

The usefulness of accounting information on financial instruments to investors assessing non-financial companies. An empirical analysis on the Bucharest Stock Exchange

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Abstract: The aim of this paper is to study the value relevance of IFRS-based accounting information regarding financial instruments provided by non-financial Romanian groups quoted on Bucharest Stock Exchange for the period 2011-2013. Data from both consolidated and parent-only accounts are tested using a modified Ohlson model to show the empirical correlation between stock market prices and accounting numbers. We find that at parent company level, the information about financial assets is more value relevant than the one about financial liabilities. At group level, investors rely mostly on information about financial assets, ignoring the one about financial liabilities. Moreover, results show the superiority of parent company's individual accounts over the consolidated ones in terms of value relevance of financial instruments information.

Keywords: financial instruments, value relevance, IFRS, regression analysis

JEL codes: M41

1. Introduction

In the Conceptual Framework for Financial Reporting, the International Accounting Standards Board (IASB), states that the primary objective of general purpose financial reporting is to provide useful information about the reporting entity to investors and creditors to enable them to make proper economic decisions.

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To meet this objective, accounting information must be relevant and representational faithful. Whether this goal is achieved or not has become a recurrent theme of research in the accounting field. There is a significant stream of literature that investigates the role played by the accounting information provided through financial statements in market-based economies, known as value relevance research (Holthausen & Watts, 2001 and Beisland, 2009 provide comprehensive literature reviews on the subject of value relevance).

Value relevance is defined as the ability of accounting information to capture and summarize information that determines the firm's value (Francis & Schipper, 1999). For an investor, accounting information is value relevant if it is reflected in stock prices and/or stock returns. For a value relevance researcher, accounting information is value relevant if it is empirically connected to financial market equity prices/returns (or changes in these prices/returns). The stronger the correlation to market prices, the more value relevant accounting information is (Filip & Raffournier, 2010).

Our study investigates value relevance of accounting information about financial instruments reported by non-financial Romanian groups. This is of particular importance as, according to Beaver (2002) single country studies are preferable to cross-country ones because they are based on a more in-depth knowledge of national standard-setting bodies and allow for a better control of institutional, socio-economic and political factors that affect the companies' reporting and the investing behaviour. Moreover, Romania is an Eastern-European country, with a less developed capital market and an original process of IFRS adoption that provides an interesting setting for value relevance research.

Firstly, we examine the connection between stock market price and financial instruments information at both individual and consolidated level. Accounting for financial instruments has been a strongly debated subject for more than 20 years already. Although it raises more interest among financial institution, it is also a matter of concern for non-financial firms companies. The voice of non-financial firms was heard pretty loudly at the discussions about the new IFRS 9 "Financial instruments". They sent 13% of all comment letters to the IASB exposure draft ED/2009/7 "Financial instruments: classification and measurement" (Huian, 2013a) and 14% to the ED/2009/12 "Amortized cost and impairment of financial assets" (Huian, 2013b). These responses represent a recognition of the significant impact of financial instruments (and their corresponding accounting and reporting rules) on their financial position and performance. We believe that this is also applicable to Romanian companies that, to our knowledge, have not been involved in the aforementioned debates so far.

Secondly, we examine whether information about financial instruments provided through consolidated financial statements is deemed by investors more useful than the one from the individual accounts of the parent company. There has been a longstanding debate in financial reporting theory about which set of financial statements provide more meaningful information (for this paper, meaningful is synonymous to value relevant): consolidated accounts or unconsolidated accounts of the parent company? According to the entity approach, the group is the dominant economic unit and thus, consolidated accounts are deemed to be the most suitable format for providing information about the financial position and performance of the parent (Abad *et al.*, 2000). We believe that this is not applicable to Romania, where consolidated statements are quite a recent requirement to which investors are less accustomed.

The findings of the 1st test show that, at parent company level, the information about financial assets is more value relevant than the one about financial liabilities. As far as consolidated accounts are concerned, investors rely only on information about financial assets, ignoring the one about financial liabilities. The 2nd test reports a superiority of parent company's individual accounts over the consolidated ones in terms of value relevance of financial instruments information.

Our contribution to the literature mainly consists of: i) addressing the subject of value relevance of accounting information provided by both consolidated and parent's individual accounts in emerging markets such as Romania. We contribute to the debate regarding consolidated versus unconsolidated financial statements in Europe, in general, and in emerging markets, in particular; ii) investigating the impact of financial instruments information on the price of non-financial companies' equity instead of the usual emphasis on the financial industry (as dominant user of financial instruments); iii) assessing value relevance of all financial instruments information. To our knowledge, prior studies addressed only financial instruments at fair value; iv) extending previous studies on one of the most controversial and debated accounting issue in the last decades: accounting and financial reporting of financial instruments.

