

## **PhD THESIS**

## SUMMARY

## IMPACTUL CALITĂȚII RAPORTĂRILOR FINANCIARE ASUPRA GRADULUI DE EFICIENȚĂ INFORMAȚIONALĂ A PIEȚEI DE CAPITAL

## THE IMPACT OF FINANCIAL REPORTING QUALITY ON THE INFORMATIONAL EFFICIENCY'S DEGREE OF THE CAPITAL MARKET

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## THE STRUCTURE OF THE THESIS

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## **INTRODUCTION**

The Global Financial Crisis and various corporate scandals (Enron, WorldCom, Tyco) underline the relevance of international accounting and financial reporting standards (IFRS), which help to prevent frauds and to avoid management mistakes (Uyar, Gungormus & Kuzey, 2017). Moreover, transparency is one of the core principles of good corporate governance, promoting the report of material facts in real time to the stakeholders and by this contributing to more confidence in the management. Concerning the financial aspects of a business, transparency can be maintained using IFRS (WEF, GCR 2014-2015).

The high quality results presented by a company provide a greater amount of information about the features of that company, its financial performance, which are relevant to a specific decision taken by a decision-maker. Dechow *et al.* 2010 consider that there are certain key-factors that determine the quality of the results, these being: the characteristics of the company; financial reporting practices; governance and control systems; auditors; capital market incentives; and external factors such as capital requirements, political processes, tax and non-tax regulations. The variety of these factors determines the complexity of the quality of financial reporting. The conceptual frameworks of the IASB / FASB state that financial-accounting information is relevant only if it has significant effects on the decision-making process.

Literature shows that financial markets produce an impact on real markets through the information that decision-makers extract from capital market prices and which they use in guiding their own decisions and actions (Bond *et al.*, 2012). In the case of companies, real decision makers are represented by management teams. Managers can learn from stock market trends, because even if they are the most informed agents in the economy about their company's situation, they may still lack information about their own company, information that is in the possession of some external agents operating on the capital market. Therefore, stock market price informativeness is a topic of great interest for company leadership.

According to recent empirical research, the country-level quality of accounting information is relevant to all its users. The growth trend of globalization of financial markets requires increasingly high-quality financial information produced in accordance with strong audit and financial reporting standards (Boolaky *et al.*, 2013). Therefore, quality accounting information proves to be extremely important for capital markets. It is interesting to surprise how the quality of accounting information has an impact on capital markets, and one of the ways we can do this is to determine its impact on stock prices' informativeness.

Stock price informativeness shows the amount of information about future earnings that is capitalised into the price (Durnev et al., 2003). A popular measure to distinguish between the amount of firm-specific and market-wide information that is impounded into stock prices can be found in the paper of Roll (1988), who uses the  $R^2$  from a market model regression as an indicator

of stock return synchronicity. A low R<sup>2</sup> indicates that more firm-specific information is impounded into the stock price and thus the stock price is more informative (Todea & Buglea, 2017). The higher the R<sup>2</sup>, the greater the stock is synchronous with general market movements (Cheong & Zurbruegg, 2016). Stock returns reflect new market-level and firm-level specific information. Roll (1988) makes clear that the extent to which stocks move together depends on the relative amounts of firm-level and market-level information capitalised into stock prices. Following the methodology elaborated by Roll (1988), Morck et al. (2000) find that stock prices move together more in poor economies than in the richer ones and that accounting standards are negatively correlated with synchronicity. They state that, if accounting data is more useful, then more firmspecific information is available to all investors. Consequently, we might observe more firmspecific price variation in countries with better accounting standards.

In these times, the need for a single set of financial and accounting standards to be in place and to be implemented is increasing due to increasing trade and inter-state transactions. Globally, we are dealing with the internationalization of both markets and policies, which creates the need for international harmonization of financial reporting. International Financial Reporting Standards are particularly popular at a global level, with more and more countries choosing to adopt and apply them. At present, 150 countries around the world have requirements for the application of IFRS in the case of reporting companies listed on the capital market and for financial companies. Of the 150 countries, a total of 140 uses International Financial Reporting Standards as the only set of global accounting standards. At the level of the European Union, as of January 1, 2005, any company listed on a capital market will prepare its financial statements in accordance with IFRS. Therefore, given the widespread use of IFRS globally, their power is extremely important (SARS), as only having a strong, clear, well-regulated and understandable set of accounting standards can ensure the efficiency of their application.

Accounting is referred to as the "business language", but the question is, '*Can all accountants around the world speak the same language*?' (Grossman, Smith & Tervo, 2013). Effective accounting standards offer investors, but also other categories of users, the opportunity to have access to adequate and reliable accounting information. By implementing IAS and IFRS, the IASB seeks to standardize global financial reporting across the globe (Ball, 2006). Furthermore, IASB argues that the development of International Financial Reporting Standards aims to provide a single set of high-quality accounting standards to help remove barriers that may arise for corporations seeking access to foreign capital markets and of investors who are looking for investment opportunities at international level. With the help of IFRSs, any entity can present and prepare its financial statements on the same basis as any other entity in any IFRS applying state, making comparisons of financial data much easier than in the case of applying different accounting standards.

Price efficiency represents a central subject of economic theory and it is defined as the extent to which market prices are informative about the value of traded assets. Economists often claim that

the price efficiency is desirable because market prices guide real decisions, such as investment. Thus, informative prices lead to a superior decision-making process. Moreover, price efficiency ensures real efficiency (Bond *et al.*, 2012). Fama & Miller (1972) argued that an efficient market has a very desirable feature that at any moment, stock market prices provide clear signals for resource allocation, and the firms can make production and investment decisions. Particularly important is the revelatory effect of stock prices, which represents the amount of previously unknown information that is revealed by stock prices and used in the investment decision-making process.

The theory of efficient markets is deeply marked by Eugene Fama, who, through the article published in 1970, 'Efficient Capital Markets: A Review of Theory and Empirical Work', succeeds in clarifying the term of market efficiency. Although Fama does not directly provide a definition of the efficient market concept, this is the most cited article in the field of finance, bringing the reputation of the author and helping himto win the Nobel Prize. According to Fama & Miller (1972), an efficient market 'has a very desirable feature. In particular, at any point in time market prices of securities provide accurate signals for resource allocation; that is, firms can make production-investment decisions'. Bond et al. (2012) consider that this idea is quite natural, because if prices are efficient and aggregate information from various sources, then decision makers in the real sector, who are likely to be only partially informed, will wish to learn from these market prices.

