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**Article**

## Segment disclosure practices and determinants: Evidence from Romanian listed companies

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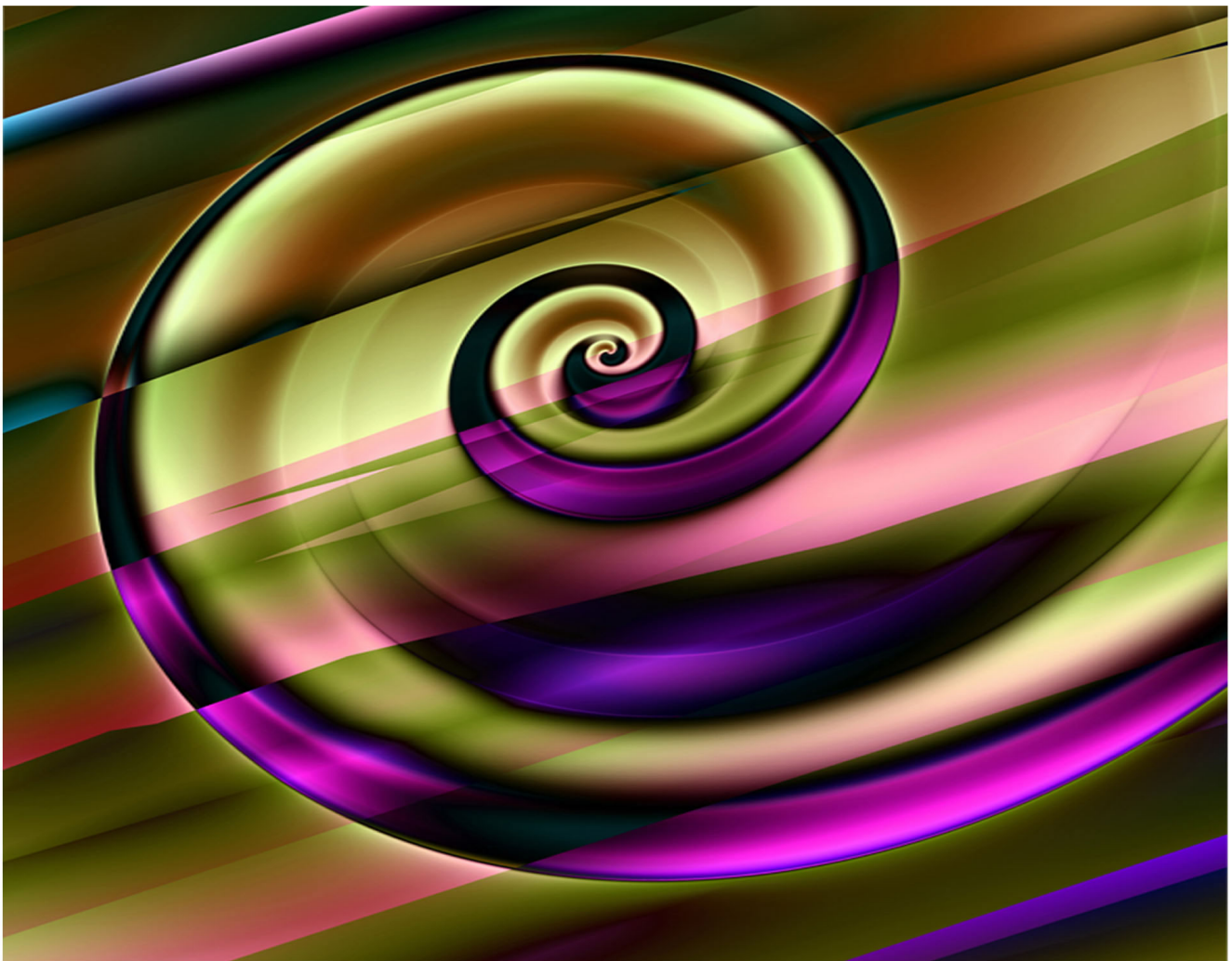
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## SEGMENT DISCLOSURE PRACTICES AND DETERMINANTS: EVIDENCE FROM ROMANIAN LISTED COMPANIES

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**Abstract:** This paper aims to be a theoretical but also an empirical study regarding the way listed companies in Romania comply with the requirements of IFRS 8 “Operating Segments”, assessing which is the information companies usually disclose about their operating segments. The second part of the study is dedicated to studying the factors which determine companies to disclose high quality segment information, particular attention is being paid to assessing to what extent does an independently structured board influence the quality of segment reporting or if there are more powerful internal factors that influence the way companies implement this reporting standard.

