and between the companies.

Starting from the models proposed by Easton and Haris (1991) and Ohlson (1995) for the analysis of the information value relevance (and which do not include macroeconomic variables), the model proposed for the analysis in our study is, as follows:

$$\bar{r}_P = \beta_{0it} + \beta_{1it} ROA + \beta_{2it} ROE + \beta_{3it} NM + \beta_{4it} FL + \varepsilon_{it} \quad (5)$$

with, $i = 1, \dots, 67$ and $t = 2006, \dots, 2012$.

The model's constant, β_{0it} , can be decomposed as:

$$\beta_{0it} = \beta_0 + \beta_i + \beta_t \quad (6)$$

given the supposition that there is no time variation of the β_{kit} coefficients. Thus,

$\sum_{i=1}^N \beta_i = 0$ and $\sum_{t=1}^T \beta_t = 0$ (Sevestre, 2002, p. 44), where β_i indicates the time unobserved differences between the firms (cross-section fixed effects) and β_t indicates the temporal differences existing within a company and the time fixed effects respectively (Jaba *et al.*, 2012).

Testing the panel data models has been carried out by using the coefficient of determination, R^2 , and the Fisher and Hausman tests, also used in the studies of Barth *et al.* (2008) and Filip and Raffournier (2010). If the value of the Hausman test is not significant, then the estimators of the model parameters with fixed effects are consistent,

but inefficient, showing the existence of some correlation between the fixed individual effects and the explanatory variables (Şova *et al.*, 2009; Andreica and Andreica, 2014). In order to reach the research results, collected data were analyzed using SPSS 20.0 and SAS 9.2 statistical software.

IV. Results and discussion

The study used panel data to analyze and assess in time the value relevance of financial information on decisions made by investors on BSE. The main results showed that main financial indicators of position and performance have a different influence in time on monthly variation of share price of listed companies. This reveals that the used financial indicators corroborated with variation of share price during previous months have a differentiated degree of importance for investors.

The evolution of financial indicators (the independent variables) used in the analysis can be seen in Table 2. For the period between 2006 and 2012, the obtained results show a growth in the performance of the operating activities (ROA) of the BSE listed companies until 2008 (the moment when the global financial crisis have started in Romania) and a significant increase after this moment. Such an evolution can be correlated with the macroeconomic evolutions in Romania. Also, in the case of other performance indicators, we may observe a growing trend of their values until the beginning of the financial and economic crisis in 2008 and a decrease of the values, immediately, following the period after the crisis.

Regarding the degree of indebtedness of the BSE listed companies, it can be noticed that at the beginning of the analyzed period, companies got financed mostly based on foreign resources (in average the *FL* had over-unity values), and during the crisis period, companies mainly focused on their own resources (the *FL* is under-unity values).

Table 2

The means value for the independent variables, by years, over the period 2006-2012

Variables	Years							Total
	2006	2007	2008	2009	2010	2011	2012	
<i>ROA</i>	0.0389	0.0544	0.0437	0.0250	0.0252	0.0140	0.0152	0.0309
<i>ROE</i>	0.0647	0.0642	0.0243	0.0009	0.0211	0.0214	0.0395	0.0337
<i>NM</i>	0.0503	0.0507	0.0291	0.0061	0.0063	-0.0122	-0.0132	0.0167
<i>FL</i>	1.0184	0.8533	0.9235	0.9089	0.8911	0.9151	0.8321	0.9061

Source: Own processing.

The evolution of the factor variables considered in the study, especially the indicators regarding the financial performance, is more influenced by the impact of global financial crisis and less by the financial structure of the company.

The reaction of investors on the capital market to the received information can be noticed using the average growth rate of share price during the analyzed period. This indicator describes the average variation of the share price during a financial year. Table

3 shows the daily average growth rate of the share price of the listed companies, monthly, by years and on the total period between 2006 and 2012.

