

## MEASURING THE VOLUNTARY DISCLOSURE OF INFORMATION IN ROMANIAN CONTEXT

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### ABSTRACT

*Several recently wrote studies have confirmed that voluntary disclosure of financial and non-financial information can reduce information asymmetry between managers and shareholder's, can reduce also, the cost of capital and can satisfy the needs of modern stakeholders. The purpose of this article is to investigate the level of voluntary information disclosure and what information are voluntarily disclosed through annual reports by the sampled Romanian listed companies, and to analyze and measure the impact of several factors associated with voluntary disclosure. Using annual reports from 2005-2007 for the non-financial companies listed on BSE, we test several hypotheses taken into account the sample companies. After the descriptive analysis, we performed a multiple regression analysis. The results indicated that profitability, auditor type, IAS/IFRS regulations, bank debt and private ownership structure positively affects the extent of voluntary disclosure choices of sampled Romanian listed companies. We found also, that the level of voluntary disclosure in the annual reports is still low. We can explain this low level of voluntary disclosure to the functioning and development of the Bucharest Stock Exchange and to the fact that BSE is a relatively new stock exchange. The major findings of our study, concerning the voluntary disclosure level of Romanian listed companies and the measurement of the impact of the above mentioned variables on voluntary disclosure, suggest that,*

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*despite the ambiguity and uncertainty about transparency and disclosure regulations and the lack of experience in external financial reporting and voluntary disclosure of information, Romanian companies generally respond well to this new challenge regarding disclosure.*

✂ information, voluntary disclosure, annual reports, listed companies

## INTRODUCTION

Nowadays, it is challenging to find out and research new tendencies of financial reporting and disclose of information. It is often suggested in the literature and in some cases also proved by empirical results that voluntary disclosure of financial and non-financial information can increase the interest of stakeholders in companies' position, mostly of investors'. Accounting information disclosed by the companies is one of the most important information sources for investors and analysts when valuing a company. Thus, the modern stakeholders needs for information are more sophisticated, they ask for more information than the one provided by the financial statements.

This article examines, firstly, the level of voluntary information disclosure and what information are voluntarily disclosed through annual reports by the sampled Romanian listed companies, and secondly, identifies several factors associated with voluntary disclosure of various types of information and tests their influence. The framework for linking voluntary disclosure to profitability, liquidity, auditor type, IAS/IFRS regulations, bank debt, new equity issues and ownership structure is mainly provided in Khanna *et al.* (2002), Krishna Palepu (2003), Makhija and Patton (2004) and Prabowo and Angkoso (2006). Our interest in the topic might found its roots mostly in the work of Jensen and Meckling (1976).

Our research is organized on three levels: on the first level, using *Standard & Poor's* model (2002) we have grouped the information voluntarily disclosed in annual reports in three main categories: Financial Transparency & Information Disclosure, Board and Management Structure and Process and Ownership Structure and Investor Relations; on the second level, in order to measure the extent of voluntary disclosure in annual reports we have compiled the set of informational items that express disclosure policy. We have used a composite index for measuring the disclosure level for each company. The final level reveals our main factors that we have assumed they could influence the extent of voluntary disclosure and the multiple regression analysis.

We consider our paper contributes to the existing domestic accounting literature written on the topic, in the following ways. First, to our best knowledge, the study adds value to the few articles written on the impact of several factors (profitability, liquidity, auditor type, IAS/IFRS regulations, bank debt, new equity issues and ownership structure) on voluntary disclosure practices. Thus, in order to measure these above mentioned factors impact we have elaborated research hypotheses, we have tested them and after that validated some. We have found that profitability, auditor type, IAS/IFRS regulations, bank debt and private ownership structure positively affects the extent of voluntary disclosure choices of sampled Romanian listed companies. In order to select the sample companies we have elaborated the following criteria: own websites; continuity in transactions between 2005 and 2008; disclosure of financial information (in annual reports, financial statements and financial highlights – ratios); audit reports. The mentioned criteria leave only eighteen companies in the research sample. Second, our paper complements recent empirical and explorative studies on the implications of these factors on corporate reporting and voluntary disclosure and shed some lights upon several aspects of corporate governance, managerial behavior and agency costs.

The rest of the paper is organized as follows. The next section reviews prior literature written on the topic highlighting how much debate exists in the present days on such a research subject. Section three presents main aspects of economic-based theories linked to the information asymmetry, voluntary disclosure and the cost of capital. Section four presents our research design, methodology and hypotheses development. Section five present the sampling process and the data collection issues. Section six discusses the empirical results of our study regarding the extent of voluntary disclosure practices in the annual reports on the sample listed companies and the influence of several factors on companies voluntary disclosure choices. The last section shows our conclusions, discussions concerning the research methodology and empirical findings and also presents the main directions for future research.

## 1. PRIOR LITERATURE REVIEW

The accounting literature on disclosure frequently cites the agency concept as providing incentives for mandatory and voluntary disclosure of financial information. These incentives are viewed in the literature as predominantly driven by the need to reduce information asymmetry between principals and agents. Stakeholders (principals) use accounting information to monitor the performance of management (agents). In turn, these agents use accounting disclosure as an opportunity to signal their performance to their various principals (Watts & Zimmerman 1986; Healy & Palepu 2001).