**Keywords:** Boards’ independence, institutional investors, Romanian listed companies, Segment reporting

### 1. INTRODUCTION

The subject of financial and non-financial transparency has gained more and more attention, especially after a series of economic failures, part of them being generated by informational asymmetry problems. That is why worldwide authorities have been making continuous efforts in ameliorating disclosure policies as to permit all stakeholders to build a correct overview

This study aims, on one hand, to assess the extent to which Romanian listed companies have understood the importance of segment reporting, and how does the implementation of IFRS 8 is being driven in those countries. On the other hand, in an emerging country such as Romania, which is just beginning to implement the International Financial Reporting Standards, it is very important to understand which are the factors that influence companies to comply with the requirements of IFRS 8 and consequently to disclose high-quality segment information.

Particular attention will be paid to the relation between boards’ composition and independence and the segment information disclosure practices. There have been conducted a lot of studies regarding the connection between the boards’ independence and the financial and non-financial disclosure process (Armstrong et al., 2013, Ho and Wong, 2013, Klein, 2002, Patelli and Prencipe, 2007) in many developed countries, but little is known about this very important issue in European emerging countries even though those countries are considered the engine of economic growth, this being the reason why they are nowadays drawing more and more the attention of worldwide researchers. Given the increasing role of the independent board members in ensuring a sound and transparent financial disclosure process, the study will try to determine if the composition of the board does influence the amount and quality of the segment information



that companies disclose, or if there are more powerful internal factors, such as company's size or institutional investors, which drive the implementation of an important disclosure standard, namely IFRS 8 "Operating segments".

## **2. LITERATURE REVIEW**

### **2.1. IFRS 8 "SEGMENT REPORTING"- ONE STEP CLOSER TO TRANSPARENCY AND ACCOUNTABILITY**

Segment reporting has gained important attention in the last years, especially in the context of the increase of the number of worldwide companies and business complexity. In the last years there have been conducted a lot of worldwide studies which have drawn the attention on the increasing importance stakeholders give to receiving high quality business segments information (Nobes and Parker, 2008).

This subject has drawn the attention of the international accounting regulatory bodies. In order to meet the informational needs of the companies' stakeholders, in 1976, the American regulatory body FASB launched the first set of regulations regarding the segment reporting issues. Five years later, the international homologous body IASC has also launched IAS 14, which required the preparers of the financial statements to use a two-tier approach, requiring disclosure by both line of business and geographic regions (Nichols et al., 2012).

The increase both in business complexity and, consequently, in the financial statements' users needs has led to a long revision process which had ultimately led to the revision of IAS 14 and to the implementation of IFRS 8 which has replaces this former segment reporting standard.

IFRS 8 has taken the managerial approach from SFAS 131, according to which segment reporting is based on those entity components monitored by managers when taking strategic decisions. The specialists' motivation was that stakeholders should have access to the information the chief operation decision maker (CODM) reviews regularly in allocating resources to segments and when assessing the company's segments financial results (The KPMG International Standards Group, 2012).

The core principle of IFRS 8 is the disclosure of information that enables users of an entity's financial statements to evaluate the nature and financial effects of the business activities in which it engages and the economic environment in which it operates (Ernst & Young, 2009).