The rest of the paper is organized as follows: section 2 deals with the literature review and the development of the 2 research hypotheses, section 3 describes the data used and the corresponding statistics, while section 4 discusses the results. Section 5 concludes the paper.

2. Literature review and hypotheses development

Value relevance literature has known a tremendous development over the last 20 years. Analyzing the explanatory power of several accounting variables (computed

according to local GAAP) on stock prices, a significant number of studies report that earnings and cash flows are value relevant. Examples include Barth *et al.* (1996), Lev and Sougiannis (1996) and Ayers (1998). Others tackle the subject of the effects of the IFRS adoption on the accounting information quality, by comparing it to accounting numbers resulting from national standards. Some examples are Hung and Subramanyam (2007) for the IFRS adoption in Germany; Callao *et al.* (2007) for Spain, Morais and Curto (2008) for Portugal; Leonrmand and Touchais (2009) for France; Iatridis (2010) for Great Britain, and Klimczak, (2011) for Poland. They show mixed findings, consisting of weak evidence or no evidence at all on the improvement of value relevance due to the adoption of a new accounting system – the IFRS.

Our paper investigates an emergent economy from Eastern Europe. These economies provide an institutional and accounting setting that favors the unambiguous prediction of value relevance testing results. According to Hellstrom (2006), the possibility of confirming the predicted results (which is higher in emergent countries) is a supportive evidence of the validity of value relevance methodology, enabling the development of the theoretical aspect of the research. Our paper is to be included in the current stream of literature on Eastern European countries, alongside other studies such as: Polish market (Grabinski *et al.*, 2014), Czech market (Hellstrom, 2006), and Baltic States market (Jarmalaite Pritchard, 2002).

In Romania, value relevance is investigated by Filip and Raffournier (2010) and Takacs (2012) who study the association between stock market prices and earnings reported by companies listed on the Bucharest Stock Exchange. They find a rather limited level of value relevance. More recently, Mironiuc *et al.* (2015) examine the value relevance of the comprehensive income in relation to that of net income, after the IFRS adoption in Romania in 2012. They find an increase in value relevance that could also be explained by the influence of the auditing performed by the Big 4 companies.

Value relevance literature dealing with financial instruments indicate a better correlation between fair value amounts and stock prices than that of historical cost figures (Barth, 1994; Ahmed *et al.*, 2006; Koonce *et al.*, 2011). Other studies argue that quality disclosures of financial instrument are value relevant (Venkatachalam, 1996, Kolev, 2009; Song *et al.*, 2010).

Based on the previously presented state of knowledge, we consider that our research extends a rather scant value relevance literature regarding both the Romanian capital market and the financial instruments information reported by non-financial companies. To our knowledge, value relevance of financial instruments information has never been addressed in Romania before. Instead of

investigating value relevance in general, we choose to test value relevance of financial instruments information for both consolidated and parent's individual accounts. This leads to our first hypothesis:

H₁: *Information about financial instruments reported in the financial statements of non-financial companies is value relevant.*

Although not explicitly stated as part of H₁, we also test the value relevance of financial instruments information by grouping the entities according to their results (i.e. profit or loss). In order to prepare the field for the second hypothesis, we further develop H₁ in 2 sub-hypotheses, tested separately:

H_{1a}: *Information about financial instruments reported in the individual financial statements of a parent company is value relevant.*

H_{1b}: *Information about financial instruments reported in the consolidated financial statements is value relevant.*

With the development of groups of companies in the USA, towards the end of the 19th century, financial reporting shifted its focus from individual financial statements to consolidated accounts (Epstein & Jermakowicz, 2010). This paradigm change has made that the USA and UK no longer require publication of the parent's separate financial statements. Nevertheless, many countries require a dual reporting: parent companies must provide separate financial statements but, at the same time, they have the obligation to prepare consolidated accounts. Each set of accounts meets different reporting demands. According to Goncharov *et al.* (2009), group accounts exist to provide a faithful representation of the entity's financial position, while the single accounts exist not only to inform about the financial position but are the starting point both for taxation and computation of distributable income.