Based on such theories as agency theory, signaling theory, or innovation diffusion theory, a number of more recent studies have examined the determinants of

Internet based corporate disclosure (Ettredge *et. al.*, 2002; Debreceeny *et. al.*, 2002; Xiao *et. al.*, 2004). Many determinants have been tested, usually based on the studies of hardcopy corporate disclosures. These include company size, leverage, industry type, listing status, profitability, auditor type and intangible assets. Ashbaugh *et al.* (1999), Craven and Marston (1999), and Ettredge *et. al* (2002) discovered that larger U.S. and U.K. companies are more likely to provide financial information on the Internet. On the other hand studies done by Pirchegger and Wagenhoffer (1999) find that whereas company size and profitability affect the corporate disclosure of Austrian companies, they do not affect German companies' disclosure choices. Also, studying the determinants of voluntary corporate disclosure in the U.S., Ettredge *et. al* (2002) realize a distinction between disclosure of items that are mandated by the SEC and those not required by regulation.

Although several studies examining the determinants of voluntary disclosure of financial and non-financial information through the Internet already exist, this theme has been explored very little in individual nations. In Litan and Wallison's vision (2000) the demand and supply side implications of the Internet for corporate disclosure are profound. If companies can use the Internet to access information almost constantly and instantaneously – and investors and analysts have a thirst for such information – the obvious result will be much more continuous reporting of financial and business information. Much, if not all, of this information should be designed to help investors' better estimate companies' future profitability and relative riskiness, so that they can more accurately price companies' true market values.

In dealing with the determinants of financial information disclosure on the Web, Marston and Leow studied a sample of companies in the UK and concluded that the size of a firm is positively related to the disclosure of financial information on the corporate website. However, this relationship was not uniform between the varied industrial sectors considered in the study. Leftwich, Watts and Zimmerman's (1981) find a relationship between external capital suppliers and company managers, an example of the agency relationship, where the capital suppliers represent the principal and the company managers represent the agents. Agency theory, which derives its roots from the conflict of interests between stockholders and managers, is discussed in a modern explanation by Jensen and Meckling (1976). This theory suggests that agency costs of borrowed capital depend on the nature of the objectives of the external suppliers of capital. This indicates that the costs would be proportional higher for the companies with greater participation from third-party capital in their capital structure.

Even though there is a considerable body of research regarding relationships between voluntary disclosure of financial information and financial leverage, a consensus has not been reached on the topic. While some studies (Mitchell *et al.*,

1995; Hossain *et al.*, 1995) reveal a positive relationship between voluntary disclosure and leverage in the capital structure of a company, others do not support these results. For instance, authors like Mckinnon and Dalimunthe (1993), Aitken *et al.*, (1997), or Brennan and Hourigan (2000) did not find a significant positive relationship between leverage and the level of disclosure of financial information. But some authors (Meek *et al.*, 1995) suggest there might be a significant negative relationship. The results offered from these studies are inconclusive.

Prabowo and Angkoso (2006) find out in their research about the factors influencing the extent of web-based disclosure, with an empirical study about Indonesian manufacturing companies, that leverage positively affects web disclosure. Using the same Indonesian context, Prabowo and Tambotoh (2005) cannot support the hypothesis that level of leverage influences the extent of IFR. Findings of Prabowo and Angkoso (2006) confirms the theory of agency conflict between shareholders and debtholders. Debreceeny *et al.* (2002) find that voluntary adoption of Internet corporate disclosure in 22 countries is associated with company size and listing on an U.S. stock exchange, but not with leverage, risk and Internet penetration in the countries. This study in opposition to Ettredge *et al.* (2002) distinguishes between presentation format and disclosure content. It finds that the level of technology and disclosure environment are associated with presentation format, but not with content. However, the study does not distinguish the disclosures of mandatory versus non-mandatory items.

Studying Internet corporate disclosure in China, Xiao *et. al* (2004) find out that there is a significant and a positive relation between mandated and voluntary disclosure. They further show that the presentation format of Internet corporate disclosure is associated with the employment of a Big-5 auditor and whether the company is in the information technology industry, while a negative association exists between profitability and the voluntary disclosures. Voluntary Internet corporate disclosure is positively and significantly associated with the proportion of legal person ownership, but not with ownership by domestic private investors, foreign investors and the state. Moreover, the proportion of independent directors has a positive relation with presentation format, voluntary disclosures and the availability of English web pages.

Prior studies of voluntary disclosure conducted by Meek and Gray (1989) showed a positive relationship between cross listings and disclosure. Foreign listing status was represented by a binary variable that took the value of 1 for a foreign listing and 0 for only domestic listings. Foreign listing is sought by companies to have a more competitive cost of capital structure as they can issue securities in markets with higher liquidity and lower cost of capital. Other benefits of multiple listings are wider marketing of products, boosting corporate image and gaining political acceptance by projecting the company as being „local” in the foreign market.

Another determinant of IFR and voluntary financial and non-financial voluntary disclosure is technology, discussed recently by Debreceny *et. al* (2002). High technology companies, for example, drugs, computers, electronics, communications, with soft assets, such as research and intellectual capital, human resources, R&D programs will disclose more information as their earnings numbers are not sufficiently value-relevant. These companies are subject to rapid change in the technological and business environment. For such companies, the earnings number may not be indicative of their future prospects as such information not only fails to convey the future growth potential of the company but are also not timely enough for decision making due to their periodic nature. The Internet can allow for multifaceted and frequent disclosures on the development of new technologies and the interaction of the company with the environment. Level of technology of the company was represented by a ternary variable that took the value of 0 for low technology corporations, 1 for medium technology corporations and 2 for high technology corporations.