IFRS 8 prescribes the way companies should identify their reporting segments and those information which should be disclosed to all the companies' stakeholders. There are 5 steps which should be followed, namely:

1. Step one: Identification of the Chief Operation Decision Maker (CODM);
2. Step two: Identification of operating segments;
3. Step three: Aggregation of operating segments;
4. Step four: Determination of reportable segments;
5. Step five: Segment disclosure information. (The KPMG International Standards Group, 2012)

Regarding this last step, the most complex of them, IFRS 8 gives detailed information regarding the compulsory information which should be provided for each reporting segment. There are nine types of information which should be disclosed: external revenues, internal revenues (between segments), interest revenue and expense, depreciation and amortisation, other material items of revenue and expense, income tax. Also, entities are required to disclose reconciliation items between the information disclosed in the financial statements and the

amounts disclosed for all operating segments, as they are allowed to evaluate the assets, liabilities, revenues and expenses using that basis they use internally, which may be different from the one prescribed by the IAS/IFRS-s.

As previously described, segment reporting is extremely important in helping all stakeholders understand the business as a whole but also analysing all its operating segments in making decisions. There have been conducted many studies especially in developed countries, with great tradition in applying International Financial Reporting Standards, but little is known about the way companies in emerging countries have understood the importance of disclosing high quality segment information.

Given the fact that Romania has recently implemented the International Financial Reporting Standards it is important to discover which is the extent to which listed companies comply with the segment reporting requirements and which is the information companies usually disclose. Moreover, it is also very important to understand what determines Romanian listed companies to disclose more operating segment information, focusing on those internal factors which have a major influence.

## **2.2. CORPORATE GOVERNANCE AND THE IMPORTANCE OF TRANSPARENCY**

The theme of corporate governance has become of a great concern during the last 40 years, especially after a series of economic failures, which have led to the investors' loss of confidence in the managers' ability of best leading the great corporations and public institutions (Cheffins, 2012). There has been an increase in the attention given by worldwide institutions to the improvement of the corporate governance rules and regulations, as to avoid new economic failures and to increase the companies' accountability towards all their stakeholders.

The Organisation for Economic Cooperation and Development (OECD) has released in 1999 a set of principles, grouped in 6 themes of concern, namely: Ensuring the Basis for an Effective Corporate Governance Framework, The Rights of Shareholders and Key Ownership Functions, The Equitable Treatment of Shareholders, The Role of Stakeholders in Corporate Governance, The Responsibilities of the Board and the last, but not the least, Disclosure and Transparency (OECD Corporate Governance Principles, 2004).

The importance of transparency has been also seized by the European authorities. In 2003, the European Commission has released the Communication 284 (COM-284), which addresses three main issues, one of them regarding the disclosure policies.

Disclosure and transparency issues are also quite important in the emerging countries, which are considered to be the engine of economic growth (Albu et al., 2013). There have been conducted a large number of studies in those countries regarding the importance of the existence of a sound financial and non-financial disclosure system.

One very strong evidence that sustains the importance of a strong disclosure mechanism is a study conducted in Turkey in 2013. Ertuna and Tukul, the authors of this research, have proven the fact that the companies that wish to attract foreign institutional investments usually increase the quality and amount of financial and non-financial information disclosed.

## **2.3. THE CONNECTION BETWEEN THE BOARDS' AND INDEPENDENCE AND THE FINANCIAL AND NON-FINANCIAL TRANSPARENCY**

As I previously mentioned, nowadays financial and non-financial transparency has gained more and more importance, mostly after a series of long debated financial scandals, many of them generated by the agency problems and by informational asymmetry.

Armstrong et al. (2013) have discovered the fact that even though independent board members have access to internal data and reports provided by companies' managers, they usually rely more on public disclosed information, given the last years enforcement of the international financial reporting standards. Jesover and Kirkpatrick (2005) also sustain the idea that independent board members have the power and expertise to improve the companies' disclosure policies, making them more accountable towards all their stakeholders.

Moreover, other studies such as the one conducted by Bianchi et al. in 2011 support the fact that companies where the boards are composed mainly of independent directors tend to be more compliant with rules and regulations, including those regarding disclosure and transparency.

A large number of other studies (Armstrong et al., 2013, Klein, 2002, Patelli and Prencipe, 2007) have shown the fact that the appointment of a larger number of independent board members is positively related to a decrease in the informational asymmetry materialised in an increase of the quantity and quality of information disclosed by companies.