The motivation of the research lies in the need of determining the impact of the quality of financial reporting on the stock price informativeness from the capital market. Often, the quality of financial reporting and the benefits of improving it in order to ensure comparability of information, improve the transparency of financial information, harmonize internal and external reporting, create a common accounting language or reduce information asymmetry (Păscan & Turcas, 2012); but the implications are even more profound and vast. Financial reporting may be associated with the term of communication. Financial reporting is a practical exercise of communication, not just a theoretical or academic term. Thus, quality financial reporting, assured by the application of IFRS, brings benefits to the entire economy by enhancing international business, encouraging foreign investors to invest, increasing foreign capital inflows, developing capital markets. Our research aims to answer the question whether the quality of accounting information really impacts on the way in which company-specific information is incorporated into capital market prices. The results show that the hypothesis that the quality of the accounting information influences the price information is true. These results have strong implications for regulatory institutions in the accounting field and provide clear evidence that financial market prices are a valuable source of information, especially for managers and investors. Through our research we aim to capture how the quality of financial reporting determines the incorporation of firm-specific information into stock prices. We want to investigate the existence and nature of the link between the quality of accounting information and price informativeness.

At the same time, we can state that one of the reasons we have engaged in studying this theme is the desire to show the link between the secondary financial market and the real economy. Often, we find that the exchange market is disconnected from real economic activity, from what is actually happening within companies, as it does not directly influence the internal environment of the companies, being just a secondary market on which their assets are traded. However, this is not true, as has already been demonstrated in the literature (Dow & Gorton, 1997; Bond *et al.*, 2012; Edmans *et al.*, 2017), the secondary financial market having a significant impact on real economic activity.

Also, the quality of financial reporting, which does not have a unique measurement method, through this study, we want to provide new insights into how it can be quantified and expressed. In order to capture the quality of financial reporting, we use its components/determinants (the power of audit and financial reporting standards, investor protection, the effectiveness of corporate boards, and the protection of minority shareholders' interests). The aggregate indicator *Accountability* is also an indicator of the financial reporting quality.

The **main objective of the research** is to determine the impact of the quality of financial reporting on the degree of informational efficiency of the capital market. The secondary objectives are the analysis of the link between the secondary financial market (the stock market) and the real economic activity, highlighted by the indicators of the quality of the financial reports, the in-depth study of the concepts of the financial reporting quality, the informational efficiency of the capital market, and the stock prices informativeness. Furthermore, we want to demonstrate the great importance of the link between the two elements for the users of accounting information, especially for company management, who can learn from the evolution of prices on the capital market, but also for the capital investors.

The **research methodology** includes both qualitative elements and quantitative, empirical methods. First of all, we began with studying the literature and selecting the relevant sources for our analysis. This review of literature has the role of revealing the current state of knowledge in this field and shaping the framework of our research. Once these aspects have been established, we have continued through the empirical analysis of the link between the quality of accounting information and stock prices' informativenes. Thus, we estimated regressions between these variables, introducing control variables, and performed statistical processing in econometric programs such as Eviews 5.0 and Stata. The analysis of the link between the quality of accounting information and price informativeness has been made through panel econometrics, which presents a number of advantages over cross-section or time series analysis, among which we mention the unobserved heterogeneity control and the elimination of the problem of omission of variables. In regression analysis, we determined the estimators though the ordinary least squares method (OLS).

The research methods used in our thesis include document analysis, comparative method, and interpretive method. The analysis of the papers consists of reading the specialized literature related

to the topic approached, extracting from it the most important aspects for realizing our own research, studying the documents and conceptual frameworks published by the international accounting regulatory bodies. The comparative method allows the various results of the analysed studies to be presented in an intelligible, cursive way, following the similarities and differences between them. The information sources used include books, scientific articles published in various journals and journals in the economic field, legislative acts and regulations of national and international bodies operating in the field of accounting.

Last but not least, our research contributes to the enrichment of specialized literature and helps to better understand the concept of the quality of accounting information and its implications, especially the link between the quality of financial reporting and stock prices' informativeness.

Throughout the paper we use the term quality of accounting information as the equivalent of the quality of financial reporting. The final product of the accounting is the financial reports and for this reason the quality of the accounting information is considered to be similar to that of the financial reports.

Chapter I has the aim to clarify the notion of financial reporting quality by presenting its defining aspects, the modalities of quantification and the relationship with the adoption of International Financial Reporting Standards. It has a theoretical character and starts with the presentation of various perspectives on the quality of financial reporting found in the literature, noting that this is not easy to explain due to the lack of an unanimously accepted definition. It also presents ways to quantify the quality of financial reporting, focusing on those who succeed in creating a link between accounting and capital markets. Much of this chapter is dedicated to the relationship between the quality of financial reporting and International Financial Reporting Standards. In regard to International Financial Reporting Standards, a short history of their emergence and adoption at European level is also presented. Special emphasis is placed on describing the qualitative characteristics of accounting information in line with IFRS requirements. For this purpose, a study on the IFRS regulations regarding the quality of the accounting information is carried out. Chapter I continues by presenting the state of knowledge in the field of the impact of the adoption of IFRS on the quality of financial reporting. A series of studies are reviewed that outline both the advantages and disadvantages of adopting IFRSs and their impact on the quality of financial reporting. The review of literature is far from exhaustive, because studies in this field are extremely numerous and various. Our goal is to focus on the studies we considered to be the most relevant to our research. The chapter ends with the part dedicated to the company's accounting value assessment models, which purpose is to highlight the relationship between the accounting values and the market value of the companies.

**Chapter II** is dedicated to the determinants of the quality of accounting information. A particular emphasis is placed on the idea that the accounting information considered to be of quality is determined by a series of internal and external factors of the firm, which can be grouped into

several categories. According to Dechow *et al.* (2010), the quality of accounting information is influenced by entity characteristics, financial reporting practices, governance and control systems, auditors, capital market incentives, and other external factors (policy, tax, legislation, etc.). The multitude of these factors determines the complexity of the quality of financial reporting and causes difficulties in precisely defining this notion. This chapter focuses on four individual determinants of the quality of accounting information: the power of audit and financial reporting standards; investor protection; the effectiveness of corporate boards; and the protection of the interests of minority shareholders. All four determinants are part of the Global Competitiveness Report 2014-2015 prepared by the World Economic Forum and are considered to be the components of the aggregate indicator Accountability, calculated as a weighted average of these individual indicators.