Operating history (company age) has been observed to affect the information disclosure level in prospectuses. Mak (1996), in a study on the relation between earnings forecast disclosure and company-specific risk, concluded that operating history, as a proxy for information asymmetry and company-specific risk, was positively related to forecast disclosure. Ding *et al.* (2005) showed that the literature has often hypothesized that larger auditors should require more extensive disclosure from their clients, namely because they have more incentives to maintain their independence. Raffournier (1995) states that companies are induced to comply with the usual practices of countries in which they operate. He stated that the more international the operations of a firm are, the larger is the inducement. The same way like Cooke did (1989), Raffournier (1995) finds a significant relationship between internationality and disclosure, providing evidence that companies with foreign sales will disclose more information because they are likely to require the necessary resources.

Research on voluntary disclosure choices or factors influencing the extent of web-based disclosure, using Romanian context is still very rare. To our best knowledge, only a few authors investigated this issue: Tiron Tudor (2006), Tiron Tudor and Cristea (2006), Ionascu *et al.* (2008), Fekete *et al.* (2008), Popa *et al.* (2008). While Tiron Tudor (2006), focused on disclosure and transparency of Romanian listed companies, searching to find out the practices of these companies regarding the Internet Financial Reporting and web-based disclosed financial and non-financial information, Popa *et al.* (2008) investigated online financial reporting practices of all actively and nonactively traded Romanian listed companies and showed that Balance Sheet Statement and Profit and Loss Account represent the main basis of Internet Reporting for all companies listed on BSE. Testing the influence of size and listing status as determinants of the level of information disclosed online, author findings revealed that both factors affects the level of online reporting.

Popa *et al.* (2008) have studied Internet Financial Reporting practices of the Romanian manufacturing listed companies, testing also the influence of ownership structure. Their results have pointed out that foreign ownership is an important determinant of the Internet business reporting. On the other hand, Ionascu *et al.* (2008) are interested in disclosure quality, disclosure regulations and the cost of capital evaluating the impact of IAS/IFRS regulations on the cost of capital for Romanian companies.

Taking into account all the findings of the studies conducted by previous researchers on the „hot” topic of web-based voluntary disclosure, our vision regarding the extent of disclosure for Romanian listed companies and the key factors influencing the voluntary disclosure is presented in the research design section.

## **2. ECONOMICS-BASED THEORIES, INFORMATION ASYMMETRY, VOLUNTARY DISCLOSURE AND THE COST OF CAPITAL**

The practice of voluntary disclosure is usually explained by *two economics-based theories*: agency theory and signaling theory or information problem theory (Healy & Palepu 2001; Xiao *et al.*, 2004). Voluntary disclosure is focused to solve the *ex-ante* (information problem) and *ex-post* (agency problem) at once. Agency theory basically assumes that everyone is selfish, pursuing her self-interests. In the context of modern companies, there exists separation of ownership (principals) and control (agents). Since principals cannot perfectly monitor agents' behavior and agents are selfish, agents have strong incentives to act for their own interests at the expense of principals'. Agency theory is *ex-post* since it exists after the formation of companies.

As Dumontier and Raffournier (2002) pointed out accounting decisions in the broadest sense have been reviewed several times in the literature, either as part of general studies of financial accounting research or through specifically themed reviews. Most of the research lies within the conceptual framework of the political-contractual theory of accounting, which explains accounting decisions based on agency theory and political costs. Dumontier and Raffournier (2002) classified the accounting choices into two broad categories: the way the company evaluates its transactions (choices concerning accounting valuation) and the way the company presents its accounting information (choices concerning financial statement format). The authors have shown that companies listed on foreign markets are more inclined to adopt international standards voluntarily. They have demonstrated like most of the studies that have developed the same topic, that these decisions are influenced by agency variables: particularly indebtedness, rather than interest coverage, dividend distribution and working capital ratios, and to a lesser extent by political costs.

Agency theory is commonly used in the literature to analyze the determinants of accounting choices. As Jensen and Meckling (1976) observed agency theory argues that there is an avoidable monitoring cost for shareholders, paid to prevent expected expropriations by management. Since companies are competing against each other in the capital market to raise funds at the lower possible cost, there is a high incentive for these companies to help investors reduce their monitoring cost, by offering them clearer and therefore more reliable information. In publicly listed companies, the agency problem is complicated by the fact that there exist many and geographically dispersed shareholders. Dispersed shareholders with minor ownership hinders further control of agents' action since it is very difficult and costly for shareholders to monitor and control agents' behavior individually. Managers lack incentive to maximize companies' value since their wealth is not affected by the maximization of companies' value. Financial statements, in opinion of Prabowo and Angkoso (2006), are one main device to reduce the agency problem, although there are other mechanisms such as efficient market for corporate control, governmental regulation, efficient job market for managers and managerial stock ownership program. By forcing managers to prepare standardized financial statements, shareholders can monitor and control managers' action with the proxy of company's financial performance. There exist growing requirements for managers to not only disclose financial information by financial statements, but also non-financial information such as history of share price. As Healy and Palepu (2001) and Botosan (2003) considered it is expected that by disclosing additional, not mandated information, managers and owners can actually reduce agency costs.

The information asymmetry is present in any economy and creates distortion for companies and investors at the same time; the investors are mostly affected because they must make the right choice for their own financial resources. The asymmetrical information phenomenon is present in a developed country and more or less in a developing one: some investors are more informed than others, and in this case, the market efficiency hypothesis is put under question. Signaling models through capital structure were created starting with the 70's, but this theory had the starting point on other markets, like the product market (Akerlof, 1970) and the labor one further developed in Spence's equilibrium theory, referring to job market signaling.