As an example, a study of Armstrong et al. (2013) concludes the fact that an increase of 18% in the number of independent directors is followed by a 6% decrease in the informational asymmetry existing in the companies. Other studies performed by Klein in 2002, Prencipe and Patelli in 2007 have also shown a positive relation between the board's independence and the reduction of the asymmetry problems.

Moreover, other studies stand for the importance of an independent audit committee. Ho and Wong (2001) have discovered the fact that companies which appoint an audit committee usually tend to be more transparent. Armstrong et al. (2013) also stand for the fact that when a company increases its number of audit committee independent directors, there is a decrease in the informational asymmetry.

A very important opinion is the one Big4 specialists have regarding the importance the existence and composition of an audit committee has in increasing the quality and amount of information disclosed by companies. Deloitte specialists (2014) support the fact that among the audit committee's responsibilities, one of the most important is related to review the quality of financial statements and other financial reports, so is expectable to seize a positive relation between the existence and composition of the audit committee and the quality of financial information.

### **3. RESEARCH METHODOLOGY**

#### **3.1. Sample description and data sources**

My study aims to discover to what extent companies listed in the first tier of the Bucharest Stock Exchange do comply with the requirements of IFRS 8. Moreover, I will try to seize the factors which influence the segment disclosure reporting practices, paying special attention to assessing the extent to which the board composition influences these practices implemented by the companies in the sample.

The analysed sample is comprised of 15 non-financial companies, listed on the Bucharest Stock Exchange. I chose to eliminate from the analysed sample the banks and other financial institutions (10 companies) in order to maintain the sample's homogeneity, given that banks and financial institutions have other particular operating segments and consequently other segment reporting practices.

I have taken into account the 2012 annual reports disclosed by the analysed companies, but also other information available on the companies' websites and on the Bucharest Stock Exchange website.

#### **3.2. Research questions**

The first research question will try to find out to what extent Romanian listed companies comply with the disclosure requirements in IFRS 8.

First of all, I will analyse the segment information disclosed by each company, as required by IFRS 8. The compliance has been measured through an index, IFRS8Compliance, inspired by the IFRS 8 requirements and by the Deloitte segment reporting check-list (2007). If a company discloses information regarding one element in the list, the element is “checked” and the index’s value increases by one. In other words, the index is a sum of the “checked” elements presented in the following list, which companies disclose in their annual reports.

- Factors used in determining the operating segments;
- The main products and services which generate revenues for the operating segments;
- Information regarding the main clients;
- Revenues obtained from the activities in Romania, respectively in other countries;
- Assets and liabilities related to the activity in Romania, respectively in other countries;
- Each operating segment’s profit or loss;
- Each segment’s assets;
- Each segment’s own liabilities;
- Internal revenues;
- External revenues;;
- Interest revenues;
- Interest expenses;
- Depreciation and impairment expenses;
- Other significant revenues and expenses;
- Operating segments’ revenues valuation basis;
- Operating segments’ assets and liabilities valuation basis;
- Reconciliations between the values disclosed for the segments and those disclosed in the financial segments.

Then, using a four points Likert scale, I will assess the compliance with the IFRS 8 requirements. The way the level of compliance is assessed is described in Fig. 1.

Values of IFRS8 Compliance index	Compliance level
0	Lack of compliance
1-5	Low compliance
6-11	Medium compliance
12-17	High compliance

Fig. 1: The IFRS 8 compliance assessment method

Finally, I will try to investigate which are the segment information Romanian listed companies are more willing to disclose.

The second research question intends to discover which are the factors that determine the analysed companies to comply with the requirements of IFRS 8.

Taking into account previous studies (Berglof and Pajuste, 2005, Crawford et al., 2012, Ojo, 2009, Glaum, 2013, Morris et al., 2012, Bonson and Escobar, 2006, Glaum, 2013, Kowalewski et al., 2007, Armstrong et al., 2013, Klein, 2002, Patelli and Prencipe, 2007, Ho and Wong, 2001, Ertuna and Tukel, 2013), I will analyse the influence of 8 internal factors, namely: the companies’ size, profit, percentage of equity held by institutional investors, the type of auditor, the board’s size, the board’s percentage of independent members, the size of the audit committee and the percentage of independent audit committee members.