**Chapter III** is focused on studying the revelatory effect of stock prices, the information efficiency of the capital market and the link between it and the quality of accounting information. The chapter begins by clarifying the notion of price-revelatory effect, economic efficiency and informational efficiency. It is emphasized the link between the capital market and the real economic activity, which is related to the fact that the disclosure of information by firms through the financial reports influences their stock exchange rates. The way in which company-specific information is incorporated into the stock prices becomes important for both those directly involved in stock exchange trading, such as investors, and also for the management teams, who can broaden their knowledge based on what is happening within the financial market.

The chapter continues with the theoretical presentation of the definitions and forms of informational efficiency, in order to ensure the conceptual understanding of this notion. Informational efficiency, although it is an intensively studied topic, is also extremely sensitive because of its complexity and the lack of a single definition. The existence of informational efficiency is one of the main conditions of the functioning of the capital market. At the same time, the informational efficiency has implications both at the macroeconomic level, the state institutions being interested in this aspect, as well as at the individual level of each investor from the capital market.

This chapter exhibits the relationship between the accounting data and the informational efficiency of the capital market, as evidenced by the studies undertaken in this field. At the same time, regarding the ways of quantifying the informational efficiency, we have chosen to present two of them, which are part of our research. The two ways of measuring are the delay of the incorporation of information into prices (stock price delay), and the stock prices synchronicity. The speed of the information incorporation into stock prices is a central topic of market efficiency, because an efficient market is characterized as one where the prices of traded assets instantly respond to the arrival of new information (Lim & Hooy, 2010). Hou & Moskowitz (2005) developed a measure that captures the average delay with which the stock price of a company's share responds to market

information. Price synchronicity refers to a phenomenon of tandem movement in capital market prices (Kun et al., 2017).  $R^2$  is the most widely accepted method of measuring synchronicity (Patro & Gupta, 2016). This can be used both to quantify synchronicity at company level and at country level. This method measures synchronicity by correlating individual company stock prices / returns with global capital market returns.  $R^2$ 's higher values indicate higher synchronicity of prices.

This chapter ends with a study upon the information incorporation into stock prices in the case of the Romanian capital market. Through this study, we want to overlook the way in which the stock price responds to the new information available on the market and to analyse the effects of adopting IFRSs on the evolution of stock price delay. The obtained results suggest that the trend of the price delay is upward, which means that the stock price is responding with a longer delay to the emerging market information during the 2005-2014 analysis period. Therefore, in the case of Romania, the adoption of IFRS standards makes it difficult to incorporate information into price. This study should be interpreted individually and isolated, strictly on the Romanian capital market, during the analysis period.

**Chapter IV** represents the empirical part of this paper, in which we study the impact of the financial reporting quality on stock price informativeness on the capital market. In our approach, we have as a starting point the research question: 'Is there a link between the quality of financial reporting and the stock market?'. The quality of financial reporting is quantified through five indicators: the power of auditing and financial reporting standards (SARS), investor protection, the effectiveness of corporate boards, the protection of the interests of minority shareholders, and the Accountability aggregate indicator. The latter is the weighted average of the four indicators mentioned above. In terms of price informativeness, we use two measures: the synchronicity of capital market prices ( $\Psi$ j) and the specific variance of the firm ( $\log(\sigma_{e,j}^2)$ ). Our sample includes 18 developed countries that, at the time of analysis, use the International Financial Reporting Standards. Through this selection, we want to ensure as much as possible that the accounting regime of the entire sample is similar, so that the differences in the quality of the accounting information are the result of other institutional factors present in those markets, factors unrelated to the applied accounting standards. The data collected is from January 2004 to December 2015 (12 years).

The chapter continues by describing the control variables used and the estimated regressions. Mainly, we analyse several regressions between dependent variables and exogenous variables of interest, chosen as indicators of the quality of financial reporting. The dependent variable is, in turn, the stock prices synchronicity and the idiosyncratic volatility. Estimators are obtained by the smallest squares method (OLS). In our research we want to capture the effects of the Global Crisis on the variables of interest, so we also estimate models containing the dummy variable for the 2007-2008 financial crisis, as well as models which include fixed effects over time. The results of the study confirm the hypothesis that the quality of financial reporting influences the stock prices

synchronicity and the incorporation of firm-specific information into these prices. The higher the quality of the accounting information, the more synchronous the prices on the capital market is, and the amount of information specific to the firm included in the prices is higher.

Thus, the red / logical thread of the research can be synthesized as follows: studying the literature on the quality of accounting information and the adoption of the International Financial Reporting Standards; presenting the determinants of the quality of accounting information, which will be used later in empirical research; presenting the revelatory effect of capital market prices in the context of the direct link between the stock market and the real economic activity; the study of stock market price information, informational efficiency of the capital markets and the measures of its quantification, represented by the delay of the incorporation of the information in the prices (the delay) and the synchronization of the stock prices. The both ways of quantifying information efficiency are then used in building empirical studies. The presentation of the state of knowledge in this field is followed by the empirical research which consists in the two studies included in the paper, of which the second, presented in Chapter IV, is the substantial empirical part of this work, demonstrating the existence of the link between the indicators of the quality of the accounting information and the stock price informativeness. The first study, included in the end of Chapter III, is focused on determining the evolution of the stock price delay on the Romanian capital market, before and after the adoption of IFRS. The two studies have to be viewed and interpreted separately, our aim was not to make a comparison between them because these analyse different aspects of price information in different contexts. We believe that by researching this topic, we are able to make important contributions to studying the quality of financial reporting in relation to price informativeness on the capital market and to expand the literature on the valency and the influence of financial reporting.

All the research is done at the **macroeconomic** level, as the indicators used are calculated at country-level.

The paper is included in the area of researching the links between the quality of the accounting information and the price informativeness on the capital market and emphasizes the importance of their knowledge both for the capital owners of the companies and for their management teams. At the same time, this paper highlights the role of the accounting regulatory system (IFRS) in determining the type of information to be incorporated into the price of assets traded on the capital market.

