

## PROPERTIES OF ANALYSTS' FORECASTS FOR ROMANIAN LISTED COMPANIES: HOW MUCH DO FIRM-SPECIFIC FACTORS MATTER?

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### ABSTRACT

*This paper seeks to explore the properties of analysts' forecast accuracy for companies listed on Bucharest Stock Exchange (BSE). Based on a sample of 266 firm-month observations (predictions made in 2008 for 2009 and 2010), the paper investigates several firm-specific factors documented by the literature to have a significant impact on forecast accuracy, and shows that for Romanian listed companies, forecast errors for earnings per share reported under local GAAP are negatively correlated with the size of the firm and the corporate governance policies. The results are convergent with those documented in international contexts, showing that larger firms as well as those which are better governed are more likely to provide additional disclosures, and thus increase forecast accuracy.*

✦ *Properties of analysts' forecast, corporate governance, information environment*

### INTRODUCTION

There is a large amount of literature investigating various factors affecting analysts' forecast accuracy. The drivers of forecast accuracy can be both analyst-specific (such as analysts skills and behavior), and firm-specific (such as firm characteristics and actions) (Ernstberger *et al.*, 2008). Among the firm-specific factors, the information environment of a company is a key driver of forecasts' accuracy, as more information reduces uncertainty about a company's future prospects and thus leads to smaller forecast errors. And the literature documents factors such as corporate governance policies and financial reporting standards and disclosure to lead to a better information environment, and consequently to increase analysts forecast accuracy.

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In Romania, several steps were taken in order to improve the quality of financial disclosure and that of corporate governance policies of listed Romanian companies. In 2006 Companies Law was amended to improve board composition by including independent directors and to allow for a dualist governance system comprising a Supervisory Board and a Management Board (Olimid *et al.*, 2009). And starting in 2001, several requirements were gradually issued to ensure companies' adherence to a Corporate Governance Code. At the same time, there were gradual requirements aimed at improving the financial disclosures of firms listed on BSE, and starting with 2005, listed Romanian companies prepare mandatorily financial statements in compliance with IFRS, while others apply IFRS for internal information needs.

In this context, the purpose of this paper is to investigate the properties of analysts' forecasts for listed Romanian companies, trying to expose the effect of firm-specific factors, especially those that are reasonably expected to affect the quality of the information environment, and thus enhance or decrease forecast accuracy.

## **1. LITERATURE REVIEW**

There is a large amount of literature showing that both analyst-specific and firm-specific factors are driving forecasts accuracy. For instance, rather optimistic analysts tend to have upward biased forecasts (Easterwood & Nutt, 1999), while more experienced analysts tend to have more accurate forecasts (Clement, 1999). Among, the firm-specific factors, the literature documents company size, industry, corporate governance policies or financial reporting standards and disclosure as drivers of forecasts accuracy.

For instance, larger firms are expected to provide additional disclosure than smaller firms, which may lead to a decrease in forecast errors. However, larger firms may also have more complex activities which may decrease forecast accuracy (Brown *et al.*, 2009).

There is also a recent stream of research showing that better quality corporate governance is associated with an increase in the overall quality of information possessed by financial analysts, which can reasonably be expected to lead to more accurate analysts forecasts. Bhat *et al.* (2006) using country level proxies for corporate governance transparency, showed that differences in transparency across 21 countries affect forecasts accuracy, when controlling for financial transparency. In addition, their results showed that the effect of corporate governance transparency on analyst forecast accuracy is larger when financial disclosures are less transparent. The argument supporting these findings is that governance-related disclosure plays a role in improving the information environment of companies which leads to smaller errors in analyst forecast.

This rationale is backed by other research results, such as the ones provided by Karamanou and Vafeas (2005), who documented that effective corporate governance is associated with higher financial disclosure quality. Karamanou and Vafeas (2005) showed that more effective corporate boards and audit committees structures lead to more accurate management earnings forecasts, which can reasonably lead to a decrease in analysts' forecast errors.

Byard and Weintrop (2006) have also discussed the association between corporate governance and the quality of information available to financial analysts. Their findings proved that the quality of corporate governance increases the quality of financial analysts' information about upcoming earnings.

Several recent papers have showed that financial reporting is an important source of information used by financial analysts for predictive purposes (Peek, 2005). Consequently, there was an increase in the body of research investigating the relationship between financial disclosure and analysts' forecast accuracy. Authors such as Vanstraelen *et al.* (2003) or Hope (2004) proved that increased disclosure leads to increased analysts' forecast accuracy. Hope (2002), for instance, relates the CIFAR index of the level of annual report disclosure to forecast accuracy for a sample of 1,553 firm-years from 22 countries, showing that a high volume of financial information made available to financial analysts enhances their forecast accuracy.