The existence of dual reporting provides an interesting research field for value relevance scholars all over the world. Previous studies that have investigated which statements are more important show mixed results. On the one hand, some have agreed that consolidated statements are more value relevant than parent's unconsolidated statements. Niskanen *et al.* (1998), using a sample of 35 Finnish companies, conclude that consolidated data is more informative than the parent-only earnings. Abad *et al.* (2000) investigate the topic on Spanish listed companies suggesting that consolidated financial statements provide incremental value relevant information over parent-only accounts. A study conducted by Okuda and Shiiba (2006) in Japan finds that subsidiary return on equity affects stock returns more than the parent-only returns. Goncharov *et al.* (2009) examine the German companies, pointing to higher predictive ability, value relevance and timeliness of consolidated accounts as well as higher earnings management in individual accounts. Muller (2011) studies value relevance of consolidated and parent

company accounting information of listed entities on the largest 3 stock markets in Europe and reports an increase in superiority of the relevance of consolidated statements (in the detriment of individual ones). On the other hand, other studies find weak or no. evidence of value relevance superiority of the consolidated accounts. Darrough and Harris (1991) argue that consolidated statements provide very little incremental information content in Japan. Harris (1997) obtain the same result while using data from German companies. Srinivasan and Narasimhan (2012) find that annual consolidated statements of 59 Indian groups are not value relevant, whereas annual parent-only financial statements are.

In Romania, as well as in other European countries, until recently, the reporting of consolidated financial statements has been the exception rather than the rule (Abad *et al.*, 2000). To be more precise, in Romania consolidated reporting practice has existed for no. more than 2 decades (Malciu & Feleagă, 2004). Even though several orders issued by the Ministry of Finance (such as Order 772/2000 or Order 1752/2005) approved rules regarding consolidation and consolidated accounts, it was not until 2007 that the Accounting Law no. 82/1991 imposed sanctions for failing to prepare and publish annual consolidated financial statements. 2007 is also the year of Romania's adhesion to the European Union and, consequently, the starting date of the mandatory application of the IFRS in the consolidated financial statements of the listed groups. Therefore, investors are not very accustomed to this type of reporting and, we expect, pay less attention to consolidated information. This leads to our second hypothesis:

***H₂**: Information about financial instruments reported in the individual financial statements of the parent company is deemed more value relevant by investors than the one provided by the consolidated financial statements.*

To confirm the 2nd hypothesis, the explanatory power of model used for Sample A, unconsolidated accounts, quantified by adjusted R², must be greater than the explanatory power of sample B's model.

3. Data and descriptive statistics

This section deals with the financial data used in the research and the most significant descriptive statistics.

3.1 Financial data

The population consists of all non-financial groups listed on the main board of Bucharest Stock Exchange (BSE) in 2012 (the year of the IFRS mandatory application in the individual accounts). The financial groups are excluded as they

have a different structure and follow different accounting practices from the non-financial firms (Hellstrom, 2006). A breakdown of data by industries is presented in table 1.

Table 1. Composition of data by industry

Groups by industry	Number of groups	Firm-year observations (financial statements)	
		Consolidated	Individual
Mining and quarrying	2	6	6
Manufacturing	12	36	36
Electricity, gas, steam supply	1	3	3
Construction	3	9	9
Wholesale and retail trade	3	9	9
Accommodation and food service	2	6	6
Total	23	69	69

Financial data is hand-collected from the annual consolidated financial statements and the parent's separate financial statements available on the companies' websites and/or the BSE's website. The chosen period is 2011-2013 to ensure the comparability of the accounting data. Even though 2012 is the first year of the IFRS mandatory application in the individual accounts, the 2012 financial statements include restated data for 2011 according to the new rules. 2013 is the only year included in our analysis in which IFRS were used as basis of accounting. Therefore, all data is prepared based on the IFRS. Only companies that have been listed on the BSE for the whole period analyzed are included. Stock market prices are also hand-collected from the BSE's website. In addition, price is taken as of 30th of June next year in order to ensure that both consolidated and separate annual reports are publicly available.

As the main purpose is to demonstrate that investors use information about financial instruments when assessing a non-financial company's value, all consolidated and individual statements of financial positions are reclassified to properly show the application of IAS 39 "Financial instruments: recognition and measurement". The IAS 39's version endorsed by the European Commission is used, and not IFRS 9 "Financial instruments", that is yet to be adopted. The reclassification consists of dividing assets and liabilities into 2 major classes: financial assets within the scope of IAS 39 (FAIAS39) and all the other assets that are considered non-financial assets (NFA); the same goes for liabilities: financial liabilities within the scope of IAS 39 (FLIAS39) and non-financial liabilities (NFL). These data are structured following both IAS 39 and IFRS 7 "Financial instruments: disclosures", as the information from the balance sheets is doubled by the one provided in the footnotes.