Based on these previous studies’ results (Berglof and Pajuste, 2005, Crawford et al, 2012, Morris et al., 2012, Bonson and Escobar, 2006, Glaum, 2013, Kowalewski et al., 2007), it is

expectable to seize a positive connection between the companies' size and profitability and the companies transparency, assessed through the IFRS 8 compliance level. According to Morris et al. (2012), more profitable companies tend to disclose more information so that investors can assess better the credibility of their reported earnings and they also tend to increase their voluntary disclosures.

Previous studies (Morris et al., 2012, Bonson and Escobar, 2006, Glaum, 2013) have demonstrated that generally larger audit firms are associated with better financial disclosure, this being the reason why it is expectable to seize a positive relation between the quality of segment reporting and the type of the auditor (Big 4 of not).

It is also expectable to seize a positive connection between a larger presence of institutional investors and the IFRS 8 compliance level, as previous studies (Ertuna and Tukul, 2013) have demonstrated that companies that want to attract more institutional investors usually tend to improve their disclosure practices.

Finally, regarding the size and independence of the board and particularly of the audit committee, it is also expectable to seize a positive connection between these factors and the compliance index, given that previous studies (Armstrong et al., 2013, Klein, 2002, Patelli and Prencipe, 2007, Ho and Wong, 2001) have underlined the connection between the independence and size of the board and audit committee and much more transparent annual reports.

#### **4. RESULTS AND ANALYSIS**

Regarding the first research question, out of the 15 companies analysed in the sample, two of them do not mention anything about their operating segments in their annual reports, even though IFRS 8 requires that for all listed companies. Five of the analysed companies have a separate note in their financial statements where they define the concept of operating segment (some of them still disclose the definition in the former segment reporting standard, IAS 14) and state the fact that their activity is unitary, identifying one single operating segment. Only eight companies in the sample (53,33%) sustain the fact that their activity is more diversified, identifying more than one operating segment.

The results of this first research question contradict other European studies. While Nichols et al. (2012) have discovered that 84% of the European listed companies identify operating segments and disclose information regarding their particularities, activity and financial performances, in Romania only 53,33% of the analysed companies are aware of the particularities of their activity and of the existence of more operating segments. One explanation may be the fact that IFRS 8 is being applied only from the beginning of 2009. Another reason may be the fact that Romanian listed companies have a recent history in implementing the International Financial Reporting Standards, given the fact that only since 2012 listed companies must comply with those requirements also in their individual financial statements. Future studies will analyse the coherence between the number of operating segments identified by Romanian listed companies and other information available in their annual reports, websites and other sources.

