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Content

Introduction

These proceedings are published to accompany the **3rd year of the international scientific conference IFRS: Global Rules & Local Use**, taking place on October 8 and 9, 2015 at the Anglo-American University in Prague.

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Subject distribution of papers and abstracts into sections:

Thursday - October 8th

- Plenary session – Presentation of conference keynote speakers
- ACCA Student Workshop (meeting of doctoral and master degree students with representatives of the global body for professional accountants ACCA
  Topic: **Ethical Dilemmas in Business and Accounting**)

Friday – October 9th

- Morning section I – Financial Reporting and Implementation of IFRS
- Morning section I continue – Financial Reporting and Implementation of IFRS.
- Parallel section I – Effects of IFRS on Financial Markets
- Parallel section II – Human Capital, Ethics and Reporting Issues
- Closing section – Contemporary Issues of Management and Reporting

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IFRS ADOPTION IN CONDITIONS OF CZECH SMES – INSIGHT INTO ACCOUNTING PRACTICE

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Abstract: *In the Czech Republic since 2011 subsidiaries and affiliated companies, whose parent companies are required to prepare the financial statements according to IFRS, may prepare their separate financial statements in accordance with IFRS.As it has been recently verified, there was no significant interest on the side of Czech companies to use IFRS. This change in accounting regulation was aimed to remove some of the barriers in IFRS adoption, especially imbalances between the costs and benefits of its usage. The aim of our research was to reveal the changes in the way how companies accept the changes in accounting regulation and reasons of rather slow and hesitant IFRS adoption. To gather the empirical data we used the questionnaire survey method. We have obtained answers of approximately 300 Czech SMEs, which were subsequently analysed. The results indicated that the main causes of the lack of interest in IFRS usage remain the imbalances between costs and benefits of practical implementation of IFRS and hesitation on the side of business partners or foreign owners of majority of Czech companies. The aim to report reliably and to provide comparable information for the purposes of capital markets plays a minor role in deciding on the IFRS usage.*

Keywords: *effects of IFRS implementation, accounting harmonization, small and medium enterprises*

1. INTRODUCTION

In the Czech Republic since 2011, subsidiaries and affiliated companies, whose parent company is required to prepare the financial statements according to IFRS, may prepare separate financial statements in accordance with IFRS. This is possible under amendments to the Act no. 563/1991 Coll. Accounting. This regulation can be applied even to subsidiaries with Czech parent company. As it has been recently verified, there was no significant interest on the part of companies to exercise this option. The main reason seems to be the obligation to determine the tax base according to Czech accounting standards (or alternatively, to adjust the tax base determined from IFRS to CAS, if the company keeps parallel accounting schemes.

We assert that the situation would have been different if the companies could apply other international standards for the tax and also for regulatory purposes. However the impact of this change on the fiscal situation of the country is not yet verified, and therefore the change are not yet envisaged.

Advantages of using IFRS:
From the perspective of auditors and financial management practices are the positive effects of this change for the subsidiary companies. The effects are usually delineated as follows (Machová, 2012):

- The first advantageous the simplification of the process of producing financial statements of those companies that are part of financial groups. It is not necessary to provide a compilation of statements (resp. Attachments) according to CAS, although the obligation to perform data conversion by CAS for tax purposes remains.

- The next advantage is that IFRS provides better conditions for interconnection with managerial accounting, which is achieved by improving communication and streamlining information and decision-making process within the company and the entire group.
- Another advantage, which can be realized only by some companies, is a higher volume of retained earnings as a result of applying IFRS procedures used for dividend payments. However, this is not the standard treatment and other companies that introduce IFRS may even perceive a negative impact on undistributed profits.
- The next potential advantage is an easier procedure to obtain bank loans, as banks already take IFRS reporting for granted. The advantage for the subsidiaries is also the fact that they are more integrated and better prepared for the restructuring of the parent company and or any capital transactions e.g. split ups or spin offs from the group companies, and their combined IPOs).
- The use of IFRS becomes an advantage when a company participates in international competitions, where the IFRS is frequently required. The IFRS thus contributes to the increase of the global competitiveness of the company.