3.2 Descriptive statistics

Table 2 provides descriptive statistics on the relative size of financial assets and financial liabilities from 69 individual and 69 consolidated observations. Compared to total assets and liabilities, the mean financial assets and liabilities within the scope of IAS 39 (FAIAS39 and FLIAS39) are about 21% (22% at consolidated level) and 73% (76% at consolidated level), respectively. While non-financial assets (NFA) represent the most consistent portion of total assets, financial liabilities (FLIAS39) are the majority of total liabilities. The results regarding financial assets are comparable to those reported by Gebhardt (2012).

Table 2. Relative size of financial assets and financial liabilities

Variables N	Mean	Median	Std. Deviation	Mini- mum	Maxi- mum
NFA/Total Assets	0.7832	0.8335	0.19418	0.0360	0.9946
FAIAS39/Total Assets	0.2056	0.1664	0.17139	0.0054	0.6990
NFL/Total Liabilities	0.2675	0.2092	0.19131	0.0214	0.7380
FLIAS39/Total Liabilities	0.7324	0.7907	0.19131	0.2620	0.9786
Variables C_N	Mean	Median	Std. Deviation	Mini- mum	Maxi- mum
C_NFA/Total Assets	0.7773	0.8312	0.17669	0.3138	0.9917
C_FAIAS39/Tot al Assets	0.2226	0.1688	0.17669	0.0083	0.6862
C_NFL/Total Liabilities	0.2661	0.1984	0.25479	0.0244	1.5905
C_FLIAS39/Tota l Liabilities	0.7569	0.8016	0.17335	0.2885	0.9756

N = Number of observations - 69 Individual Financial Statements
C_N = Number of observations - 69 Consolidated Financial Statements
NFA and NFL indicate non-financial assets and liabilities. FAIAS39 and FLIAS39 are financial assets and financial liabilities within the scope of IAS 39. C_NFA/C_NFL, C_FAIAS39/C_FLIAS39 are the same abbreviations for the consolidated accounts.

In this paper, financial assets within the scope of IAS 39 (FAIAS39) fall in one of the 4 categories: receivables, derivative assets, other investments, cash and cash equivalents. In most cases, receivables and cash & cash equivalents are the only types of financial assets. Accordingly, financial liabilities within the scope of IAS 39 (FLIAS39) are divided into: accounts payable, derivative liabilities and debt. Overall, derivative liabilities are almost non-existent. Table 3 provides descriptive statistics on the relative size of receivables, cash & cash equivalents, accounts payable and debt from 69 individual and 69 consolidated observations.

Table 3. Relative size of major categories of financial assets and liabilities

Variables N	Mean	Median	Std. Deviation	Mini- mum	Maxi- mum
Receivables/FAIAS39	0.7111	0.8080	0.26481	0.0723	0.9901
Cash/FAIAS39	0.2328	0.1710	0.21894	0.0099	0.9201
Accounts Payable/FLIAS39	0.4677	0.4005	0.30089	0.0346	1.0000
Debt/FLIAS39	0.4940	0.5654	0.31649	0.0000	0.9422
Variables C_N	Mean	Median	Std. Deviation	Mini- mum	Maxi- mum
C_Receivables/FAIAS39	0.7137	0.8036	0.25210	0.0526	0.9809
C_Cash/FAIAS39	0.2487	0.1877	0.21552	0.0186	0.9203
C_Accounts Payable/FLIAS39	0.4475	0.3676	0.28574	0.0357	1.0000
C_Debt/FLIAS39	0.5070	0.5844	0.29088	0.0000	0.9643

N = Number of observations - 69 individual financial statements

C_N = Number of observations - 69 consolidated financial statements

FAIAS39 and FLIAS39 are financial assets and financial liabilities within the scope of IAS 39.

C_FAIAS39/C_FLIAS39 are the same abbreviations for consolidated accounts.

According to the data in table 3, the most significant financial asset reported by non-financial companies are receivables with a mean of 71% (for both individual and consolidated level), while mean financial liabilities are almost equally split between accounts payable (47% - individual data and 45% - consolidated data) and debt (49%, 51% respectively).

Table 4 provides descriptive statistics on the variables used to test value relevance of accounting information regarding financial instruments under IFRS. All variables are per-share numbers.

Table 4. Per share value of financial and non-financial assets, financial and non-financial liabilities

Sample A		Variables	Sample B	
Individual Statements			Consolidated Statements	
Mean	Std Deviation		Mean	Std Deviation
0,6867	2,8016	NFA	0,6950	2,7648
0,1207	4,4712	FAIAS39	0,1377	4,1315
0,0651	3,3965	NFL	0,0620	3,5037
0,2205	5,0312	FLIAS39	0,2454	4,7829
0,1810	4,0171	Price	0,1858	4,0269

NFA and NFL - non-financial assets and liabilities. FAIAS39 and FLIAS39 - financial assets and financial liabilities within the scope of IAS 39. All amounts are per share numbers.