Signaling theory exists before investors put their money into certain companies. Therefore it is called *ex-ante* problem. Information problem exists because investors have no or limited information to assess the quality of companies, forcing them to value all the companies at average level. The main problem with information asymmetry is that it impairs the efficient allocation of capital and entails higher cost of capital. Akerlof (1970) sees information asymmetry as a „lemons” problem that arises when a person wants to buy a used car. So, the buyer has an information disadvantage compared with the seller, because the seller has better information about the used car than the buyer. This difference in information about the product is the information asymmetry between the buyer and seller. In



capital markets the „lemons” problem scenario can be compared with the problem that emerges when a company goes public. The present owners of the initial public offerings (the sellers) know more about the firm (the product) than potential investors (buyers). An initial public offering company is a company’s first sale of shares to the public market. Hence, this difference in information creates uncertainty regarding the product’s value. Disclosing more financial and non-financial information to potential investors can reduce the information problem.

The signaling theory may be relevant to analyze the determinants of accounting choices. More specifically, accounting policy choices has signaling properties. As we have mentioned above the most commonly investigated information asymmetry is between the company and the investors although such kind of asymmetry can appear between other parties too (e.g. the company and the underwriter). Previous studies have demonstrated that increased disclosure decreases information asymmetry. To demonstrate this, Botosan (1997) reported that in companies with a low analyst following an increase in disclosure will lower the companies cost of equity capital. However, no association between cost of equity capital and disclosure has been reported in companies with a high analyst following.

As Ionascu *et al.* (2008) have pointed out, in relation to the prior literature and more specifically in relation to empirical research, there are several inconsistencies regarding the statistical association between the disclosure quality and the cost of capital. According to the authors some possible causes of this lack of empirical consensus may spring from: (1) the unclear theoretical relationship between the quality of financial reporting and the cost of capital, (2) the methodology of computing and measuring the cost of capital, (3) the existence of a set of institutional factors (e.g. legal system, governance system, political system, the link between accounting and taxation, auditor litigation) which influence the very implementation of the standards, leading to low-level financial information irrespective of whether the standards are of high quality.

Botosan and Plumlee (2002) examined also, disclosures and their relation to cost of equity capital. They have reported that cost of equity capital decreased with increased disclosures. The disclosures were based on the AIMR analyst disclosure rating reports during a 10-year period (1985-1995). Although, the results are only valid for annual report disclosures and not other types of disclosure, for example quarterly reports. These findings indicated that the type of disclosure is important and suggests that not all types of disclosure reduce a company’s cost of capital.

### **3. RESEARCH DESIGN, METHODOLOGY AND HYPOTHESIS DEVELOPMENT**

As we have presented in a previous section of our paper, voluntary disclosures have been extensively researched and documented across markets, such as in the U.S., U.K., Western European, Australian and Asian countries. But only a few studies exist for Central and Eastern European Countries. This is the main reason

why we have investigated in the present paper the extent of voluntary disclosure as a Romanian perspective.

This study has two major objectives. The first is to investigate and measure the level of voluntary information disclosure and what information are voluntary disclosed through annual reports by sample Romanian listed companies and secondly to examine if accounting regulations, bank debt, auditor type, new equity issues or ownership structure are influence factors, associated with voluntary disclosure of various types of information.

In the present paper we have used content analysis for investigating annual reports of the eighteen companies listed on Bucharest Stock Exchange (BSE), selected after we have established the main criteria for sampling. We have chosen our sampling criteria starting from the hypothesis already tested in previous research that companies' size is an important predictor of corporate disclosure behaviour (Buzby, 1975; Raffournier, 1995; Graven & Marston, 1999; Stolowy & Ding, 2003) and large companies traded on a capital market should have the most complete annual reports and a larger range of voluntary information disclosed. Because these companies are the most wanted for investors they should provide more information to the market.

The methodology we have used is *Standard & Poor's Transparency and Disclosure Survey Questions*. The purpose of this survey is to provide investors with an objective ranking of the corporate reporting practices of large companies and to help them understand the differences in reporting levels across markets and business sectors.

We apply the survey for annual reports and accounts of 2005, 2006 and 2007 years, on a sample of 18 companies listed on Bucharest Stock Exchange. Standard & Poor's identified 98 separate items of information that should be disclosed in annual reports and accounts when best practice is followed. The survey scores companies according to how many of these items of information they disclose and the calculated index provides a measure of a company's public disclosures.

The scores are developed by searching company annual report for the inclusion of the 98 items listed below. The company receives one point when it provides information on an item. The results from the 98 questions below are converted into a coefficient by dividing the score by 98. According to Standard & Poor's the scores are designed so as to be unaffected by non-disclosure of items that are not applicable. The scores themselves are not released to the public. The 98 items are grouped into three sub categories as it can be seen below.

We have elaborated our research on three levels. On the first level of our investigation, using *Standard & Poor's* model we have grouped the information voluntarily disclosed in annual reports in three main categories: Financial Transparency & Information Disclosure, Board and Management Structure and

Process and Ownership Structure and Investor Relations as presented in table 1. Each information subcategory from our sample contains a different number of items. The level of voluntary disclosure is measured then by the amount and detail of mandatory and non-mandatory information that is contained in the analyzed annual reports. We have developed a disclosure score sheet for scoring each sample company's annual report as regarding the level of information that is disclosed.