Disadvantages:
On the other hand potential disadvantages of using IFRS in Czech companies have been also mentioned:
- The main disadvantage is the requirement to calculate the tax base according to procedures of CAS and connected conversion of selected data from IFRS to CAS.
- Another disadvantage is the costs of training of accounting staff and modification of accounting and information systems.
- A further disadvantage is that financial statements under IFRS are generally larger and more laborious than under CAS. From the point of view of subsidiary the disadvantage is that separate financial statements under IFRS must be reported even for those items that were eliminated due to consolidation of the parent.

The Czech economy is an open export economy, dependent to a large extent on exports of goods and services. It belongs to the transitioning economies that transformed from a centrally planned economy to a market system by means of voucher privatization in 2001 and 2003. Subsequently the country created a new accounting system suitable for market conditions.

It could be presumed that the positive effects of IFRS adoption will affect large number of companies and they will be interested to use it, irrespective of size, industry and ownership. Surprisingly, the opposite is true: The implementation of IFRS into Czech accounting legislation and into accounting practice in terms of Czech companies is very low and slow. This can be attributed to resistance to change. The causes of this fact can be seen on many levels. The aim of this article is to identify the main reasons of the lack of interest in IFRS reporting with a special attention to the area of SMEs from the point of view the financial manager and accounting practitioners[1]. As the main causes of the lack of interest in IFRS usage are as was showed by results

[1] *Upon the EU Commission the firms are classified according to four criteria: number of employees, yearly turnover, value of total assets and firm´s independence. These criteria a distinguish free respectively four categories of firms (sell Act No. 47/2002 Col on support of small and medium enterprises):*

Firms	*Number of employees*	*Turnover*	*Assets*
Micro firms	*Less than 10*	*Less than 2 mil EUR*	*Less than 2 mil. EUR*
Small firms	*From 10 to 50*	*From 2 to 10 mil EUR*	*From 2 to10 mil. EUR*
Middle firms	*From 50 to 250*	*From 10 to50 mil EUR*	*From 10 to 43 mil. EUR*
Large companies	*Above 250*	*Above 50 mil EUR*	*Above 43 mil. EUR*

The criteria of yearly turnover and total assets are alternative: If one of them is fulfilled then the firm falls in the category of SMEs. The firm´s independence is defined as absence of ownership. The firm is not owned by any other subject from more than 25 per cent and it does not own other subjects form more than 25 per cent.(In: Regional board of Moravia and Silesia (2013): Methodical instruction: Definition of small and medium enterprises. Available at: file:///C:/Documents%20and%20Settings/ Uzivatel/ Dokumenty/ mp_definice_msp_1_06%20(1).pdf, Accessed on 28.3.2015) of previous research (Mullerová *et al*., 2010, Paseková, 2012, Kubíčková, 2013) in general the imbalances between costs and benefits of practical implementation of IFRS and a lack of requirements to report with the use of IFRS on the side of business partners of majority of Czech SMEs and almost no incentives coming from the area of capital markets. We attempt to reveal to what extend do these causes affect the decisions of SMEs in CR at present, after the changes in accounting regulation in 2011.

2. LITERATURE REVIEW

The scope and method of implementation of IFRS in SMEs in local conditions has been dealt with by many researchers. The findings confirm that the scope of IFRS implementation, its effects and accompanying problems are significantly influenced by factors that are rooted in the national economic, social, cultural and historical environment (Nobes and Parker, 2012; Borker, 2012; Beneisch *et al*., 2012; Albu N., Albu C., 2014). Another important point is the nature of the transition economies, albeit in different countries to varying degree (Sucher, Jindřichovská, 2004, Žárova and Mejzlik, 2011; Kubíčková *et al.,* 2012; and 2013; Albu, 2013; Albu *et al.* 2013, and Kilicaa *et al*. 2014; Procházka and Pelák, 2015). Different approaches of IFRS application have been practiced over times, e.g. Albu *et al*. (2013) discuss the Romanian approach and find that in transitional countries stakeholders mostly support the convergence approach. However, users oppose convergence and prefer the adoption of IFRS for SMEs. The convergence approach moves regulators' attention from users' needs to preparers' preferences and their preparedness. This finding is relevant in the decision-making process of national regulators.