The mean of non-financial assets (NFA), which is 0.69 for individual statements of the parent company (sample A), is more than 5 times higher than the mean of financial assets within the scope of IAS 39 (FAIAS39), which is 0.12 (the same goes for consolidated accounts – sample B). In terms of liabilities, the situation is reversed. Financial liabilities within the scope of IAS 39 (FLIAS39) have a mean of 0.22 (sample A) which is 3 times higher than the mean of non-financial liabilities (NFL), that is 0.07. For sample B, the mean of financial liabilities is 4 times higher than the mean of non-financial liabilities. Table 4 shows results for 66 observations for each sample: sample A - the individual financial statements of the parent company and sample B - the consolidated financial statements. The 2 samples were adjusted for outliers because both databases included some extreme cases of observations. Outliers were identified according to the labeling method developed by Hoaglin *et al.* (1986). Thus, 3 observations were eliminated from both samples, reducing the number of observations from 69 to 66 each.

4. Research design and results

This section comprises the description of the model used and the results obtained by testing the proposed hypotheses.

4.1 Research Design

The model used to test the value relevance of accounting information regarding financial instruments is the one applied by Song, Thomas and Yi, 2010 when testing value relevance of fair value hierarchy. It is based on the Ohlson, 1995 model that is modified by partitioning the book value into financial assets and liabilities and non-financial assets and liabilities. We further modified the Song, Thomas and Yi model by transforming the other variable from the original Ohlson model, net income, into a dummy variable - PL (1 for profit and 0 for loss), because the net income data were not normally distributed. Around 40% of net income data are negative (the parent company or the group report losses) and range over several orders of magnitude. All techniques used (such as adding a constant value to the data prior to applying the natural logarithm transformation or the reflection of data prior to the natural log transformation) failed to make the data normally distributed.

A multiple linear regression model is applied to estimate the association between stock market price (that is the dependent variable) and accounting numbers (the independent share-deflated variables), for both sample A and B. The equation of the model is:

$$P_{it} = \alpha_0 + \alpha_1 NFA_{it} + \alpha_2 FAIAS39_{it} + \alpha_3 NFL_{it} + \alpha_4 FLIAS39_{it} + \alpha_5 PL_{it} + \varepsilon_{it} \quad (1)$$

The dependent variable, P, is stock market price of the firm i, measured 6 months after the individual and consolidated annual financial statements are released for the year (the period taken into account is 2011-2013). All others are independent variables defined, as previously stated, on a per share basis. Moreover, to ensure a normal distribution of the data, all variables (except for the dummy one – PL – profit or loss) are natural log transformed. According to Osborne, 2002, the natural-log transformation reduces the skewness and kurtosis in the raw data and does not change the relationship between variables.

4.2 Results

We first analyze the degree of linear dependence between variables. Pearson's correlation coefficients (table 5) reveal the existence of direct correlations of strong intensity between price and assets and a moderate dependence between price and liabilities for parent's accounts.

Table 5. Correlation matrix of variables – Sample A - individual accounts

Pearson Correlation	Pnatlog	NFA natlog	FAIAS39 natlog	NFL natlog	FLIAS39 natlog	Profit or loss
Pnatlog	1.000					
NFAnatlog	0.734**	1.000				
FAIAS39 natlog	0.739**	0.571**	1.000			
NFL natlog	0.315*	0.662**	0.488**	1.000		
FLIAS39 natlog	0.380**	0.617**	0.665**	0.704**	1.000	
Profit or loss	0.459**	0.143	0.239	-0.168	-0.143	1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

This conclusion holds for consolidated accounts too (table 6), but overall, the coefficients are lower than those from table 5. This means that the relationship between price and accounting information, in the case of consolidated statements – Sample B, is of weaker intensity (Jaba & Grama, 2004).

Table 6. Correlation matrix of variables – Sample B - consolidated accounts

Pearson Correlation	Pnatlog	NFA natlog	FAIAS39 natlog	NFL natlog	FLIAS39 natlog	Profit or loss
Pnatlog	1.000					
NFAnatlog	0.691**	1.000				
FAIAS39 natlog	0.685**	0.517**	1.000			
NFLnatlog	0.278*	0.658**	0.465**	1.000		
FLIAS39 natlog	0.379**	0.620**	0.640**	0.742**	1.000	
Profit or loss	0.418**	0.148	0.201	-0.177	-0.212	1.000

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 7 presents the results of the equation (1) applied to sample A: parent companies' separate financial statements.