*Table 1. Information categories regarding disclosure dimension*

<b>Information category</b>	<b>Information subcategory</b>	<b>No. of items considered</b>
Financial Transparency & Information Disclosure	<ul style="list-style-type: none"> <li>▪ the quality of accounting standards used in the preparation of financial statements (e.g.: U.S. GAAP or IAS/IFRS),</li> <li>▪ frequency of publication of financial statements (e.g.: quarterly or annual),</li> <li>▪ extent to which aggregated and disaggregated disclosures are provided (e.g.: consolidated financial statements, segment data, information on affiliates in the firm owns minority stake, related party transactions),</li> <li>▪ key accounting policies (e.g.: asset valuation and depreciation),</li> <li>▪ disclosure on auditors (e.g.: identity, audit fees, and non-audit fees),</li> <li>▪ disclosure on business (e.g.: nature of business, physical statistics, corporate strategy),</li> <li>▪ management analysis and forecasts (e.g.: specific performance ratios, investment plans, earnings forecasts, industry trends).</li> </ul>	35
Board and Management Structure and Process	<ul style="list-style-type: none"> <li>▪ board composition (e.g.: number of directors, names and background information on directors, whether or not the directors are independent),</li> <li>▪ board committees (e.g.: information on audit, compensation and nominating committees),</li> <li>▪ board compensation (e.g.: directors' salaries),</li> <li>▪ top management composition (e.g.: names, background),</li> <li>▪ top management compensation (e.g.: salary levels, specifics of performance-based compensation plans),</li> <li>▪ top management shareholdings.</li> </ul>	35

Information category	Information subcategory	No. of items considered
Ownership Structure and Investor Relations	<ul style="list-style-type: none"> <li>▪ the composition of shareholdings in a company (e.g.: number and identify of shareholders who own 5% or more shares each, identity of top 10 shareholders, percentage of cross-ownership),</li> <li>▪ description of the equity claims against the company (e.g.: description of share classes),</li> <li>▪ details of shareholder rights (e.g.: procedure for putting proposals at shareholder meeting and the way shareholders nominate directors to the board).</li> </ul>	28

(Source: Khanna & Palepu, 2003)

On the second level of our investigation, in order to measure the extent of voluntary disclosure in annual reports we have compiled the set of 98 informational items that express disclosure policy. We have chosen an item-based approach using a dichotomous procedure. Following the model used by *Standard & Poor's Transparency and Disclosure Survey Questions* many other authors have used this kind of index in their' researches like Khanna & Palepu (2003). The S& P disclosure score is similar to the measurement used by Botosan (1997) who measured disclosure directly by examining a comprehensive set of items in annual reports and builds a disclosure index. This measure is also similar to the CIFAR (Center for International Financial Analysis and Research) disclosure scores used in prior papers, by authors like La Porta *et al.* (1998), Hope (2002), Rajan and Zingales (1998), Bushman *et al.* (2003).

Most of the earlier papers have used analysts rating of disclosure to proxy for firm level disclosure scores (Lang & Lundholm 1996, Healy *et al.* 1999). Khanna *et al.* (2002) use analyst ratings of firm level corporate governance practices. The main advantage of scoring from financial reports is that, unlike an analyst's subjective assessment of disclosure, these are an objective assessment of disclosures. The drawback resulting from the methodology is that while the S& P scores assign equal weights to every item on the list, some disclosure items may be more important in reality than others.

We have built a composite index for each company using unweighted items. All voluntary disclosed items investigated in this study were considered equally important. We have assigned the value of "one" to every item disclosed on the company's annual report and value "zero" otherwise. We have determined for each company the score for measuring voluntary disclosure by summing all items values and dividing it by 98 (the total number of items). The voluntary disclosure index

(VD) used to measure the level of voluntary disclosure quantitatively is determined with the formula:

$$ScoreVD = \frac{\sum_{i=1}^{98} VD_i}{98} \quad (1)$$

On the third level of our exploratory investigation we have developed a checklist instrument for testing seven variables influence on voluntary disclosure. Finally, we have developed a multiple regression analysis and tested it.

After a thorough study of corporate environment, regulations, and financial reports of the companies listed on BSE we have identified seven categories of variables that can have an influence on the level of disclosure: profitability, liquidity, auditor type, IAS/IFRS regulations, bank debt, new equity issues or ownership.

As regarding Romanian listed companies we are expected to find a positive association between these variables and the level of voluntary disclosure. For testing this likelihood we have formulated the following hypothesis:

**H1:** *Companies with a greater profitability rate (ROE) are disclosing more voluntary information.*

We have considered profitability (using Return on Equity ratio) as an influence factor on the level of disclosure for the BSE listed companies. ROE was calculated as ratio between the net profit and total equity. Probably the higher profitability the companies' record, the higher the level of corporate reporting and voluntary disclosure is.

**H2:** *Companies applying IAS/IFRS reporting practices disclose more voluntary information.*

Out of the companies listed on I<sup>st</sup> and II<sup>nd</sup> tier of BSE only a few use IFRS reporting practices, most of them still use the local regulation in order to prepare the financial statements. In order to find out if IFRS reporting practices influence the level of disclosure, we have assigned a dummy variable which takes the value of „one” if that company uses IFRS regulations and the value of „zero” otherwise.

**H3:** *Companies with a higher current liquidity ratio disclose more information.*

Our third hypothesis analyse if companies with a higher liquidity ratio disclose more information through their annual reports. The current liquidity ratio was calculated as ratio between current assets and current liabilities.

*H4: Companies with a higher bank debt ratio disclose more information.*

Furthermore we tested if bank debt ratio influence the VD score registered by Romanian listed companies. Larger bank debt implies greater bank monitoring and consequently, less need for public disclosure to providers of capital in common-law countries where companies are mostly financed through private equity (Makjia & Patton, 2004). In such an environment the need for public disclosure is reduced in the presence of bank monitoring because banks are considered to be superior monitors. So, the point is, bank debt has a negative effect on disclosure because once established as a specialised monitor of the firm, the bank can exploit the dependent creditor. But it is well known that in code law countries like Romania, companies are borrowing money from banks rather from capital markets. In this case we consider that the level of exposure of the companies to the banks can be important in disclosing financial and non-financial information.