According to Ionascu *et al*., 2014, results obtained so far show that the Romanian economic environment is to a certain degree open to IFRS and is optimistic about their potential, although there are compliance issues and institutional factors that can diminish their benefits.

Similarly Kubíčková *et al*. (2013) find that in the Czech Republic the use of IFRS for SMEs is relatively low to significantly increase the number of companies using IFRS. The reason for IFRS application is usually a requirement of the parent company. The motivation for adoption arises from business partners or from the requirements of the bank or the intention to enter the capital market only in very few cases. Also the effects of adoption in transitional as well as developing countries move out of the financial market into the companies' management and improvement of legislative regulations governing the reporting process.

From the macroeconomic perspective of national economic the effects of adopting IFRS are generally associated with an increase of interest of in foreign investors. This leads to greater volume of FDIs with all the positive impacts on the economy, such as growth of jobs, GDP growth, etc. were analysed on different markets e.g. Leuz and Wysocki, 2008; Daske *et al*., 2008, and more recently by Gordon, *et al*., 2012; Brüggemann, *et al*., 2014.

Another expected positive effect is the development of international business – the comparability and transparency of financial information will encourage interest in export and import. Along with this there is an expectation of greater labour mobility. A further positive effect on this level is then placed to support and develop the capital market (Prochazka and Pelák, 2015).

3. DATA SOURCE AND RESEARCH METHOD

The questionnaire survey method was used for investigation of the current state of IFRS adoption in Czech SMEs. The research was conducted in March and April of 2015. The questionnaire has developed on basis of previous research conducted with the same purpose three and five years ago. Those have concentrated primarily on Czech SMEs (Mullerova, *et al*., 2010; Kubíčková *et al*., 2013). The present research has broadened the scope to include other enterprises and subsidiaries of international companies, which were originally Czech SMEs and subsequently became parts of international groups.

The questionnaire aimed to investigate the current state of adoption of IFRS by Czech enterprises and identify the conditions for possible positive effects of the use of IFRS. Apart from the questions concerning the accounting and way of bookkeeping practices, there were also questions concerning the foreign business partners and activities or intentions of firms, which could require financial information according to IFRS (e.g. entering the capital market).

The construction of the questionnaire was based on two dominant hypotheses:

I. The need of IFRS reporting in condition of Czech SMEs arises from the business contacts with suppliers and customers rather than from the needs of financial source (banks, capital market).

II. The IFRS usage in Czech SMEs is under the influence of foreign trade orientation of the Czech economy.

In practice, a database containing e-mail contacts of chief financial officers and chief accountants of 1,613 Czech medium and large firms was used for the research. In total we have processed 258 completed questionnaires that mean a response rate of 15.99 per cent. The predominant share of the sample represented medium businesses, whilst small firms represented less than 15 per cent. The sample included 77 companies which exceed the thresholds for SME definition and belonged to group of big firms plus there were only a small number of micro firms. The structure of the respondents according to industrial sector is in table 1:

Table 1. Sample characteristics

Company	**Number of respondents**	**Industrial sector**				
		Manufacturing	**Trade**	**Services**	**Construction**	**Agriculture/ Other**
Micro	6	0	1	4	1	0
Small	37	8	15	11	3	0
Medium	138	73	20	23	13	9
Big	77	49	6	18	4	0
Total	**258**	**130**	**42**	**56**	**21**	**9**