The entire research approach contributes to the literature by analysing a large number of developed countries using the same system of financial-accounting reporting. We believe that understanding and knowing the impact of the financial reporting quality on the degree of informational efficiency of the capital market are issues of interest to any investor, manager and regulatory authority in the financial and accounting field.

## SUMMARY OF CHAPTER I.

## <u>CHAPTER I. FINANCIAL REPORTING QUALITY – DEFINING ASPECTS,</u> <u>GENERAL CONSIDERATIONS, STAGE OF KNOWLEDGE</u>

Financial reporting quality does not have a single, widely accepted definition. In the literature, we can find various definitions that vary significantly between individuals, projects, companies and organizations, depending on the purpose for which financial information is used. In order to have a certain degree of quality, the financial statements must meet certain quality criteria. These criteria are stated by both conceptual frameworks issued by the IASB and the FASB, concluding that the high quality of the accounting information is achieved by adhering to the objective and qualitative characteristics of the financial information.

The quality of financial statements is an indicator difficult to quantify, as it cannot be directly observed, being based on the perception of users of financial information. Each category of users has its own expectations and perceptions of what information is useful and of high quality. On the one hand, according to Biddle et al. (2009), the quality of financial reporting can be seen as the precision with which financial reports transmit information to capital investors related to expected cash-flows. On the other hand, according to Elbannan (2011), the quality of financial reporting refers to the extent to which a company's financial statements communicate the underlying economic condition and its performance during the measurement period. The reference to the position and performance of a company is also found in the definition developed by Tang et al. (2008), which considers the quality of financial reporting as the extent to which the financial statements provide true information about the entity's position and financial performance. A generally accepted definition is mentioned by Jonas & Blanchet (2000), who argue that quality financial reporting is full of comprehensive and transparent financial information that is not designed to complicate or mislead users. What we can see from these definitions is that they all link the quality of financial reporting to information provided by companies through their issued reports.

The role of financial reporting is complex and, according to the FASB, it aims to provide users with financial and other information which, together with information from other sources, facilitates the efficient functioning of the capital market and the efficient allocation of resources to the economy.

In order to have a certain degree of quality, the financial statements must meet certain quality criteria. These criteria are stated by both Conceptual Frameworks issued by the IASB and the FASB, concluding that the high quality of the accounting information is achieved through the adherence to the objective and qualitative characteristics of the financial information. Therefore,

the fundamental qualitative characteristics of accounting information are considered to be relevance and fair representation. The basic qualitative characteristics of accounting information are not the only ones presented in the conceptual frameworks of IASB and FASB. In addition, enhancing qualitative features are: comparability, verifiability, timeliness/availability and intelligibility.

Regarding the relationship between adoption of IFRS and the quality of accounting information, it is, in turn, a subject of great interest in the literature. Studies are conducted at country level as well as globally where countries are compared to capture the causes and effects of differences in the quality of financial reporting and how international standards have been adopted and implemented, depending on the specific national context.

Most company-level research is done in developed countries with free market economies. The relevance of applying IFRS to emerging or developing countries is still a topic of great interest to the academic world, but not only. This topic has not yet been sufficiently debated, empirical studies in this area being at the beginning of the road.

Regarding the way of measuring the quality of accounting information, there are different methods for determining the level of financial reporting quality. There is no generally valid measure of the accounting information quality, which can be measured according to the characteristics of the economic environment. However, accounting information is considered to be of high quality when it is relevant, reliable, credible, comprehensible and comparable. The most commonly used methods for determining the quality of accounting information are: earnings management, timely loss recognition and value relevance.

Earnings management occurs when managers use judgment in financial reporting and transaction classification to alter financial statements in order to mislead current and potential investors with respect to the company's economic performance or to influence contractual outcome conditional upon obtaining a certain level of financial indicators (Healy & Wahlen, 1999). At the same time, the earnings management also represents a transfer of funds between periods. The management of the earnings generally has two manifestations: the smoothing of the result, respectively the manipulation of the result towards the exclusive presentation of positive results. Smoothing the result is a specific form of outcome management, it is part of a whole. This occurs when managers take concrete actions to reduce the fluctuations in the companies' reported earnings. Result management or smoothing of the result are often used to measure the quality of accounting information due to their impact on the reported result (Chin et al, 2009, Liu & Yang, 2008 quoted by Liu et al., 2011). Earnings management is defined by Schipper (2005) as a specific purpose intervention in the external financial reporting process. Regarding the timely recognition of losses, Ball et al. (2000) considers it of primary importance to recognize financial losses when they occur, rather than spreading their effects over several periods of time, using earnings management techniques.

Among the methods of measuring of the accounting quality, value relevance is the one that fits best in our research, because it links the company's accounting results to its capital market values. Value relevance is the method by which the link between the quality of financial reporting and the capital market is achieved by using exchange rates and returns in relation to the net result or the accounting value of equity. The value relevance is traditionally seen as a synonym for correlation with market data: the more the accounting data are more correlated with stock prices or returns, the higher the value relevance is.

Financial reporting aims to provide relevant information to all its users, but especially to capital market investors who are extremely concerned about the economic and financial situation of companies. They take their investment decisions based on the information embedded in the financial reports issued by companies. Therefore, the relationship between stock prices and accounting data is of major interest to investors, and this is quantified through value rating models. Therefore, understanding the valuation models of a company is particularly important for investors, which can then determine the economic value of any asset by updating the expected benefits over the period of ownership of that asset.

This chapter, through its complexity, conceptually treats the quality of financial reporting, the relationship between accounting quality and IFRS, namely the way by which the adoption of International Financial Reporting Standards influences accounting quality. The chapter is vast because the term "accounting quality" is extensively studied in the literature, having different valences, presenting diverse ways of quantifying and being important in relation to several areas, such as the capital market. It is important to note that this chapter helps us in the theoretical presentation of what the quality of financial reporting and understanding of this concept is. The theoretical elements gained from this research are used in the following chapters, in which we restrict the scope of research and position ourselves more precisely in this area. We believe that we cannot choose our study niche without knowing the whole context of what we want to study. Thus, from the articles presented in this chapter, only a few are studied in more detail, in order to find an answer to the research question whether this quality of the accounting information produces a significant impact on the degree of informational efficiency of the capital market.