Table 3

Daily average growth rate of the stock price for the listed companies, by months and by years, over the period 2006 and 2012

\bar{r}	Years							Total
	2006	2007	2008	2009	2010	2011	2012	
\bar{r}_1	0.0050	-0.0073	-0.0068	0.0033	-0.0007	0.0059	0.0029	0.0003
\bar{r}_2	0.0034	-0.0011	-0.0057	0.0004	0.0015	-0.0036	0.0015	-0.0005
\bar{r}_3	0.0037	-0.0049	0.0084	0.0093	0.0014	-0.0028	-0.0017	0.0019
\bar{r}_4	0.0093	-0.0023	0.0132	-0.0016	-0.0028	0.0014	-0.0042	0.0019
\bar{r}_5	0.0022	0.0041	-0.0020	-0.0141	-0.0024	-0.0082	0.0009	-0.0028
\bar{r}_6	0.0052	-0.0079	0.0004	-0.0019	-0.0013	-0.0014	-0.0030	-0.0014
\bar{r}_7	0.0044	-0.0017	0.0015	0.0031	0.0000	0.0017	-0.0001	0.0013
\bar{r}_8	-0.0009	-0.0059	0.0005	-0.0018	-0.0053	0.0022	-0.0002	-0.0016
\bar{r}_9	-0.0017	-0.0096	0.0042	0.0019	-0.0064	-0.0033	-0.0006	-0.0022
\bar{r}_{10}	-0.0026	-0.0207	-0.0049	-0.0016	0.0010	-0.0004	-0.0016	-0.0044
\bar{r}_{11}	-0.0060	-0.0082	0.0001	-0.0033	-0.0055	-0.0037	0.0022	-0.0035
\bar{r}_{12}	0.0017	-0.0049	0.0001	0.0028	0.0011	0.0050	0.0029	0.0012

Source: Own processing.

Results shown in Table 3 emphasize that in 2006 (before the manifestation of the global financial crisis), Romanian listed companies reported growths of the daily average growth rate of the share price during the first seven listing months and decreases of the daily average growth rates of the stock price during the following five listed months.

For the information issued in the financial statements corresponding to 2007, there is an opposite situation to the year of 2006, when the average daily growth rate of the stock price decreases during the whole listing period and a growth of just 0.41% during the fifth month. This growth comes immediately after the moment of issuance of the annual financial statements of the Romanian listed companies and especially after the announcement on the dividends and the expiration of the reference date.

Since 2008 financial year, the year of emergence of the economic-financial crisis in Romania (Albu, 2013), the stock price of the analyzed companies have registered an evolution featured by a diminishing trend for most of the months.

When explaining the evolution of the stock price, we must also consider the analysts' estimations on the companies' results related to financial performance, as data are published once every three months.

Both monthly and yearly evolution of the daily average growth rate of the stock price of the listed companies expresses the value relevance of the information on investors

when making investment or un-investment decisions. The investor's decision regarding the shares acquisition or sale is made upon the information provided from the market and based on the own criteria that complete the pure financial information.

Another study results consists of testing the relevance of the information regarding the financial position and performance of the company on the investor's decision. To reach it, 12 models of information relevance were built up, depending on the indicators of the financial position and performance, corresponding to each month of the financial years between 2006 and 2012. The results of the tests, respectively the R², the Fisher statistics and the Hausman test, for each of the 12 models, are shown in Table 4.

Table 4

Results on testing the panel data models

Model	1	2	3	4	5	6	7	8	9	10	11	12
R ²	0.31	0.24	0.35	0.35	0.36	0.27	0.22	0.25	0.33	0.43	0.31	0.24
F	2.46	1.51	2.88	2.82	2.93	2.00	1.42	1.74	2.37	4.13	2.38	1.62
Sig.	0.00	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
H	7.10	3.37	2.08	1.98	3.93	3.09	7.59	4.42	1.56	2.54	9.12	1.58
Sig.	0.13	0.50	0.72	0.74	0.42	0.54	0.11	0.35	0.82	0.64	0.06	0.81
Fixed effects	Cross		67		Observations		469					
	Time		7									

Note: F test for no fix effects; Hausman specification test (H) is used for testing the consistency of the estimated parameters; in the case of fixed effects, on the null hypothesis (H₀), the parameters of the model are consistent but inefficient, and on the alternative hypothesis (H₁) the parameters of the model are consistent and possibly efficient.

Source: Own processing.