Table 7. Value relevance of financial instruments information – Sample A - individual accounts

Sample A Parent company individual statements N = 66	Unstandardized Coefficients		Standar- dized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
	(Constant)	-1.440	0.245				-5.877
NFAnatlog	0.913	0.106	0.676	8.581	0.000	0.438	2.281
FAIAS39 natlog	0.554	0.074	0.596	7.516	0.000	0.432	2.313
FLIAS39 natlog	-0.224	0.079	-0.260	-2.848	0.006	0.326	3.071
NFLnatlog	-0.245	0.094	-0.216	-2.599	0.012	0.395	2.533
Profit or loss	0.408	0.173	0.146	2.352	0.022	0.707	1.415
	R	R Square	Adjusted R Square	Std. Error of Estimate/ Durbin-Watson	ANOVA F	Sig.	
	0.915	0.837	0.823	0.5849	1.531	61.475	0.000

Table 7 shows that the model has a high explanatory power. The adjusted R^2 is 82.30%, which means that more than 82% of variation in the dependent variable, stock market price, is explained by the independent variables chosen. The p-value of the F statistic of the ANOVA test is less than 0.05, which means that the model is fit. Moreover, all independent variables have coefficients that are statistically significantly different from zero (the p-value for the regression coefficient is less

than 0.05), meaning that they are significant predictors of stock market price. In table 7, beta expresses the relative importance of each individual variable in standardized terms. According to this, the information about non-financial assets (NFA) has a higher power for investors than the one about financial assets within the scope of IAS 39 (FAIAS39). The information regarding financial liabilities within the scope of IAS 39 (FLIAS39) has only a slightly higher power than the one about non-financial liabilities (NFL).

Because all variables are natural-log transformed, the regression coefficients are analyzed as partial elasticity coefficients of the dependent variable in relation to the independent ones (e.g. a 1% increase in FAIAS39 is associated with an average 0.554% increase in price when all other independent variables are constant). The dummy variable's coefficient shows that if it switches from 1 to 0 (from profit to loss), the % impact of the dummy on price is a negative one of 33.5%. This percentage is the back-transformed coefficient after using the formula $100*(e^{-0.408}-1)$. This transformation is necessary as the dependent variable is natural-log transformed. Therefore, stock price decreases by 33.5% if a company no. longer reports profits and all other variables remain constant.

Hence, H_{1a} is supported. Information about financial assets and, to a lesser degree, information about financial liabilities are used by investors to assess the value of a non-financial parent company.

The results of the equation (1) applied to consolidated financial statements (sample B) are presented in table 8.

Table 8. Value relevance of financial instruments information – Sample B – consolidated accounts

Sample B Consolidated statements N = 66	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
	(Constant)	-1.752	0.273				-6.416
NFAnatlog	0.876	0.129	0.640	6.783	0.000	0.469	2.131
FAIAS39 natlog	0.466	0.078	0.475	5.990	0.000	0.665	1.504
NFLnatlog	-0.370	0.106	-0.333	-3.478	0.001	0.455	2.199
Profit or loss	0.477	0.203	0.170	2.345	0.022	0.797	1.254
	R	R Square	Adjusted R Square	Std. Error of Estimate/ Durbin-Watson		ANOVA	
	0.863	0.745	0.729	0.7256	1.560	44.631	0.000

The explanatory power of the model is lower than the one of sample A, but it is still very high (adjusted R^2 is 72.9%). In addition, financial liabilities within the scope of IAS 39 (FLIAS39) are excluded from the model as they are not deemed to be significant predictors of stock market price.

Hence, H_{1b} is partially confirmed. There is an association only between price and financial assets, therefore investors only use accounting information about financial assets when assessing the value of a non-financial group. As far as H_2 is concerned, it is supported. Because the explanatory power of Sample A is slightly greater than the one of sample B, we conclude that Romanian investors deem the parent's individual financial statements to be more value relevant than the consolidated accounts. These results are consistent to those reported by Srinivasan and Narasimhan (2012) for emerging markets or Herrman *et al.* (2001) for developed markets.

Both models were checked for any violations of the multiple regression assumptions. They both passed the normality test (i.e. Kolmogorov-Smirnov test), but also multicollinearity, non-constant variance (heteroscedasticity) and auto-correlation of residuals tests. Multicollinearity can be detected using the variance inflation factor (VIF) that measures the degree to which a variable is contributing to the standard error in the fitted regression model. When the independent variables included have a statistically significant linear correlation, the variance inflation factor is very large. In our paper, we used a level of 5 and above for VIF to indicate a multicollinearity problem, according to Jermacowicz *et al.* (2007). Tolerance (TOL) is the reversed version of VIF: a TOL below 0.2 indicates a multicollinearity problem. According to tables 7 and 8, variables are correlated (when they are not correlated, the variance inflation factor is 1), but there is no evidence of multicollinearity.