We have calculated bank debt ratio as ratio between the short and long term bank debts and total assets.

*H5: Companies with financials audited by one of the BIG5 companies disclose more information.*

Romanian auditors' market is dominated by five important companies (named by us BIG 5) and local auditors. These BIG 5 companies are PWC, KPMG, Deloitte Touche Tohmatsu, Ernst&Young and BDO and we have assigned a dummy variable which takes the value of „one” if that a company's financials are audited by one of these five companies and the value of „zero” otherwise.

*H6: Companies that prepare a new equities issue disclose more information.*

The companies that try to finance their activity by issuing new shares should be more open in disclosing data through the annual reports in order to offer a complete image of the company for the investors. In order to find out if companies that issue new shares influence the level of disclosure for these companies, we have assigned a dummy variable which takes the value of „one” if that companies had issued new shares and the value of „zero” otherwise.

*H7: Companies with a private majority ownership disclose more information.*

The companies that have a private majority ownership should be more open in disclosing data through the annual reports in order to offer the investors/shareholders a complete and prospective image of the company. So, we considered that there should be a positively relationship between the private majority ownership and VD scores. In order to find out if companies that have private majority ownership influence the level of disclosure for these companies, we have assigned a dummy variable which takes the value of „one” if those

companies have private majority and the value of „zero” for public owned companies.

#### **4. SAMPLE AND DATA COLLECTION**

This study covers the companies listed on Bucharest Stock Exchange within 2005 and 2007. The authors have taken all the companies of I<sup>st</sup> and II<sup>nd</sup> categories listed on BSE as the population of this study due to the fact that the number of companies is small and it is convenient to collect data related to it. The population consists of 60 companies divided into 10 sectors of activity according to BSE classification. Financial Investments Companies (S.I.F.) were excluded from the study due to the fact that they are particular Romanian closed-end investment company and their value is formed from other listed companies.

For measuring the level of voluntary disclosure we have analysed the content of annual reports of sample companies. Annual reports are the main annual source of communication between the company and its external investors, through these means the company publishes investment related information. The annual reports examined in this paper are based on the 2005, 2006 and 2007 fiscal years.

Companies were surveyed between May 2005 and May 2008 to find out whether they have websites or not, searching also for data regarding the voluntary disclosure of financial and non-financial information. All the data was gathered from the following sources: [www.bvb.ro](http://www.bvb.ro), [www.cnvmr.ro](http://www.cnvmr.ro), [www.ktd.ro](http://www.ktd.ro) and [www.kmarket.ro](http://www.kmarket.ro), sites providing stock exchange information and sites of companies listed on Ist and IInd BSE categories; we have collected the data in order to establish the market capitalization of the companies listed on BSE and also a part of the accounting and financial information regarding the financial statements and annual reports for the years 2006 and 2007; the database provided by the Reuters Press Agency regarding the market prices of the companies from the sample to determine the market capitalizations; the accounting and financial information obtained from the site of the Romanian Ministry of Economy and Finance.

Sample companies are selected purposively. Authors used the following criteria to select the sample companies:

- own websites;
- continuity in transactions between 2005 and 2008;
- disclosure of financial information (in annual reports, financial statements and financial highlights –ratios);
- audit reports.

The mentioned criteria leave only 18 companies in the research sample. The selection process of the sample can be seen from Table 2 below.

Table 2. Sample Selection Process

Explanation	Amount
Population (companies listed on Ist and IInd BSE categories except Financial Investments Companies - S.I.F.)	61
Less companies with no websites or websites under construction (or unable to open)	-4
Companies left	57
Less companies listed between 2005 and 2008	-3
Companies left	54
Less companies that do not present annual reports (2005, 2006, 2007)	-33
Companies left	21
Less companies that do not have an audit report (2005, 2006, 2007)	-3
<b>Final sample</b>	<b>18</b>

## 5. EMPIRICAL RESULTS

### 5.1. Descriptive statistics

Table 3 presents the descriptive statistics for voluntary disclosure index of the companies through the annual reports. A slightly increase in information disclosed year by year by the 18 companies studied can be observed. The average VD score of sample companies for the entire period is 0.5546, with the maximal and minimal score of 0.7347 and 0.3469 respectively. It seems that in Romania's securities market, most companies disclose regular information, the voluntary disclosure level of Romania being relatively low.

Table 3. Voluntary disclosure (VD) statistics

Year	2005	2006	2007
<b>Score VD</b>	0,5317	0,5550	0,5771
VD Standard deviation	0,1008872	0,09751	0,09783
VD Minimum Score	0,3469	0,3980	0,3980
VD Maximum Obtained Score	0,7143	0,7245	0,7347
VD Maximum Possible Score	1	1	1

Table 4 presents the descriptive statistics of scoring.



Table 4. Statistics of the information disclosed in annual reports

	VDI	ROE	REG	OWN	NEWEQ	LIQ	BDEBT	AUDITOR
Mean	0.5546	0.1642	0.4444	0.8333	0.4259	1.9325	0.1575	0.6296
Median	0.5663	0.1154	0	1	0	1.54	0.1525	1
Maximum	0.7346	1.4531	1	1	1	9.5	0.4773	1
Minimum	0.3469	-0.3898	0	0	0	0.57	0	0
Std. Dev.	0.098656	0.288725	0.501569	0.376177	0.4991257	1.423336	0.120551	0.487438
Skewness	-0.0960	2.6953	0.2236	-1.7888	0.2996	3.10777	0.5580	-0.5368
Kurtosis	2.3976	11.9143	1.05	4.2	1.0897	16.1086	2.8634	1.2882
Jarque-Bera	0.8994	244.18400	9.0056	32.04	9.0181	473.5590	2.8442	9.1869
Probability	0.6377	0	0.0110	1.10306	0.01100	0	0.2412	0.0101
Sum	29.9489	8.8678	24	45	23	104.36	8.5079	34
Sum Sq. Dev.	0.5158	4.41819	13.3333	7.5	13.2037	107.3720	0.7702	12.5925
Observations	54	54	54	54	54	54	54	54