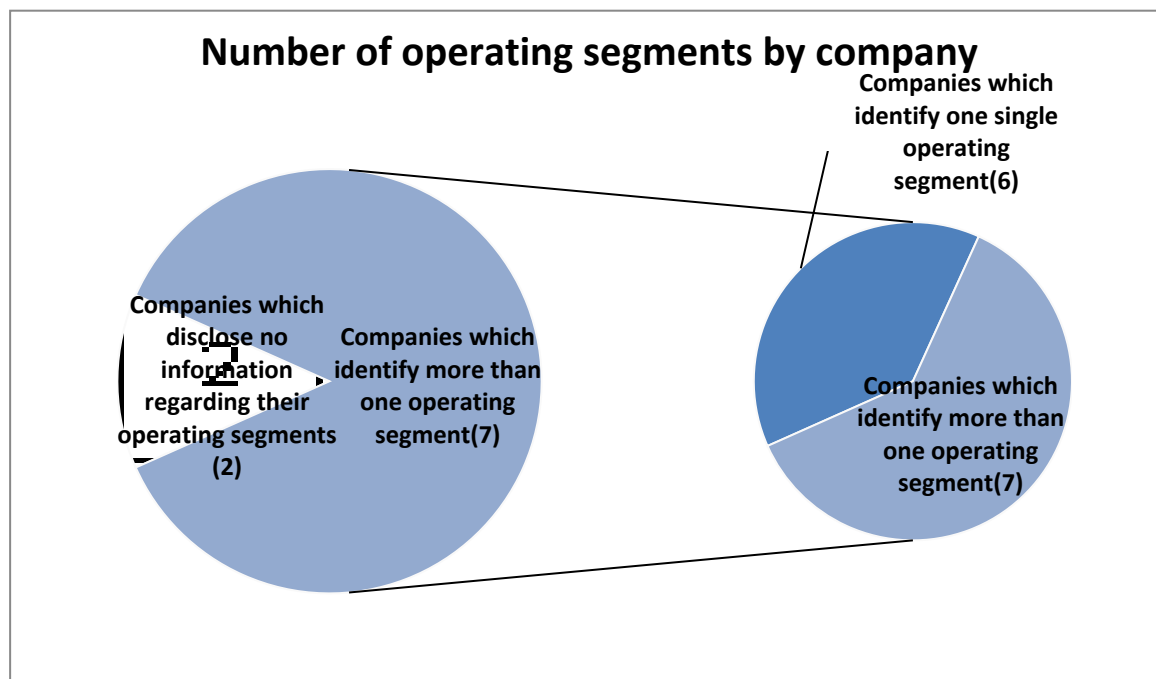


Fig. 2: The number of operating segments identified by the companies in the sample

Regarding the companies which disclose segment information, they identify in average 2,87 segments, with a maximum of 5 segments. The quite high value of the standard deviation (0,538) shows that there are great disparities between the companies, regarding the number of operating segments. It is possible that some companies are more complex than others, but it may also be possible that companies which identify a few or no operating segments at all do not understand the requirements of IFRS 8, not being able to correctly identify their reporting segments.

	Observations	Minimum	Maximum	Average	Standard deviation
Number of operating segments (companies which have a separate note regarding the operating segments)	13	1	5	2,87	0,538

Fig. 3: Statistical description of the number of operating segments identified by Romanian listed companies

In order to discover which are the types of information companies choose to disclose regarding their operating segments, I will take into account only the 8 companies which have identified more than one operating segment.

Analysing the information companies usually disclose for each reporting segment, as described in Table 4, the results are encouraging. While in Europe 93% of the companies present information regarding the value of each segment's assets and 71% disclose the segment's liabilities (Nichols et al., 2012), in Romania, from the 8 companies which have a separate note regarding the operating segments and which identify more than one operating segment, 100% disclose the assets' value and 87,5% describe each segment's liabilities.

The least disclosed information are those regarding the interest revenue and expense, given that usually companies treat those elements as a whole, only 50% of the companies which identify more than one operating segments