## SUMMARY OF CHAPTER II.

## CHAPTER II. THE DETERMINANTS OF THE ACCOUNTING QUALITY AND THEIR INFLUENCE ON THE CAPITAL MARKET

The final product of the accounting is the financial reports and for this reason their quality is considered to be the equivalent of the accounting quality. The lack of a single general definition of the quality of financial reporting encourages researchers to study, propose and validate different indicators. In this paper, we use four indicators of the financial reporting quality taken from the Global Economic Competitiveness Report (2014-2015), which are represented by: the power of the audit and financial reporting standards (SARS); investor protection; the effectiveness of corporate boards and the protection of the interests of the minority shareholders. At the same time, these four indicators compound the aggregate indicator Accountability, which is also used as a proxy for the financial reporting quality.

The strength of the auditing and financial reporting standards is influenced by a number of factors that were analysed for the first time globally by Boolaky, Krishnamurti & Hoque (2013). The results show that institutional infrastructure, financial market development and education and training, together play an important role in shaping the strength of the audit and financial reporting standards at country level. If accounting and auditing regulations are weak, powerless, companies may choose not to disclose information or manipulate the information required by its various user categories (Boolaky, Krishnamurti & Hoque, 2013). Since 1983, Zysman has argued that a country with a developed financial market requires strong auditing and financial reporting standards, compared to any other country with a less developed financial market.

Global studies show that the strength of the audit and financial reporting standards is influenced by a number of factors such as: the degree of capital market development, the level of education, expertise and professional competence of accountants, the presence of an adequate protection environment of investors.

Investor protection is defined as a key institutional factor affecting a company's choices regarding its policies, such as the voting rights of capital owners and the financial system (La Porta *et al.*, 2000). At the same time, it is regarded as being particularly represented by the protection of external investors provided by the laws and regulations applied (Shleifer & Wolfenzon, 2002). Measuring investor protection differs according to the national legal systems. At the same time, firms within the same country may offer different degrees of investor protection (Zhang *et al.*, 2017). The law and the quality of its application are determinants of the rights of the capital holders and the way they are protected (La Porta *et al.*, 1998). Existing differences in investor protection can help explain the reasons that lead to so much different companies' financing and control in some countries.

Investor protection is particularly important in the context of ensuring the quality of financial reporting. When investors finance companies, they usually get certain rights or powers that are generally protected by laws and regulations. Some of these rights include access to disclosure of information, which provides investors with the information they need to be able to exercise their other rights. In the absence of investor protection or in the case of the existence of a low level, the internal actors of a company, management in particular, and boards can hide or steal company profits by manipulating accounting figures.

Investor protection, in addition to the other major influences it has, also influences the development of financial markets. When investors are protected from the risk of expropriation, they pay more for the shares/bonds, making the issuance of shares or other securities to be more attractive for entrepreneurs (La Porta et al. 2000b). Investor protection plays an important role in limiting expropriation and is also associated with the superior valuation of a company's assets. Investor protection contributes to preventing the fall of the stock exchange as it restricts the company's internal actors to store bad news and to conceal fraud. Laws governing publicly listed companies improve the rights of investors as the firms are required to disclose financial information to have high quality and transparent reporting to reduce information asymmetry between foreign and domestic investors.

Investor protection also has implications for stock prices synchronicity. Morck *et al.* (2000) examines whether the negative correlation between the stock price synchronicity and the national gross product per capita is caused by the underdeveloped economies that offer low protection for investors and for private property rights. *Why can investor protection affect stock prices' movements*? The answer to this question is synthesized in the work elaborated by Morck *et al.* (2000), the results of which show that better protection of private property rights in developed countries reduces the stock prices synchronicity. The stock prices from the capital markets of high-income countries have a lower synchronicity than those of lower income countries. On the other hand, Jin & Myers (2006) suggest that investor protection does not affect synchronicity if companies are transparent.

Researching the literature, we can state that there is a direct positive link between the quality of financial information and the protection of investors. Firms from countries that have a high level of protection of investors have a higher value relevance of accounting figures, compared with firms in countries where economic environment is characterized by a low level of investor protection.

## SUMMARY OF CHAPTER III.

# CHAPTER III. THE REVELATORY PRICE EFFECT IN THE CONTEXT OF THE ACCOUNTING QUALITY

This chapter begins with thw description of how the disclosure of information by firms influences their stock exchange rates. A particular emphasis is placed on explaining the revelatory effect of stock price and its importance in the investment decision-making process by managers. The way in which company-specific information is incorporated into the stock prices becomes important both for those directly involved in stock exchange trading, but also for the management, who has to learn from what is happening on the financial market. The conception that capital markets are only collateral elements that do not affect the real economy is erroneous, as demonstrated by Bond *et al.* (2012). They argue that the idea that capital markets have a real impact on economic activity must be treated with great seriousness.

In this chapter we have presented the concept of informational efficiency, through the definitions, the efficiency forms and the methods of measurement. A special place was devoted to presenting the relation between accounting data and the informational efficiency of the capital markets, while being aware of the limits of our approach due to the vast literature in this field. We also conducted a study on how the information incorporates into stock prices in the case of the Romanian capital market, wishing to capture the impact of the adoption of IFRSs in relation to these variables.

The efficient markets' theory argues that if capital markets are efficient, it can be considered at any time that the stock price reflects entirely all available information from the market. Although market efficiency is a highly debated subject, with thousands of articles published so far, there is still no consensus on the issue of the efficiency of capital markets. Several researchers claim that perfect efficiency is an abstract term, in fact there is no such thing (Campbell et al., 1997; Lo, 2008; Lo & MacKinlay, 1999). They consider that it is more correct to talk about relative efficiency. This is the efficiency of a market measured in comparison to another market. In other words, it is more useful to determine the degree of informational efficiency than to test whether a market is efficient or not. Among the determinants of informational efficiency are the degree of openness of the capital markets to foreign investors, changes in the regulatory framework, the adoption of an electronic trading system, the implementation of the price restraint system and the appearance of the financial crisis (Lim et al., 2008). These factors are enlarged by others, such as the investor protection, press freedom, foreign portfolio investment and market integration (according to Plesoianu, 2015). Regarding the relationship between accounting results and stock prices, Ball & Brown (1968) are the pioneers of this analysis. They establish that the efficiency of the capital market is determined by adequate data sources, the most important of which is the companies' annual reports that reveal their annual net result. Thus, financial data, together with

the choice of accounting policies, prove to be of major importance in the process of stock price formation.