To examine heteroscedasticity (see table 9), we used a Breusch-Pagan test and a Koenker test which show if the standard deviations of the error terms (residuals) are constant and do not depend on the values of the independent variables. For sample A, Breusch-Pagan test calculates a value of 5.171 with a significance value of 0.3935, which is >0.05 , therefore the null hypothesis of homoscedasticity is accepted (there is no correlation between independent variables and residuals). The same interpretation is given to the Koenker test result (Koenker has more rigorous results for small sample sizes). Therefore, the null hypothesis is also accepted for sample B. To check for the auto-correlation of residuals, we performed the Durbin Watson test (tables 7 and 8) and Runs Test (table 9) on both samples. As the Durbin Watson test is between 1.5 and 2.5, we conclude that there is no. serial correlations among residuals (Jaba & Grama, 2004). Moreover, the Runs test has a significance level >0.05 , which shows that the null hypothesis is accepted (i.e. residuals do not auto-correlate).

Table 9. Heteroscedasticity and auto-correlation of residuals

Breusch-Pagan test	Sig.	Koenker test	Sig.	Runs test (sig.)
Sample A - Parent company's individual financial statements				
5.171	0.3953	4.906	0.4275	0.457
Sample B - Consolidated financial statements				
6.328	0.2756	7.990	0.1568	0.215

To better examine the influence of reported earnings, we repeat the analysis with subsamples partitioned by the “profit or loss” characteristic (entities reporting profits versus entities reporting losses). The model used is described in equation 2:

$$P_{it} = \alpha_0 + \alpha_1 NFA_{it} + \alpha_2 FAIAS39_{it} + \alpha_3 NFL_{it} + \alpha_4 FLIAS39_{it} + \varepsilon_{it} \quad (2)$$

Results obtained for individual financial statements of the parent companies are provided in table 10. The adjusted R^2 of both subsamples are equal (79.1%) and they both deem non-financial and financial assets to be significant predictors of stock market price. With liabilities, the situation is different: for companies reporting profits – subsample A₁ - only financial liabilities are kept within the model, while for the A₂ subsample, only non-financial liabilities are taken into consideration.

Table 10. Value relevance of financial instruments information reported in individual accounts according to the profit/loss criterion

Sample A Parent company individual statements	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
Subsample A ₁ - entities reporting profits (N = 38)							
(Constant)	-0.479	0.119		-4.022	0.000		
FAIAS39	0.516	0.084	0.829	6.117	0.000	0.307	3.256
natlog							
NFAnatlog	0.680	0.114	0.547	5.963	0.000	0.670	1.492
FLIAS39	-0.244	0.086	-0.402	-2.835	0.008	0.281	3.561
natlog							
	R		Adjusted R Square	Std. Error of Estimate		ANOVA	
	0.899	0.808	0.791	0.47881		F	Sig.
						47.739	0.000
Subsample A ₂ - entities reporting losses (N = 28)							
(Constant)	-1.759	0.518		-3.392	0.002		
NFAnatlog	0.987	0.202	0.828	4.883	0.000	0.269	3.721

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Sample A Parent company individual statements	Unstandardized Coefficients		Standar- dized Coeffi- cients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
	FAIAS39	0.635	0.174			0.473	3.654
natlog							
NFLnatlog	-0.584	0.155	-0.523	-3.775	0.001	0.403	2.480
	R		Adjusted R	Std. Error of	ANOVA		
		R Square	Square	Estimate	F	Sig.	
	0.903	0.815	0.791	0.67293	35.150	0.000	

Results obtained for sample B, consolidated financial statements, are provided in table 11.