IFRSs are allegedly high-quality financial reporting standards, with extensive disclosure requirements and evolved recognition and valuation procedures, expected to increase transparency, diminish information asymmetry, and, consequently, facilitate predictions in order to support investment decisions on capital markets. Starting with the adoption of IFRS in the EU, several papers tried to investigate the impact of IFRS adoption on the analysts' forecast accuracy. For instance, Brown *et al.* (2009) showed on a sample of 40,123 monthly observations for companies operating in 13 European countries during 2002-2007 that forecast errors were significantly lower after the IFRS mandatory implementation. Ernstberger (2008) has also showed that on the German capital market analysts' forecast accuracy improved after the IFRS adoption. Tan, Wang and Welker (2009) obtained similar results on a sample of 38 countries, several European countries included. Furthermore, Tan *et al.* (2009) documented empirically, that the IFRS adoption attracts foreign analysts, especially those with experience in IFRS, or whose countries make IFRS implementation compulsory at the same time.

However, the literature has not yet reached common grounds on the role plaid by the quantity of financial disclosure in enhancing analysts' forecast accuracy, authors such as Pope (2003) arguing that it is not clear whether financial disclosure is a fundamental determinant or just a complement of the recognition rules operating in different accounting regimes. At the same, a higher volume of

financial disclosure due to preparing two sets of financial statements under two types of standards (usually local GAAP and IFRS) might have a negative impact on the information environment of a company which may lead to a decrease in analysts' forecasts accuracy.

This paper investigates the effect of firm-specific factors on analysts' forecasts accuracy for Bucharest Stock Exchange, trying to expose those that are reasonably expected to affect the quality of the information environment, and thus enhance or decrease forecast accuracy.

## **2. METHODOLOGY**

The sample was comprised of 19 companies listed on the Bucharest Stock Exchange followed by financial analysts according to Thomson Reuters' I/B/E/S data base. We used monthly predictions made in 2008 for 2009 and 2010. The sample was reduced to 266 firm-month observations by the following: lack of actual earnings for 2010, absolute analyst forecast error in the corresponding month of the previous year cannot be calculated due to missing consensus forecast, eliminating financial entities.

The following regression model (firm, month and year subscripts omitted for convenience) is used to investigate the properties of analysts' forecasts:

$$ERROR = \alpha_0 + \alpha_1 IndGOV + \alpha_2 LOG\_SIZE + \alpha_3 IFRS + \alpha_4 FOLLOWING + \alpha_5 HORIZON + \alpha_6 PREV\_ERROR + \varepsilon$$

Where:

*ERROR* The absolute difference between actual EPS computed under local GAAP and the monthly median consensus forecast scaled by stock price at the middle of the month.

*IndGOV* An aggregate index for corporate governance computed by Olimid *et al.* (2009) for listed Romanian companies based on three characteristics of the board of administrators (board size, proportion of non-executive directors, duality for the Chairman and Director General).

*LOG\_SIZE* Natural log of the market value of equity at the middle of the month.

*IFRS* An indicator variable equal to 1 for companies with double reporting (both IFRS and local GAAP), and 0 otherwise.

*FOLLOWING* The number of analyst earnings forecasts included in the median consensus forecast.

*HORIZON* The number of months between the announcement of the median consensus forecast and the earnings announcement date.

*PREV\_EPS* The absolute value of last year's forecast error scaled by price, measured at the corresponding month in the previous year.

We expect the coefficient on IndGOV and LOG\_SIZE to be negative, consistent with a reduction in analysts' forecast errors, and the coefficient on IFRS to be positive, as double reporting may lead to confusion and a decrease in forecast accuracy.

The model used three control variables: FOLLOWING was used, as the literature documents that more competition between analysts makes them forecast future earnings more accurately (Hodgdon *et al.*, 2008). We also controlled for the number of months between the announcement of the consensus forecast and the announcement of actual earnings (*HORIZON*) to control for the fact that earnings forecasts tend to become more accurate near the announcement of actual earnings date (Clement 1999; Brown *et al.* 1999). And we also controlled for the previous errors effect (PREV\_ERROR), as the current period's forecast error is expected to be positively correlated with the previous period's forecast error (Brown *et al.*, 1999).