After studying the related literature, we notice that the accounting standards clearly influence the quality of financial reporting (Barth *et al.*, 2008; Bartov *et al.*, 2005). Thus, we expect the adoption of quality accounting standards, such as IFRSs, to effectively contribute to increasing the quality of accounting information and to ensure better information incorporation in stock prices and easier user access.

The informational efficiency of the capital market in the context of the financial reporting quality can be quantified both by the stock price delay (Delay) and stock prices synchronicity ( $\mathbb{R}^2$ ). An efficient market is characterized as one where the prices of traded assets respond instantly to the arrival of new information on the market (Lim & Hooy, 2010). Thus, the Delay indicator captures the essence of informational efficiency of capital markets, and how quickly new information is incorporated into the price. Stock prices synchronicity is about determining the tandem movement of the stock prices of the capital market assets. This synchronicity is most often determined by the determinant coefficient ( $\mathbb{R}^2$ ), which correlates the individual stock prices / returns of listed companies on the capital market with the overall market profitability data. The higher the value of  $\mathbb{R}^2$ , the higher the stock price synchronicity, and the lesser the stock price informativeness. The tandem movement of stock prices implies a smaller amount of information specific to firms incorporated in prices, which are mostly influenced by market-wide information.

Regarding the influence of the adoption of International Financial Reporting Standards on stock price informativeness, the opinions are divided. Supporters of IFRSs believe that these standards improve the disclosure of company-specific information, information that is easier to access to the market and is of real use to investors in the decision-making process. Thus, traded assets become more informative and price synchronicity decreases.

The study conducted within this chapter aims to determine the way in which information is incorporated into stock prices on the capital market of Romania. Through this study, we want to analyse the stock prices' response to the new available market information and to capture the effects of adopting IFRSs on the Delay indicator. The obtained results show that, on the Romanian capital market, the stock prices' reaction to the new available information decreases after the adoption of IFRS. Therefore, the adoption of IFRS in Romania has a negative impact on the delay in the incorporation of information into prices. Of course, these results must be interpreted and explained according to the entire national context.

## SUMMARY OF CHAPTER IV

## CHAPTER IV. EMPIRICAL RESEARCH ON THE IMPACT OF THE FINANCIAL REPORTING QUALITY ON THE STOCK PRICES' INFORMATIVENESS

The Global Financial Crisis and various corporate scandals (Enron, WorldCom, Tyco) underline the relevance of international accounting and financial reporting standards (IFRS), which help to prevent frauds and to avoid management mistakes (Uyar, Gungormus & Kuzey, 2017). Moreover, transparency is one of the core principles of good corporate governance, promoting the report of material facts in real time to the stakeholders and by this contributing to more confidence in the management. Concerning the financial aspects of a business, transparency can be maintained using IFRS (WEF, GCR 2014-2015). That is why we choose to include in our sample only countries that report accordingly to IFRS. Also, companies adopting IFRS have less earnings management, more timely loss recognition and more value relevance of earnings, all of which can be interpreted as evidence of higher accounting quality. Barth, Landsman & Lang (2008) and Ball (2006) argue that a key benefit of IFRS to investors is a better-quality accounting. In line with these facts, our paper examines the role that accounting quality has on the type of information that incorporates into stock prices across a sample of developed markets.

The final product of accounting is represented by the financial reports, and for this reason, the accounting quality is considered in this paper interchangeable with financial reporting quality. The non-existence of a generally accepted definition or measurement method for financial reporting quality encourages researchers to study, propose and validate in different contexts a variety of indicators.

This chapter was valued through a paper already accepted for publication by the Journal of Economic Research (Economska Research – ISI).

We use four indicators of financial reporting quality which are found in *The Global Competitiveness Report (GCR) 2014-2015*: the strength of auditing and reporting standards; the strength of investor protection; the efficacy of corporate boards and the protection of minority shareholders' interests. Recently, papers such as Boolaky (2012), Boolaky & Cooper (2015) and Nurunnabi (2017) have used these indicators. *The GCR 2014-2015* issued by the World Economic Forum provides a comparative qualitative picture of the economic and business environments of 144 individual countries. The report measures a great variety of indicators grouped in 12 pillars which form the Global Competitiveness Index (GCI). The survey questions are assessed on a 7-point Likert scale, where 1 is the lowest possible and 7 the highest possible. Moreover, these four

variables compound the aggregate indicator named *Accountability* which was also used as a proxy for accounting quality.

Information about fundamentals of a firm is capitalised into stock prices in two ways: through a general revaluation of stock values following the release of public information and through the trading activity of risk arbitrageurs who gather and possess private information (Durnev, Morck, Yeung & Zarowin, 2003). Research shows that financial markets impact the real economy through the information that real decision makers learn from stock prices and use it to guide their decisions and actions (Bond, Edmans, & Goldstein, 2012). The real decision makers in case of companies are the management teams. Managers can learn from market prices because even if they are the most informed agents about a specific firm, they can still miss some information which could be in possession of outsiders. That is why, stock price informativeness is of high interest for the management. In our study, we have used the most popular measures of stock price informativeness: stock price synchronicity and idiosyncratic volatility. The reason for using both measures is that stock price synchronicity and idiosyncratic volatility are not equivalent in measuring the incorporation of firm-specific information into the stock prices. As Li, Rajgopal & Venkatachalam (2014) demonstrate, these measures may lead to contradictory inferences, especially if there is a correlation between the systematic risk and the variable of interest (e.g. earning quality or governance quality). Therefore, stock price synchronicity and idiosyncratic volatility should not be viewed as interchangeable measures.

Our findings exhibit a negative connection between accounting quality and stock price synchronicity. Also, our results show that accounting quality is positively correlated to idiosyncratic volatility. These are consistent with Morck, Yeung & Yu (2000) and Cheong & Zurbruegg (2016). Morck et al. (2000) show that among developed stock markets, higher firm-specific returns variation is associated with stronger public investor property rights and accounting standards are negatively correlated with synchronicity. Cheong & Zurbruegg (2016) find that less firm-level information reaches the market if the enforcement of the accounting standards is weak.