Table 11. Value relevance of financial instruments information reported in consolidated accounts according to the profit/loss criterion

Sample B Consolidated statements	Unstandardized Coefficients		Standar- dized Coeffi- cients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tol	VIF
	Subsample B ₁ - entities reporting profits (N= 39)						
(Constant)	-0.428	0.142		-3.020	0.005		
NFAnatlog	0.446	0.130	0.362	3.419	0.002	0.740	1.351
FAIAS39	0.382	0.068	0.593	5.598	0.000	0.740	1.351
natlog							
	R	R	Adjusted R	Std. Error of	ANOVA		
		Square	Square	Estimate	F	Sig.	
	0.837	0.701	0.685	0.58240	42.243	0.000	
Subsample B ₂ - entities reporting losses (N = 27)							
(Constant)	-2.213	0.504		-4.389	0.000		
NFAnatlog	1.268	0.197	0.994	6.423	0.000	0.353	2.834
NFLnatlog	-0.773	0.162	-0.671	-4.761	0.000	0.424	2.356
FAIAS39	0.612	0.176	0.400	3.476	0.002	0.637	1.569
natlog							
	R	R	Adjusted R	Std. Error of	ANOVA		
		Square	Square	Estimate	F	Sig.	
	0.898	0.806	0.780	0.73028	31.817	0.000	

The adjusted R² is lower for the profit subsample B₁ (68.5%) when compared to the loss subsample B₂ (78%). For B₁ only assets (both non-financial and financial) are

deemed to be significant predictors of stock market price. For the B_2 - loss subsample, non-financial liabilities are added to the model, while financial liabilities are excluded.

5. Conclusions

This study had two major motivations: (1) to test whether the accounting information regarding financial instruments provided by individual and consolidated accounts was value relevant to investors in the case of non-financial companies; and (2i) to test which of the 2 sets of financial statements is more value relevant to investors (especially in terms of financial instruments information). These research questions are even more challenging when posed for non-financial companies that use financial instruments to a lesser degree than financial entities. Moreover, as shown by empirical results, they use less sophisticated financial instruments such as accounts receivables and accounts payable, cash and deposits, short and long-term debt.

This leads to the following question: do investors place weight on the accounting information about financial instruments when estimating the value of a non-financial company? To answer it, we use data from the annual separate financial statements of the parent companies and the consolidated financial statements of the non-financial groups listed on the Bucharest Stock Exchange between 2011 and 2013. Firstly, we investigate whether financial instruments recognized in the individual accounts are deemed value relevant or not. Secondly, we do the same for consolidated accounts. Thirdly, we address whether parent company's statements provide value relevant information about financial instruments in excess of consolidated statements.

We find the following. At parent company level, investors place more weight on information about assets than liabilities and, among assets, on non-financial ones (which have the highest regression coefficient, almost equal to 1). This is not surprising given the industry to which the analyzed companies belong to. Also interesting to notice is that, in terms of liabilities, the importance placed on financial liabilities is very similar to non-financial liabilities (and quite small when compared to assets). We conclude that, of all financial instruments, financial assets are better market predictors than financial liabilities. At group level, coefficients are smaller for both types of assets (when compared to individual accounts) and greater for non-financial liabilities. Furthermore, investors seem to ignore any information regarding financial liabilities. This is rather puzzling as in terms of relative size of liabilities, the financial liabilities are more significant than the non-financial ones. One explanation could be that investors perceive financial liabilities

as “less risky” as they are contracted after a thorough analysis made by banks, which reassures investors that companies are creditworthy.

When the analysis is detailed based on the results obtained by the parent company, it is noticeable that investors heavily rely on non-financial assets and non-financial liabilities in determining the stock price of unprofitable firms. Correlation with the market price is lower if firms are profitable, the existence of profits decreasing the importance of other accounting variables. In addition, financial instruments weigh more heavily in determining stock prices. The same can be seen at group level. Accounting variables correlation with stock price is two or three times higher for groups reporting losses, the detached winners being the non-financial assets and liabilities, followed by financial assets. For profitable groups, only assets (financial and non-financial) are taken into account and, as in the case of parent companies, the importance of the two types of assets is similar (there is no. big difference between the regression coefficients of financial assets and non-financial assets).

Based on the results of the test performed at group level, it is worth noting that our initial suspicion regarding the superiority of parent-only accounts in terms of value relevance has been confirmed. This makes us believe that on the Romanian stock exchange, investors see the consolidated annual accounts as an extension of the individual annual accounts of the parent company rather than the main source of information about the reporting entity. Therefore, they treat the consolidated information as a complement to the information disclosed in the parent company’s accounts. These results are consistent with those obtained by Srinivasan and Narasimhan (2012) or Herrman *et al.* (2001).

There are some limitations to our research, such as: size of the sample, which is small compared to other studies, but common to emerging economies; inefficiency of the Romanian stock exchange that might influence the interpretation of results. However, Hellstrom (2006) and Filip and Raffournier (2010) downgrade the importance of market efficiency in emerging markets where stock prices and accounting numbers are correlated, arguing that it matters mainly for developed markets, where stock prices are derived from the accounting figures. These limitations will be addressed in the future as we intend to expand our research to bigger samples and more efficient markets.

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