Source: own research

The questionnaire consisted of five parts: the first part aimed at identification of the respondent. The second part investigated the potential reasons for IFRS adoption, i.e. cooperation with the foreign partners (suppliers, customers). In this part were investigated the intentions to establish some foreign contacts as a potential stimuli for the IFRS adoption in the future years. The third part was aimed at investigation of the degree of involvement of IFRS in the SMEs accounting practice (how are their accounts kept) and to what extent are IFRS already a part of SMEs´ economic practice. The fourth part concentrated on the most demanding issue in firms' accounting (what is the most time consuming and most complicated accounting issue), and the fifth part investigated the opinions of the IFRS experience (opinions of IFRS users and non users).

We have used the SPSS software to analyse the responses obtained. We have investigated the correlations between surveyed variables. We used the Pearson's correlation coefficient and a sign test. Sign testis a nonparametric method of evaluating the hypothesis of partial independence in the pivot table. It expresses the relative deviation from the situation when both variables in the contingency table are independent from each other. The cell is coloured in the event that a given cell meets this criterion of deviations from independence criterion (i.e. it implies dependence between cases in row and column). Positive deviation is expressed in black (see Annex B), a negative deviation is coloured in grey (see Annex B). Any such deviation is significant at a five percent α=5% level of significance (i.e. with min. 95 per cent certainty). When there is no relationship between number of cases in rows and columns then the cell in the table is not highlighted. Each shaded cell defies the case of independence of both variables in the table with min. 95% certainty, i.e. it indicates that both variables are interdependent.

4. THE RESULTS AND INTERPRETATION

The results show, that more than a half of the companies (63 per cent) have some business contacts abroad (suppliers, customers, parent). The foreign contacts were established mainly with important suppliers, followed by links to the parent companies, and major customers. The results show that the nature of international contacts almost always represents commercial interests of the company rather than possibility of access to capital resources. This corresponds to the nature of the Czech economy with a large export segment. Foreign contacts are of various kinds – one company can have multiple links: a contact to its parent company as well as to foreign suppliers and customers.

In the part in which we investigated the state of IFRS adoption we have asked whether companies report under other than Czech accounting standards in addition to compulsory Czech standards. There were 81 firms i.e. 34 per cent of companies that prepare financial statements in accordance with CAS plus another system of accounting standards. These companies prepared the statements mostly according to IFRS (70 companies, 28 per cent). Only a few companies (11 firms, 6 per cent) used US GAAP (5 firms) or other standards (6 firms) – German standards HB2 (3 firms), French GAAP (2 firms) and UK GAAP (1 firm).

The share of companies using IFRS along with CAS is about the same in manufacturing and trade sectors. It is higher in services and a bit lower in construction and agriculture. This reflects the structure of Czech economy – its business and foreign trade orientation.

One Interesting finding concerns the way financial statements are prepared according to IFRS. The respondents stated that the most frequent method of preparation of IFRS statements is the so-called “transformation bridge” (48 per cent). That means that the firms do not use IFRS to track transactions to report individual items of their assets and liabilities based on IFRS principles, but they construct their IFRS statements from the original Czech version of statements compiled based on Czech accounting principles. Other group of firms-IFRS adopters were preparing two sets of accounting books (28 per cent). And 14 per cent of firms reported only selected items in accordance with IFRS. For more details see table 2.

Table 2. The accounting standards usage, keeping accounts and financial statements

Accounting standards used besides CAS	**IAS/IFRS % (abs.)**	**US GAAP % (abs.)**	**Other % (abs.)**	**No % (abs.)**
	27 (70)	**4 (10)**	**3 (9)**	**66 (169)**
Business sector				
Manufacturing	27.7	5.4	5.4	61.5
Trade	28.6	4.8	2.4	64.3
Services	33.9	-	1.8	64.3
Construction	9.5	4.8	-	85.7
Agriculture	14.3	-	-	85.7
Accounting is kept by:				
Own employees	92% (238)			
Accounting firm	6% (16)*			
Individual accountant	2% (4)			
Creation of financial statements according to IFRS:				
Transformation bridge from CAS	48	40	67	-
Keeping two independent accounting books	28	20	11	-
Only selected items translation from CAS	14	20	11	-
Different way	10	20	11	-