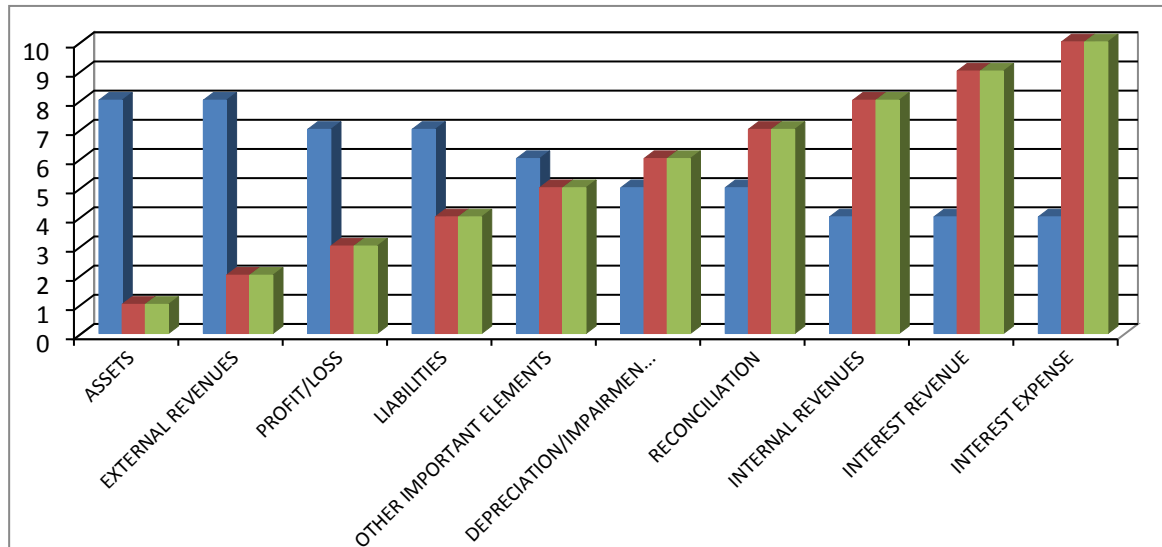


Fig. 4: Segment information disclosed by those companies which identify more than one reporting segment

Finally, as I described in the Research Methodology section, I divided the 15 companies in the sample into four categories, taking into account the IFRS8 Compliance index. The results can be found in Figure 5.

Compliance level	Number of companies	Percentage of total analysed companies
Lack of compliance	2	13,33%
Low compliance	5	33,34%
Medium compliance	2	13,33%
High compliance	6	40%
Total	15	100%

Fig 5: IFRS 8 compliance level

These results are also encouraging, especially for a country with little experience in implementing the International Financial Reporting Standards. 40% of the companies in the sample have obtained an over 12 points IFRS8 Compliance score, which means that companies are beginning to understand the importance of high quality segment information. They are being more accountable towards all their stakeholders and this fact equals a signal to the market that they are being more and more transparent and trustworthy.

On the other hand, 33,34% of the companies disclose less than a half of the information IFRS 8 requires, not forgetting about the two companies that disclose absolutely no information regarding their operating segments.

These disparities between Romanian listed companies lead us to the second great research question, regarding the factors which influence companies' segment reporting practices.

As I previously mentioned, trying to discover the answer to the second research question I will take into account 8 internal factors, as described below.

Variables	Measure	Values	
Size	Total assets (natural logarithm)	Total values	Avg 3.595.177 RON Min 107.695 RON Max 38.144.620 RON
		Natural logarithm	Avg 13,428 RON Min 11,587 RON Max 17,457 RON
Profit	Profit (natural logarithm)	Total values	Avg 74.866.601 RON Max 875.141.108 RON
		Natural logarithm	Avg 12,008 RON Min 0 RON Max 20,590 RON
Institutional	The percentage of equity held by institutional investors	Avg 45,10% Min 0% Max 88,42%	
Auditor	Dummy variable, equals 1 if the company is audited by a Big4, 0 otherwise	40% of the analysed companies are audited by a Big4, while 60% are audited by another type of auditor	
BoardDim	The board's number of members	Avg 6,47 Min 5 Max 14	
BoardInd	The percentage of independent board members	Avg 50% Min 0% Max 86%	
AuditDim	The audit committee's number of members	Avg 3 Min 2 Max 4	
AuditInd	The percentage of independent audit committee members	Avg 67% Min 25% Max 100%	

Fig. 6: Variables' statistical description

The study has also tried to discover a few factors which could influence the segment reporting practices and the amount of information companies are willing to disclose. In order to analyse this fact, I have used a Pearson correlation, whose results are presented below. Out of the 8 internal factors which have been taken into consideration, only three of them are correlated to the IFRS8 Compliance index.

Variables	Institutional	Profit	Assets	Auditor	Board Dim	Board Ind	Audit Dim	Audit Ind	IFRS8 Compliance
<b>Institutional</b>	<b>1</b>								
<b>Profit</b>	<b>0,462*</b>	<b>1</b>							
<b>Assets</b>	<b>0,480**</b>	0,371	<b>1</b>						
<b>Auditor</b>	0,344	-0,040	<b>0,669***</b>	<b>1</b>					
<b>BoardDim</b>	0,027	<b>0,497**</b>	<b>0,544**</b>	0,199	<b>1</b>				



<b>BoardInd</b>	<b>0,744***</b>	0,272	<b>0,415*</b>	0,275	0,010	<b>1</b>			
<b>AuditDim</b>	-0,222	0,128	<b>0,522**</b>	0,344	<b>0,693***</b>	-0,154	<b>1</b>		
<b>AuditInd</b>	<b>0,461*</b>	0,185	0,036	0,118	-0,349	0,222	-0,220	<b>1</b>	
<b>IFRS8 Compliance</b>	<b>0,425*</b>	0,047	<b>0,440*</b>	<b>0,569**</b>	0,181	0,074	0,324	-0,024	<b>1</b>