The R² values for the 12 models that correspond to the months of the financial years show a growth of the financial information value relevance of the company starting from January (when non-audited results are known) and reaching the maximum in May (the issuance on May 15th of the first quarterly report of the following financial year). It shows that investors' decisions is not just based on information from financial statements (annual, half year and quarter) but also on information related to capital market (especially variations of share price in the previous months).

The values of the F statistics from Table 4 show that all 12 models regarding the analysis of the daily average growth rate of the stock price under the influence of the determining factors (ROA, ROE, NM and FL) display cross-section fixed effects and time fixed effects.

Based on Hausman (H) statistics, we can appreciate that for the 12 models with fixed effects, except the one corresponding to November, the estimators of the parameters are consistent but inefficient. As a result, it is recommended to choose models with random effects, as together with the influence of information from reported financial statements, the variation of share price is calculated also based on its values recorded in the previous months.

The results on the estimated influence of determining factors of the financial information value relevance are presented in Table 5.

Table 5
Parameters estimates of the 12 regression models, corresponding to
each month, over the period 2006-2012

(\bar{r}_m)	Intercept		ROA		ROE		NM		FL	
	β_0	Sig	β_{1nt}	Sig	β_{2nt}	Sig	β_{3nt}	Sig	β_{4nt}	Sig
\bar{r}_1	0.0060	0.13	-0.0078	0.53	-0.0050	0.39	0.0125	0.09	-0.0013	0.16
\bar{r}_2	0.0005	0.89	0.0051	0.66	0.0073	0.18	0.0054	0.43	0.0003	0.76
\bar{r}_3	-0.0019	0.58	0.0028	0.80	0.0054	0.30	-0.0008	0.91	-0.0001	0.88
\bar{r}_4	-0.0052	0.25	0.0134	0.35	-0.0082	0.22	-0.0013	0.88	-0.0011	0.29
\bar{r}_5	0.0025	0.56	-0.0257	0.05	0.0044	0.47	0.0128	0.10	0.0011	0.23
\bar{r}_6	-0.0005	0.89	0.0025	0.81	-0.0028	0.57	0.0079	0.21	-0.0006	0.47
\bar{r}_7	0.0027	0.39	-0.0151	0.12	-0.0057	0.21	0.0134	0.02	-0.0002	0.79
\bar{r}_8	0.0015	0.63	0.0137	0.16	-0.0102	0.03	0.0003	0.96	-0.0014	0.05
\bar{r}_9	-0.0008	0.82	0.0288	0.01	-0.0032	0.55	-0.0090	0.19	0.0002	0.80
\bar{r}_{10}	-0.0018	0.65	0.0111	0.37	-0.0070	0.23	-0.0008	0.92	-0.0002	0.85
\bar{r}_{11}	0.0049	0.22	-0.0092	0.46	0.0012	0.83	0.0042	0.56	0.0004	0.66
\bar{r}_{12}	0.0034	0.41	-0.0064	0.62	-0.0000	0.99	0.0038	0.62	-0.0005	0.62

Notes: - the regression model is:

$$\bar{r}_m = \beta_{0it} + \beta_{1it}ROA + \beta_{2it}ROE + \beta_{3it}NM + \beta_{4it}FL + \varepsilon_{it}, m = 1, \dots, 12;$$

- significant estimations for a 10% risk are shown in bold.

Source: Own processing.

The significance of the regression coefficients of the *ROA*, *ROE*, *NM* and *FL* on the daily average growth rate of the stock price varies from month to month, emphasizing that the influence of the factors stands under the impact of the reporting calendar of the financial statements. Data in Table 5 indicates that *ROA*, *ROE*, *NM* and *FL*, occasionally, have had high value relevance, on the investors' decisions at least during the 5-9 months of the following year, except January, where only *NM* shows a high relevance (the estimations of the parameters associated to the indicators in the regression models have significant values). This is due to the fact that by August 31th, the report on the first semester must be published.

After this date, the daily average growth rate, on a monthly basis, of the stock price, is also influenced by other information that is not reported by companies. Starting from October until the end of the financial year, the information regarding the financial position and performance, from the previous financial year, grow in value relevance, especially due to the possibility of making comparisons with the results registered during the current year (until November 15th, the third quarter report is published, which widely includes the company's position and performance during the new, yet unfinished, financial year).