## 5.2. Hypotheses tested results

In order to test the influence of the factors identified in our study on the level of voluntary disclosure, we use correlation and multiple regression analysis. Out of the seven categories of variables we have identified on the sample companies, five of them have important correlations as it can be seen in the Table no. 4; therefore we used the Fisher test in order to extend the results of the studied sample to the companies listed on BSE Ist and IInd tier, with a 5% level of confidence.

**Testing H1:** *Companies with a greater profitability rate (ROE) are disclosing more voluntary information.*

We have tested the influence of profitability (using ROE ratio) on the extent of information discloser by the Romanian listed companies, the profitability ratio proved to be an important influencing variable on other markets. The statistical results show a very weak correlation between the ROE ratio and VD score for Romanian listed company. Our supposition cannot be validated. Companies with a greater profitability rate (ROE) do not have a high level of voluntary disclosure.

**Testing H2:** *Companies applying IAS/IFRS regulations disclose more voluntary information.*

One can see that the companies which use IFRS regulations for their annual financial statements report, are disclosing more information, and have a higher VD score comparing to the companies that use only domestic regulation in financial

reporting. The value of F statistic allows us to validate the hypothesis. Companies applying IFRS regulations are disclosing more voluntary information.

*Testing H3: Companies with a higher current liquidity ratio disclose more information.*

In order to test our third hypothesis we calculate correlation coefficient, its negative value indicating a negative correlation between the two variables. Our hypothesis cannot be validated. Companies with a higher current liquidity ratio are not disclosing more information.

*Testing H4: Companies with a higher bank debt ratio disclose more information.*

Because the correlation coefficient and the Fisher test (see table 5) have significant values, we may state there is a link between the bank debt ratio and voluntary disclosure level in the years 2005, 2006 and 2007. Bank debt can be considered a variable influencing the VD Score. Our second supposition can be validated. Companies with a higher bank debt ratio disclose more information.

*Testing H5: Companies with financials audited by one of the BIG5 companies disclose more information.*

We have assigned a dummy variable which takes the value of „one” if that companies’ financials are audited by one of the big five auditing companies acting in Romania and a value of „zero” otherwise. It is easy to observe in table 5 the strong link between the auditor type and VD score, the auditor type being the most important variable influencing the level of disclosure. We can validate the hypothesis according to which Companies with financials audited by one of the BIG5 companies disclose more information.

*Testing H6: Companies that prepare a new equities issue disclose more information.*

The negative value of the correlation coefficient indicates an inverse relation/causality between new shares issues and VD score. This result determines us to reject the supposition according to which the companies that prepare a new equities issue disclose more information.

*Testing H7: Companies with a private majority ownership disclose more information.*

The value of correlation coefficient points out that there is a strong causality between the two variables. The majority of private ownership in companies listed on BSE is directly linked to the level of data disclosure. Our supposition can be validated: Companies with a private majority ownership disclose more information.

*Table 5. Results of Correlation Analysis*

VDI	REG	ROE	LIQ	BDEBT	AUDITOR	NEWEQ	OWN
Correlation	0,1461	0,0472	- 0,2406	0,1252	0,2523	-0,1528	0,1755
Fcalc	9,0696	2,6258	-10,2804	7,5883	17,8911	-7,02682	-7,9135
Ftab = 4							

After the descriptive analysis, we performed a multiple regression analysis. The regression equation can be written as:

$$VD = \beta_1 REG + \beta_2 ROE + \beta_3 LIQ + \beta_4 BDEBT + \beta_5 AUDITOR + \beta_6 NEWEQ + \beta_7 OWN + \varepsilon$$

Where:

VD = voluntary disclosure score

REG = IFRS regulation

ROE = profitability (ROE ratio)

BDEBT = bank debt

AUDITOR = auditor type

NEWEQ = new equity issue

OWN = ownership

$\varepsilon$  = random variable

Using the Ordinary Least Squares method we computed the multiple regressions equation's coefficients presented in table 6. The high value of R-squared showed that the regression equation model is quite conclusive.

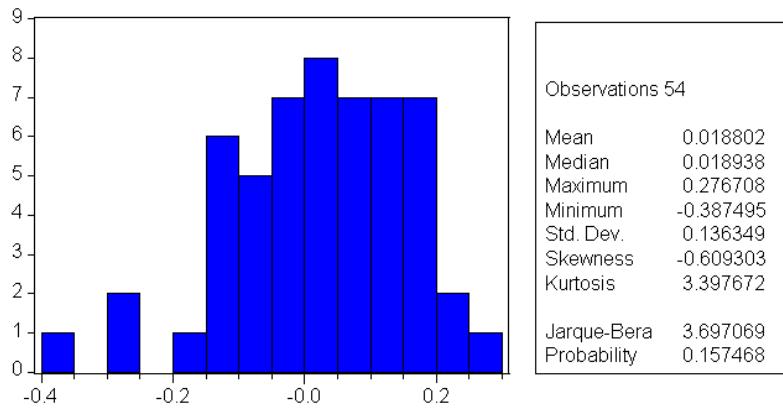
*Table 6. Results of inferential analysis*