Source: own research

*Note: Just five operating accounting firms offer preparation in IAS/IFRS; value in brackets represents number of answers

The next part of the questionnaire investigated the factors which could affect the decision of IFRS adoption and the views concerning the benefits of IFRS. In total there are 169 respondents which did not use the IFRS. This raises the question: what advantages and in contrast what disadvantages are perceived by respondents in connection with the use of IFRS (companies that still do not use the IFRS).Only 17 per cent of respondents perceived some benefits from using IFRS, while 83 per cent see no positive effects in the use of IFRS. And only five per cent of IFRS non-adopters consider the adoption of IFRS in the future.

It was stated, that the main reason why companies are not yet using IFRS is, that they see no rationale: e.g. it is not needed or that it is not required by foreign business partners or foreign parent company. Conversely, as the reason for the adoption of IFRS was in 90% of firms (62 firms-IFRS adopters) stated that there was the requirement of their parent company. Here again we can see the specifics of the position of the majority of Czech companies (SMEs and large companies), which are no longer separate entities (after privatization or other capital transactions) and their decision making is dependent on their foreign parent companies.

Regarding what advantages and benefits are perceived by companies who use IFRS it was chosen most frequently: “Better comparison of accounting data” (69 per cent) and „Easier reporting“ (66 per cent). Only two firms stated that they have easier access to capital markets. Another interesting finding comes from the response of 28 and 22 per cent of respondents that claimed that IFRS reporting leads to better use of internal data for in-house managerial accounting and internal reporting respectively. This aspect has been already discussed by Prochazka, 2010 and Zarova, 2014. This contribution of IFRS has more importance for Czech companies than others. A very low number of respondents perceived the importance of use of IFRS for easier access to bank loans or capital markets (3 and 2 per cent respectively). This can be understood as a reflection of the basic purpose of IFRS. But it is a reflection of the special conditions of activities of the Czech firms. From the standpoint of banks IFRS is not required as reliable statements of financial position and the role of capital market are still very low. (For more details – see table 3)

Table 3. Responses of IFRS non-adopters

Non-adopters (147 companies)				
Will you consider IFRS adoption?			Are there any potential benefits from IFRS adoption for your company?	
Yes	No		Yes	No
5%	95 %		17%	83 %
Main reasons for not adopting IFRS	%		**What would be the benefits of IFRS adoption?**	%
No benefits for company	38		Better comparison of accounting data	69
Don’t know about benefits of IFRS usage	29		Easier reporting	66
Company is not issuer of securities	14		Higher credibility for business partners	47
Other	11		Better public perception	28
Don’t have a foreign business partner	9		Better usage of data for business management	28
			Better quality of inter-company information	22
			Better access to EU funding	13
			Getting loans easier	3

Source: own research

One of the important reasons of IFRS non adoption was quoted relatively high cost of transition to the other base of reporting. This factor could be very restrictive especially for SMEs. Regarding costs associated with transition to IFRS, there were most frequently reported costs were in the range of 5 per cent of firms annual turnover (in case of 31 per cent of respondents). The most frequently reported kinds of costs were the cost of training (67 per cent), consulting services (51 per cent) and IT adjustments (43 per cent). See table 4.

Table 4. Responses of IFRS adopters

IFRS Adopters (71 companies)					
The costs of IFRS implementation [% of business turnover]	< 0,05	0,05–0,5	0,5–1	> 1	Couldn't estimate
	31%	12%	1%	1%	54%
Types of costs (%)	Consultancy	IT	Training	Salary	Other
Preparation of IFRS statements	51	43	67	20	6
Implementation of other standards	33	29	20	13	6

Source: own research

For better presentation of the collected data, primarily to confirm or refuse the assumption of mutually conditioned characteristics, we analysed correlations between selected characteristics and we have used sign test for the detection of significant relationships. The results are summarized in Appendices A and B.