The results shown in Table 5 show that the information on the performance of the operating activity, assessed by using the *ROA*, is a value relevant to investors and with a significant influence (low values of the significance level) on the stock price at the moment of financial statements' publishing, in May (Sig = 0.05) and also in September (Sig = 0.01), immediately after the reporting of the intermediate statements corresponding to the second semester, that significantly improve the analysts' and the companies' estimations. A 1% growth of the operating losses, reported to the total assets, leads to a 2.57% decrease of the daily average growth rate of the stock price in May. A 1% growth of the operating profit causes a 2.88% increase of the daily average growth rate of the stock price in September.

Information on studied companies on the financial profitability, assessed by the *ROE*, is irrelevant to investors, negatively influencing the daily average growth rate of the stock price in August (until the issuance of financial statements for the first semester). A 1% growth of the losses that were generated by using the equities leads to a 1.02% decrease of the daily average growth rate of the stock price in August.

Information on the disclosed net income or loss of the company (compared to the turnover, assessed by using the *NM*) are value relevant to investors immediately after the closing of the financial year and the issuance of the first information regarding the performance of the closed year (January of the following year), in the moment of the financial statements issuance (May) and, subsequently, during the preparation and the reporting of the half-year financial statements (until August). A 1% increase of the *NM* causes an increase in the daily average growth rate of the stock price of 1.25% in January, of 1.28% in May and of 1.34% in July.

Information on the financial structure of the company and the degree of indebtedness (*FL*) are useful to investors, during the second half of the following financial year, when one can carry an analysis of the benefits resulting from the activity funding, either based on the own resources, or based on foreign resources. A 1% increase of the *FL* leads to a 0.14% decrease in the daily average growth rate of the stock price in August.

IV. Conclusions

The results obtained in the study have led to reaching the research objectives and to validation of the working hypothesis. Using the main financial indicators, calculated based on the information in the annual financial statements; we could assess its value relevance in time, monthly, to investors. In this study, the value relevance was assessed based on the influence of the financial indicators on the average monthly growth rate of the stock price for the Romanian BSE listed companies.

As a result of the analysis on collected data of the sample considered in the analysis, the hypothesis suggested for testing was validated. We can appreciate that in the case of the Romanian BSE listed companies, the value relevance of the financial information, reported based on the annual financial statements, varies in time, from month to month, during one financial year.

Information on the company's financial performance aims the results of the operating activity (using the *ROA*), the performance of using equity in funding (*ROE*) and the performance of the trading activity (*NM*). As a result of analyzing the data collected in

the studied sample, reported information that stands at the basis of *ROA* calculation are a relevant value to investors only when it is published (after its auditing) and subsequently, in September, when the intermediate financial statements are published. Information on the financial rentability is relevant to investors starting from July (after the auditing procedure), and the information regarding the commercial rentability (*NM*) are value relevant to investors immediately after the ending of the financial year and the announcement of the non-audited results, in the moment of the financial statements issuance (May), and subsequently, when half-year situations are prepared and reported.

Research results have emphasized the fact that the information on the financial position and especially the financial structure of the company, evaluated based on the financial leverage, (*FL*) are a relevant value to investors, especially in the second half of the financial year. The utility of this information is supported by the possibility of creating comparisons regarding the obtained benefits as a result of financing activity either from own resources or from foreign resources.

A strong point of this study is represented by the fact that, unlike other studies, the analysis uses the average growth rate of the stock price, by months and by years, thus better controlling the evolution of the share price under the influence of the information in the reported financial statements. Based on the obtained results, we can make a time hierarchy of the information (indicators) with high value relevance to investors. At the same time, by identifying the time periods when an indicator displays relevance to investors or not, we can request or mandate additional periodical reports which should contribute to the growth of value relevance and which are useful to the investors' decision making.

The limits of the study are mainly given by the inclusion into the analysis just of the information regarding the rentability and degree of indebtedness, the suggested model not including other information on the companies' cash, solvability, the affiliation to a certain field of activity, or a certain auditor, or the type of the audit opinion expressed regarding the reported financial statements.

Future research should increase the analyzed sample by carrying out a comparative analysis within the listed companies on the main stock exchanges in the South-Eastern Europe, as well as by including other factorial variables into the analysis, with direct impact on the value relevance of the reported information for the investors' decisions.

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