Dependent Variable: VDI Method: Least Squares Included observations: 54				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
AUDITOR	0.10259626259	0.0502136222	2.0431958111	0.0466622461551
BDEBT	0.95879626798	0.1569819913	6.1076831788	0,0000000000
NEWEQ	-0,1192618396	0,0465477484	-2,562139816	0.0466920539487
LIQ	0.05283390664	0.0159501583	3.3124377564	0.0017845907489
OWN	0.19991224603	0.0489612130	4.0830737970	0.0001713688349
REG	0,07615670620	0,1931463109	2,5361694406	0.0031202124799
ROE	0.17504869861	0.0881016109	1.9868955495	0.0527804879113
R-squared	0.947069131145	Mean dependent var		0.554610733182

Adjusted R-squared	0.933631147887	S.D. dependent var	0.098656973704
S.E. of regression	0.146186571574	Akaike info criterion	-0.887443290350
Sum squared resid	1.004414144304	Schwarz criterion	-0.629612025055
Log likelihood	30.96096883947	Durbin-Watson stat	1.981796810636

Furthermore, in order to validate the model we have tested the normality distribution of errors, the homoscedasticity and independence of errors hypothesis. The normality of the errors was confirmed by the Jarque Berra test as seen in Figure 1.

*Figure 1. The distribution of errors*



Then, we conduct the White test in order to detect the Homoscedasticity of errors and Durbin Watson test for errors' independence. Both tests (table 7) are validated, pointing out the homoscedasticity of the multiple regression models' errors, but also their independence. The model is a valid one.

*Table 7. Results of White Heteroscedasticity Test*

White Heteroskedasticity Test:			
F-statistic	0.6274031437	Prob. F(10,43)	0.782083441
Obs*R-squared	6.8757860424	Prob. Chi-Square(10)	0.737117179
Test Equation:			
Dependent Variable: RESID^2			
Method: Least Squares			
Included observations: 54			

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.015065770	0.027111345	0.5556998	0.581296065
AUDITOR	0.006600013	0.010771885	0.6127074	0.543296850
BDEBT	0.026857371	0.099510557	0.2698946	0.788532353
BDEBT^2	-0.015367666	0.227150876	-0.0676540	0.946374673
LIQ	-0.003625699	0.011017769	-0.3290774	0.743694652
LIQ^2	0.001041756	0.001044639	0.9972401	0.324226948
NEWEQ	-0.006082842	0.008964946	-0.6785118	0.501082713
OWN	0.003280829	0.012625353	0.2598604	0.796211673
REG	-0.002124682	0.011009908	-0.1929792	0.847883831
ROE	-0.016213730	0.036362051	-0.4458970	0.657908817
ROE^2	0.002358389	0.026140459	0.0902198	0.928531432
R-squared	0.12732937	Mean dependent var		0.01860026193
Adjusted R-squared	-0.07561728	S.D. dependent var		0.02691766479
S.E. of regression	0.02791684	Akaike info criterion		-4.13954978797
Sum squared resid	0.03351204	Schwarz criterion		-3.73438637108
Log likelihood	122.76784427	F-statistic		0.62740314372
Durbin-Watson stat	1.93226237	Prob(F-statistic)		0.78208344108

## DISCUSSION, CONCLUSIONS AND FUTURE RESEARCH

Using annual reports from 2005-2007 for the non-financial companies listed on BSE, we test several hypotheses taken into account the sample companies. It is worth mentioning that we have conducted a sampling process selecting five criteria: own websites; continuity in transactions between 2005 and 2008; disclosure of financial information (in annual reports, financial statements and financial highlights – ratios); audit reports. This sampling process leaves only eighteen companies listed on BSE.

Supporting our hypotheses, we found that the extent of disclosure is positively related to profitability, auditor type, IAS/IFRS regulations, bank debt and private ownership structure but is negatively related to liquidity and new equity issues. The results of our testing model were generally the expected one. Regarding the positive correlation between higher bank debt and disclosure of voluntary information, we are aware that the results may show a weakness of the hypothesis

development. But, in our vision, it is important to be taken into consideration the environmental issues that may exert influence on the financing mode of domestic companies. As Ball *et al.* (2000) described shortly, in code law countries the governance model of companies is oriented to satisfy the needs of stakeholders, unlike the common-law country governance where the information disclosed are oriented to shareholders. Romania is a code law country. In this context, our results are valid because, companies are preponderantly disclose mandatory information using mostly debt financing. We found that the level of voluntary disclosure in the annual reports is still low. We can explain this low level of voluntary disclosure to the functioning and development of the Bucharest Stock Exchange and to the fact that BSE is a relatively new stock exchange.

The major findings of our study, concerning the voluntary disclosure level of Romanian listed companies and the measurement of the impact of the above mentioned variables on voluntary disclosure, suggest that, despite the ambiguity and uncertainty about transparency and disclosure regulations and the lack of experience in external financial reporting and voluntary disclosure of information, Romanian companies generally respond well to this new challenge regarding disclosure.

If we look upon the main limitations of our results we can conclude that there are three types of limits: time period; sample size and communication vehicle used. These limits may affect the generalization of the findings.

A few ideas on the direction for future research is outlined below which is based on the results and experience from writing this study. First of all, this article contributes to our understanding on the role of accounting information on the capital market. Another way forward could be to extent the study to all companies listed on BSE, to study more specific cases focusing on one industry to get a more accurate understanding of which factors lay behind the extent of voluntary disclosure and to conduct an investigation of the association between the mechanism of corporate governance and other voluntary disclosed items on the investors' behavior and the companies' performance indicators. Another direction of research it could be an approach that could lead to a better understanding of the role of accounting information for fundamental analysis.

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