The result of the survey of mutual relationships (correlations) between the studied characteristics were confirmed by a relatively high degree of positive correlation between the use of IFRS and foreign ownership of companies (see box a5) and other links or foreign contacts (parent company) (see box a8). Other correlations reach rather low values. Significant values of correlation coefficient confirm logical links (see light grey boxes), for example – that there is a stronger correlation between foreign ownership and trading with foreign entities and/or between whether company trades with foreign partners and those who intent to start using IFRS. This confirms that in Czech firms IFRS are more associated with foreign trade than with trading on capital markets.

For values of the Pearson correlation coefficient the sign is important. It indicates the direct (positive sign) or indirect (negative sign) dependency between the investigated characteristics. As it can be seen, the sign between the size of total assets (g) and ownership by a foreign company (5) is negative. This indicates indirect dependence, i.e. larger firms measured by total assets are less frequently owned by foreign entities. The analysis was then performed on the results of the questionnaire, which concerned the use and effects of IFRS. At this point in the process, we discovered and documented interesting relations that were previously derived only intuitively. One of them was that the use of IFRS (a) was in close correlation with the fact that the companies were owned by foreign entity (5). Another significant correlation was confirmed between the IFRS usage (a) and other ties to foreign subjects (mostly parent companies) (8) (see Appendix A). Both of these correlations confirmed and measured the above mentioned conclusions, i.e. that the subordinate position of Czech firms to foreign companies has the greatest influence on IFRS usage.

More detailed and tighter relationships between detected characteristics were measured with the use of sign test. The test results are summarized in table in Appendix B. Coloured cell characterizes that the number of cases is significantly different from the expected frequency for independent relation (with min. 95% confidence level). Each such cell can reject the independence hypothesis of both variables in the table at 95 per cent level of significance, i.e. it implies that these variables are interdependent. The coloured cells then express the nature of relationship: Positive relation is marked in black, negative is coloured in gray. As can be seen in Appendix B, the test has revealed a number of interesting interdependencies.

The fact that the test reveals the existing relations evidenced for example a strong link between the classification of the company (the company as small, medium or large) and the number of employees and total assets, or the subsidiary's position and size of the company. These relationships only confirm that the information potential of this method can extend the knowledge gained from the questionnaire. Based on the questionnaire survey and using the sign test method it was confirmed, that mainly large companies are planning to establish contact with foreign entities. Also, lack of interest in IFRS reporting is more associated with small and medium enterprises. Another important link, demonstrated by the sign test, is that big companies are more experienced with IFRS and to the contrary no experience or lack of information is typical for small and medium businesses. Employees in big companies are more trained in IFRS and they are also more interested in such training, while small businesses are not trained and are not interested in such training. Also keeping accounts in a separate department is typical for large companies while such dependence is not apparent in small and medium-sized firms. Interesting is also the finding, of the relationship between the size of company and the problems that the use of IFRS brings in the form of compulsory determination of tax base according to Czech accounting standards. Furthermore the relationship between of little significance of usage of IFRS to access capital markets by large firms- in other words, businesses, especially large firms do not see any reason to use IFRS for the benefit of access to the capital markets. On the contrary, it has been confirmed that IFRS is important to ensure the comparability of financial data for better reporting of the parent company. Interesting finding concerned also the question about the most comprehensive accounting matter in the enterprise: for small businesses inventories are the most complex issue whilst for large companies the most complex items were costs and fixed assets.

In summary, the sign test has confirmed the results that were found in partial responses. IFRS is used by large companies that are primarily directed by the requirements of their parent (mostly international) companies. A positive effect of the use of IFRS is primarily associated with the comparability of data for the purposes of international business contacts. Larger firms do not see any advantage of using IFRS or operations on the capital market. Small and medium-sized companies also do not see any other benefits arising with the use of IFRS.