*Signifiant correlation coefficients are indicated in bold.*

*\*, \*\*, \*\*\* represent  $p < 0,1$ ,  $p < 0,05$ ,  $p < 0,01$*

Fig. 7: Pearson correlation

As expected, larger companies usually disclose more detailed segment information, sustaining other prior studies (Crawford et al., 2012, Berglof and Pajuste, 2005) which have demonstrated that larger companies are usually much more transparent than other companies. This may be the result of the fact that larger companies tend to attract more investors and help the existing ones in better assessing the company's financial performance and position.

The positive correlation between the IFRS8 Compliance index and the companies' size validates the basic assumption of the agency theory.

Secondly, the positive correlation between the IFRS8 Compliance index and Auditor variable validates the results of previous studies (Morris et al., 2012, Bonson and Escobar, 2006, Glaum, 2013, Ojo 2009) which have demonstrated that companies which are audited by larger audit firms are associated with a better disclosure level.

Another important factor which has not been so much studied before is the presence of institutional investors, which resulted to be positively and significantly correlated with the IFRS8 Compliance index. Previous studies (Ertuna and Tukul, 2013) have demonstrated that companies which want to attract institutional investors tend to become more transparent. Moreover, other studies regarding corporate governance issues have also demonstrated that institutional investors have the financial power but also the technical expertise that help companies in implementing better corporate governance mechanisms, including disclosure policies.

Even though there have been conducted a lot of studies (Armstrong et al., 2013, Klein, 2002, Patelli and Prencipe, 2007, Ho and Wong, 2001) which have demonstrated a positive connection between the composition and size of the companies' boards and especially audit committees, the Pearson correlation presented above shows no significant connection between these corporate governance variables and the IFRS 8 Compliance index. Even though as I previously mentioned a sound corporate governance system influences the companies' transparency level, it seems that a larger and more independent board does not necessarily imply the disclosure of high quality segment information.

## 5. CONCLUSIONS

The aim of this study was to assess the extent to which Romanian listed companies have understood the importance of disclosing high quality operating segment information and thereupon the way they have implemented the requirements of IFRS 8.

The results are quite divergent, 33,34% of the studied companies present a low level of IFRS 8 compliance, while 40% of them comply to a high extent with the requirements of IFRS 8.

Regarding the information companies usually disclose regarding their operating segments, the most commonly presented data are those about the segments' assets, liabilities, external revenues and the segment's financial result.

Trying to discover the reason why the compliance levels are so different among the companies in the sample, I tested the correlation between the IFRS8 Compliance index and 8 internal variables, namely the assets' value, the financial result, the type of auditor, the presence

of institutional investors, the board's size, the percentage of independent board members, the audit committee's size and the percentage of independent audit committee members. The Pearson correlation has proven the fact that only the size, the type of auditor and the percentage of institutional investors have a significant relation with the level of IFRS 8 Compliance.

None of the variables related to the size and composition of the board and the audit committee are correlated with the segment reporting variable, which indicates the fact that probably there are more powerful factors and that maybe, in Romania, managers are the ones in charge with the financial reporting, the boards members being implied in other internal activities.

These results lead to a lot of other research questions, the most important, in my opinion, being connected to finding the most appropriate ways of improving Romanian listed companies' segment disclosure policies.

Concluding the results of this paper, I will cite the opinion of the Deloitte specialists (2014): "The quality of financial and corporate reporting is ultimately determined by the players' (the board of directors, the audit committee, the external auditor and the management) effectiveness in working together as a system. These players, therefore, must consider their own roles and responsibilities and as well as their interaction and working relationships with each other. Such a relationship cannot be forged through simple mechanical or regulated solutions. Instead, the players themselves must develop effective working relationships within their organizations – something that can be done when each player possesses the necessary attributes, expertise and characteristics."

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