This study contributes to the literature by using a set of markets that have adopted the same disclosure rules and it highlights the importance of the compliance and enforcement of regime. Also, our paper fills the gap regarding the connection between accounting quality and stock price informativeness in the case of IFRS adopters in the recent years. However, this study extends the empirical literature on financial reporting quality by exploring its relationship to stock-price informativeness. Our proxies for financial accounting quality are the strength of auditing and reporting standards; the strength of investor protection; the efficacy of corporate boards; and the protection of minority shareholders' interests. We also use *Accountability* as an aggregate indicator of accounting quality. We use stock price synchronicity and idiosyncratic volatility as proxies for stock price informativeness.

Using data from 18 developed national stock markets, our results show robust evidence supporting the hypothesis that financial reporting quality influences the co-movements of the shares listed on the capital market and the incorporation of firm-specific information into stock prices. The higher is the accounting quality, the more firm-specific information can be found in the stock prices. The higher is the accounting quality, the lower is stock price synchronicity.

The existence and direction of causality between financial reporting quality and stock price informativeness have implications for several users of financial information, as policy setters and the management of the companies. The policy setters may learn from the effects of the accounting quality on the stock market and thus make efforts for applying and maintaining International Financial Reporting Standards and International Auditing Standards, as these standards assure a certain level of reporting quality in a country. The real effects of financial markets determine the management to pay great attention to the movements from the capital markets and to learn from the stock prices. The new information they obtain from stock prices can be used in their decisionmaking process and could guide their actions.

The fact that financial markets have a real effect through the transmission of information does not imply that real decision makers are less informed that traders, but only that they do not have perfect information about every decision-relevant factor. This information can be in possession of outsiders. Thus, real decision makers, such as the management teams, may be the most informed agents in the economy about the firm, but there are still aspects about which they can learn from the outsiders (Bond et al., 2012) and which can help them in the decision-making process.

## **GENERAL CONCLUSIONS AND FUTURE RESEARCH DIRECTIONS**

This paper represents a small step towards a better understanding of the financial reporting quality and its importance in relation to the capital market, to the process of formation and the evolution of stock prices.

This paper contributes to the expansion of empirical literature on the issue of the financial reporting quality by exploring its relationship with the stock prices informativeness. This land is not yet fully overwhelmed, empirical studies, at least in our knowledge, are quite limited in number. Our study also contributes to the importance of applying International Financial Reporting Standards, considered to be a set of high-quality standards, and how these standards have an impact on stock prices' informativeness. Our thesis is within the scope of the research regarding the way through which transparency and disclosure of company financial information influence stock market price informativeness. Thus, we also contribute to the widening of the overall image of stock prices informativeness in developed countries, following Morck et al. (2000), Jin & Myers (2006) and Fernandes & Ferreira (2009).

In the context of accounting convergence and harmonization, as well as that of the globalization of capital markets, capturing an overall picture regarding the quality of financial reporting and its impact on the real economy is a necessary and useful step. The existence of causality between the quality of financial reporting and the informational efficiency of capital markets has implications for several categories of users of accounting information. First of all, this is of particular importance for the management of the listed companies, which can learn new aspects from the evolution of the stock prices of the companies they lead. Secondly, the relationship between the quality of financial reporting and the capital market is useful to regulatory bodies in the financial and accounting field, which can draw conclusions from the effects of the accounting information quality and, thus, can make efforts to implement and maintain high quality International Financial Reporting Standards and International Standards of Auditing, as these standards provide a certain level of quality of financial reporting. Moreover, the real effects of financial markets determine the management of companies to pay more attention to capital market movements and to learn from what is happening there, through the evolution of stock prices.

At the same time, IFRS standards are considered to particularly emphasize the information disclosure by the companies and are more market-oriented compared to local accounting standards applied by different states (Ding *et al.*, 2007). Therefore, these topics increase transparency and improve the quality of financial reporting. International Financial Reporting Standards are considered to be a set of standards that help improve the financial reporting quality and increase the amount of information disclosed to the public by companies applying them. Thus, these benefits of applying IFRS are expected to produce significant benefits on the capital market, which

in turn will lead to an increase in the amount of company-specific information that gets incorporated in stock prices.

Financial reporting quality can be defined in many ways, not having a single definition, and one of these is through the characteristics of accounting information. From the study on the framework documents issued by the IASB and the FASB, it can be concluded that there are two distinct categories in which the qualitative characteristics of the accounting information are grouped: fundamental characteristics and enhancing characteristics. Fundamental features include relevance and faithful representation, while the enhancing characteristics are represented by comparability, verifibility, timeliness, and understandability. These characteristics are important because they are the basis for measuring the accounting quality. Based on these features of accounting information, various models for assessing the quality of financial reporting have been developed. There is no generally valid measure of the quality of accounting information, which can be quantified accordingly to the characteristics of the economic environment. Based on the analysis of the literature, one can notice that the most commonly used methods in determining the quality of accounting information are: earnings management, timely loss recognition and value relevance.

In the investment decisions process, the participants to the financial markets resort to estimates and predictions about the future evolution of the titles they are interested in, but also on overall market developments. The basis of these estimates is the financial and accounting statements issued periodically by companies, this being the reason why the quality of these reports becomes an increasingly pressing need. At the same time, this is one of the factors that have led to the emergence and improvement of international accounting standards over the past decades, as well as efforts to converge national standards to Community standards in the field of accounting. Under these circumstances, there is a close link between the good functioning of the financial market, the quality of the accounting reporting and the fairness of the forecasts that are achieved through the use of econometric models. This raises the growing concern of quantifying the impact of the accounting quality on the informational efficiency of the stock market.

The quality of the accounting information is determined by internal and external factors of the firm. Soderstrom & Sun (2007) draws a schematic framework of the determinants of the quality of financial information that includes: legislative and political system; accounting standards; capital market; the structure of capital; capital owners; the tax system. We have chosen to focus on four individual determinants of the quality of accounting information, according to the Global Competitiveness Report 2014-2015: the power of auditing and financial reporting standards; investor protection; the effectiveness of corporate boards; and the protection of the interests of minority shareholders.

The link between the capital market and the real economic activity is demonstrated by research in the field (Hayek, 1945; Miller & Bahnson, 2002; Bond *et al.*, 2012; Edmans *et al.*, 2017). Financial markets are intensively analysed, but the question that arises according to Bond *et al.* (2012) is the following: 'Is the capital market just a collateral aspect or it affects the real economic activity?'.