5. CONCLUSIONS AND FURTHER RESEARCH

The aim of our research was to reveal if and how the changes in accounting regulation affected the companies´ attitude to the IFRS adoption and to explain the reasons of rather slow and hesitant attitude to IFRS adoption. The findings of our study were more or less in line with previous studies and the main reasons were reaffirmed by our results. We have revealed the main reasons of the lack of interest in IFRS in the segment of SMEs. The results showed that the current state of use of IFRS was still relatively low, even though it has increased in comparison to previous studies from 2010 and 2013 (from 16 per cent to 28 per cent of companies in the sample). The most important reason for not reporting in accordance with IAS/IFRS is the perceived absence of any benefits for most of companies. Majority of companies (93 per cent of the sample) prepare their financial statements internally. For preparation of FRS statement they predominantly use the translation bridge. With regard to perceived benefits of the use of IFRS there are some differences between the IFRS adopters and non-adopters, but the most significant reasons are similar for both groups. The changes in accounting regulation in 2011 did not lead to any significant change in the firms´ approach to IFRS usage.

Awareness of IFRS through completion of IFRS training by firm employees has been found in 90 companies, i.e. 35 per cent. However, 168 respondents (65 per cent) confirm only basic or no information (47 and 18 per cent respectively). Therefore it seems clear that awareness of company management or accounting department is relatively high, even if the firms do not report under IFRS. But on the other hand, there are other firms, that have little or no information and have no interest in IFRS (61 per cent, and 12 per cent respectively, from the whole sample).

Very surprising is the fact that 95 of the respondents from the IFRS non-adopters (i.e. 66 per cent and 38 per cent of the sample) do not see any benefits in reporting according to IFRS despite the fact that they have contact with foreign customers or suppliers or intend to establish such contact. This was confirmed by 108 and 129 respondents in the sample respectively (i.e. 41 and 50 per cent). Thus it can be concluded that firms still do not associate cooperation with a foreign partner with mandatory IFRS reporting. This also implies that foreign markets still do not require transparent and comparable information from their Czech partners. The effects of IFRS adoption in connection with capital market are not important and play only a minor role among other effects.

In further research more attention needs to be devoted to macroeconomic perspective of national economic effects of adopting IFRS, e.g. the impact on FDIs, country export and import and intensification of international relations including development of capital market.

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Appendix A

			IFRS	No. of Employees	Balance sheet total	Net sales (Annual turnover)	Is your firm owned by 25 or more per cent by large company?	Are your customers also foreign companies?	Do you purchase from foreign suppliers?	Does your company have other ties to foreign subjects?	Do you plan to establish contacts with foreign suppliers in the long-term?	Do you plan to establish contacts with foreign customers in the long-term?	In the long term, do you plan to enter the foreign market in another way (share issue, bond issue, etc.)?
			1	2	3	4	5	6	7	8	9	10	11
IFRS	Pearson Correlation	a		-0,219	-0,269	-0,202	0,572	0,056	0,034	0,488	0,010	-0,046	0,135
	Sig. (2-tailed)	b		0,001	0,000	0,002	0,000	0,387	0,597	0,000	0,879	0,483	0,037
	N	c		239	234	236	239	239	239	230	238	237	238
Number of Employees	Pearson Correlation	d			0,460	0,438	-0,237	-0,059	-0,187	-0,216	-0,164	-0,020	-0,022
	Sig. (2-tailed)	e			0,000	0,000	0,000	0,344	0,002	0,001	0,008	0,745	0,731
	N	f			253	255	258	258	258	249	257	256	257
Balance sheet total	Pearson Correlation	g				0,546	-0,324	-0,041	-0,095	-0,199	-0,140	0,055	-0,065
	Sig. (2-tailed)	h				0,000	0,000	0,519	0,131	0,002	0,026	0,385	0,302
	N	i				253	253	253	253	246	252	251	252
Net sales (Annual turnover)	Pearson Correlation	j					-0,194	0,024	-0,085	-0,163	-0,072	0,103	-0,086
	Sig. (2-tailed)	k					0,002	0,698	0,178	0,010	0,251	0,101	0,170
	N	l					255	255	255	247	254	253	254
Is your firm owned by 25 or more per cent by large company?	Pearson Correlation	m						0,026	0,076	0,528	0,096	0,018	0,009
	Sig. (2-tailed)	n						0,675	0,223	0,000	0,125	0,780	0,885
	N	o						258	258	249	257	256	257
Are your customers also foreign companies?	Pearson Correlation	p							0,607	0,212	0,557	0,683	0,014
	Sig. (2-tailed)	q							0,000	0,001	0,000	0,000	0,829
	N	r							258	249	257	256	257
Do you purchase from foreign suppliers?	Pearson Correlation	s								0,244	0,561	0,492	-0,033
	Sig. (2-tailed)	t								0,000	0,000	0,000	0,596
	N	u								249	257	256	257
Does your company have other ties to foreign subjects?	Pearson Correlation	v									0,248	0,177	0,115
	Sig. (2-tailed)	w									0,000	0,005	0,069
	N	x									248	248	249