### 3. RESEARCH RESULTS

The values obtained after the operationalization of the variables are presented in *Table 1* below.

*Table 1: Descriptive statistics*

|           | Observations | Minimum | Maximum | Mean      | Std. Deviation |
|-----------|--------------|---------|---------|-----------|----------------|
| ERROR     | 266          | ,0088   | 15,0796 | ,502168   | 1,5841630      |
| IndGOV    | 266          | ,2222   | 1,0000  | ,661785   | ,2695070       |
| SIZE      | 266          | 15,6529 | 24,0965 | 19,364842 | 1,8554278      |
| IFRS      | 266          | 0       | 1       | ,47       | ,500           |
| FOLLOWING | 266          | 1       | 7       | 1,73      | 1,341          |
| HORIZON   | 266          | 13      | 41      | 24,91     | 6,760          |
| PrevERROR | 266          | -,9625  | 19,7236 | 1,736109  | 4,8418358      |

We used stepwise regression analysis to avoid eventual collinearity problems and to find the best fitted model to explain forecasts errors.

**Properties of analysts' forecasts for Romanian listed companies:  
How much do firm-specific factors matter?**

Regression results are summarized in *Table 2* below.

**Table 2: Regression results**

|                   | <b>Model 1</b>     |        |      | <b>Model 2</b>     |         |      | <b>Model 3</b>     |         |      |
|-------------------|--------------------|--------|------|--------------------|---------|------|--------------------|---------|------|
| Variables         | Coefficients       | t      | Sig. | Coefficients       | t       | Sig. | Coefficients       | t       | Sig. |
| (Constant)        | 6,989              | 7,433  | ,000 | 10,518             | 11,425  | ,000 | 9,818              | 10,776  | ,000 |
| LOG_SIZE (-)      | -,335              | -6,930 | ,000 | -,556              | -11,244 | ,000 | -,528              | -10,872 | ,000 |
| IFRS (+)          |                    |        |      | 1,613              | 8,785   | ,000 | 1,695              | 9,440   | ,000 |
| PREV_ERROR (+)    |                    |        |      |                    |         |      | ,067               | 4,061   | ,000 |
| Observations      | 266                |        |      | 266                |         |      | 266                |         |      |
| Adjusted R square | ,151               |        |      | ,341               |         |      | ,378               |         |      |
| F statistic       | 48,024 (sig. ,000) |        |      | 69,534 (sig. ,000) |         |      | 54,583 (sig. ,000) |         |      |

As expected, company size is negatively correlated with forecasts errors, as larger firms are more likely to disclose more information and thus reduce forecasts errors. Contrariwise, companies preparing financial statements in compliance with both local GAAP and IFRS tend to have lower forecast accuracy. We were only able to control for previous errors effect, which are positively correlated with current period forecasts errors. Overall, the model accounts for 37.8% of the analysts' forecast errors variations.

The other control variables, FOLLOWING and HORIZON, were not significantly associated with forecast errors. However, IndGOV was found to be negatively associated with forecasts errors, when analyzed as a single independent variable (see *Table 3* below):

**Table 3: Regression results**

|              | <b>Model 4</b>     |        |      |
|--------------|--------------------|--------|------|
| Variables    | Coefficients       | t      | Sig. |
| (Constant)   | 1,900              | 7,877  | ,000 |
| IndGOV (-)   | -2,112             | -6,255 | ,000 |
| Observations | 266                |        |      |
| R square     | ,129               |        |      |
| F statistic  | 39,123 (sig. ,000) |        |      |

## CONCLUSIONS, LIMITATIONS AND FURTHER RESEARCH

The paper investigated several firm-specific factors expected to affect analyst forecast accuracy for listed Romanian companies. The results confirmed the international trends, as larger Romanian listed companies and those that are better governed tend to have more accurate forecasts. However, companies preparing two

sets of financial statements incur bigger forecast errors, as double reporting seems to have a negative impact on the information environment of a company.

The main limitation of the paper comes from the small number of listed companies followed by financial analysts and the limited period covered. Furthermore, there was no data available on forecasted earnings per share reported under IFRS to compare their properties with those for earnings per share reported under local GAAP.

Consequently, research is needed in order to further clarify the effect of the information environment on analysts' forecast accuracy for Romanian listed companies with an emphasis on the role played by financial reporting.

#### ACKNOWLEDGEMENTS

The author gratefully acknowledges the financial and logistic support offered by the Project Performance and Excellence in Postdoctoral Research in the Field of Economic Sciences in Romania, grant POSDRU/89/1.5/S/59184.

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