Indeed, this is an interesting question which response has major implications for the importance of embedding information in stock prices. Hayek (1945) believes that real decision makers find new information in stock prices and then use it in the economic decision-making process. The capital market is the place where many speculators meet each piece of information and want to take advantage of it. Prices include these different pieces of information and ultimately reflect a clear valuation of the firm's value. Real decision makers, such as managers, investors, customers, employees, learn from this information and use it in making their own decisions, cascading cashflows and company values. Thus, the capital market has an impact on real economic activity through the transmission of information (Baumol, 1965).

The assumption that the capital markets have an impact through the transmission of information does not mean that real decision makers are less informed than other market participants, but only that they do not have the perfect information about each relevant decision-making factor. Thus, those outside the company can have important information that is useful to real decision makers. Therefore, decision makers, especially the management, can be the most informed agents in an economy with regard to the companies they run, and there may, however, be some issues to be learned from those outsides of these companies.

The literature demonstrates that the disclosure of information by companies influences the stock prices of their assets traded on the capital markets. The way in which company-specific information is incorporated into the stock prices becomes important for both those directly involved in stock market trading and for the management, who has to learn new things about what is happening on the financial market. According to Miller & Bahnson (2002), capital market investors play an important role in the evolution of the price of listed securities on that market, which is heavily influenced by their degree of their involvement.

Through our research, we aim to capture how accounting information impacts the informational efficiency of the stock markets. As ways of quantifying the informational efficiency of capital markets, we study the stock price delay (Delay) and the stock price synchronicity. Our work includes two empirical studies. The first one is related to the determination of stock price delay in the case of Romania, while the second one focuses on the impact of the quality of financial reporting on the stock price informativeness. In the latter case, price informativeness is measured by stock price synchronicity and idiosyncratic volatility.

The first study, which is related to the stock price delay on the Romanian capital market, reveals how the stock price responds to new market information. We followed the methodology developed by Hou & Moskowitz (2005) and Bae *et al.* (2012), the time horizon being 2005-2014. Also, the analysis period was divided into two subperiods, depending on the date of adoption of the IFRS, in order to overcome the effect of applying these standards. The results show that the adoption of IFRS did not have a positive impact on how new market information is incorporated into the stock price, as the Delay indicator increases over the analysed period. Of course, these results must be corroborated with the national and institutional context. Although this analysis is in fact a case

study on a single emerging market, the methodology can be replicated on other countries with similar economies.

The second, and the most extensive study, provides an answer to the research question: "Is there a link between the quality of financial reporting and the capital market?" The influence of the quality of the accounting information on the capital market is studied through the way it impacts the incorporation of the company-specific information into the stock price. We chose to use two alternative measures of stock price informativeness to define the dependent variable: stock price synchronicity and idiosyncratic volatility. We measure the quality of financial reporting through five indicators: the strength of audit and financial reporting standards; investor protection; the effectiveness of corporate boards; the protection of the interests of minority shareholders and Accountability. The latter is an aggregate indicator that includes all four other previous indicators. The variables used as proxies for the quality of financial reporting were taken from the Global Economic Report 2014-2015.

Following the analysis of 18 developed capital markets over the period 2004-2015, which implements the International Financial Reporting Standards, the results show that the qualitative level of financial reporting impacts the informational efficiency of the capital market, as measured by stock price informativeness. The higher the financial reporting quality indicators (investor protection, the strength of auditing and financial reporting standards, the effectiveness of corporate boards, the protection of minority shareholders' rights), the lower the synchronicity of prices and the idiosyncratic volatility, which means there is an increase in the amount of company-specific information being embedded into stock prices.

These results have important implications and show that stock prices are a source of high-value information for many users, especially for the management of listed companies, which can find out new aspects about the entities they run. Also, the results are important for the financial and accounting regulatory bodies that can guide their policies so that the quality of financial reporting improves, not only by applying quality financial standards, but also by ensuring their understanding and control their application. Thus, the revealing effect of stock prices plays a leading role in corporate decision-making.

Our study contributes to the literature by using a set of developed countries that have adopted the same rules and policies for presenting and disclosing financial information, and by emphasizing the importance of the financial-accounting regime that ensures a certain level of the quality of financial reporting. At the same time, our study demonstrates the clear link between the quality of financial reporting and the capital market. Thus, the accounting field is also important in terms of the capital market. Accounting should not be seen as an isolated aspect or just as a set of documents that already contain "expired" data, as its implications are major in terms of price informational efficiency in financial markets.

At the same time, the results obtained by us are similar to those in the works that establish a reverse link between the quality of accounting information and the synchronicity of stock exchange rates and link the greater variation of the company's specific information on the better functioning of the capital markets, such as those developed by Morck et al. (2000) and Cheong & Zurbruegg (2016).

The novelty of the paper is given by the indicators used to measure the quality of accounting information. Some of these, investor protection and the power of audit and financial reporting standards, have been used in relation to financial reporting, but our knowledge has not been used together in panel studies in relation to price information in the market of capital.

Regarding the limits of the research, our approach is far from exhaustive. The studies in our field, which is situated at the intersection of accounting and empirical finance, are extremely vast. That is why we have chosen what we considered that is the closest to our research, but the assessments are subjective. Extensive material on this topic can provide new research directions on this topic. At the same time, in the empirical study we chose to include only developed capital markets, but the tested relationships can be replicated in emerging markets as well.

Our analysis still has a limit, which can be solved in future research. This is due to the fact that the research is carried out at macroeconomic level, but the regression analysis undertaken can also be applied at microeconomic level, using individual securities. Of course, measuring business-level indicators will be a real challenge, both because of the availability of data and of the considerable workload.

Also, another limit of research lies in the sample of developed countries. It can be extended, including several developed states, or a longer time horizon. The limits of our research are mainly due to the difficulties encountered in accessing and obtaining the data needed for the analysis, but we leave the research directions open for the near future.

We end our thesis by pointing out that the analysis of the impact of the quality of financial reporting on the capital market's informational efficiency provides useful evidences to regulatory financial bodies, which may decide to adopt and maintain high-quality standards (IFRS). At the same time, the management of the companies and the capital market investors can get significant benefits from understanding this causal relationship and the impact that financial data provided by companies have on stock prices. The real effects of financial markets determine the management to pay special attention to the movements from these markets and learn from the evolution of stock prices of traded assets belonging to the companies they run. The new information that managers obtain from the capital market can be used in decision-making and thus has an impact on their business decisions and actions.

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