Do you plan to establish contacts with foreign suppliers in the long-term?	Pearson Correlation	y										0,666	0,083
	Sig. (2-tailed)	z										0,000	0,187
	N	aa										255	256
Do you plan to establish contacts with foreign suppliers in the long-term?	Pearson Correlation	ab											0,022
	Sig. (2-tailed)	ac											0,723
	N	ad											255
In the long term, do you plan to enter the foreign market in another way (share issue, bond issues, etc.)?	Pearson Correlation	ae											
	Sig. (2-tailed)	af											
	N	ag											

Appendix B

		Total		Company Size	
				Small/medium	Big
		Count	Col %	Row %	Row %
Total		**253**	**100,0**	**71,1**	**28,9**
The predominant activity:	Production	130	51,4	**65,4**	34,6
	Trade	41	16,2	82,9	17,1
	Services	52	20,6	67,3	32,7
	Construction	21	8,3	81,0	19,0
	Agriculture	7	2,8	100,0	
	Other	2	0,8	100,0	
No. of employees:	Less than 10	4	1,6	100,0	
	11-50	36	14,2	100,0	**0,0**
	51-250	132	52,2	100,0	**0,0**
	More than 250	81	32,0	**9,9**	90,1
Balance sheet total (total assets):	Up to CZK 54 million/2 mil.€	33	13,0	100,0	**0,0**
	From CZK 54 million/2 mil.€to270mil CZK/ 10mil.€	76	30,0	100,0	**0,0**
	From 270mil. CZK/ 10mil.€ toCZK1,161 mil. / 43mil.€	94	37,2	**62,8**	37,2
	More than1,161 mil.CZK/ 43mil.€	50	19,8	**24,0**	76,0
Net sales (annual turnover):	Less than CZK 54 million/2 mil.€	15	5,9	100,0	
	Ranging between CZK 54 million and CZK270 miles/2and 10mil.€	74	29,2	97,3	**2,7**
	More than 270mil CZK/ 10mil.€	164	64,8	**56,7**	43,3
What is your position in the firm?	Executive officer	24	9,5	75,0	25,0
	Middle management position	82	32,4	79,3	20,7
	Member of senior management	140	55,3	**65,0**	35,0
	Owner (co-owner	7	2,8	85,7	14,3
Is your firm owned by 25 or more per cent by large company?	Yes	119	47,0	**58,8**	41,2
	No	134	53,0	82,1	**17,9**
Are your customers also foreign companies?	Yes	184	72,7	69,6	30,4
	No	69	27,3	75,4	24,6
Do you purchase from foreign suppliers?	Yes	210	83,0	**67,1**	32,9
	No	43	17,0	90,7	**9,3**
Does your company have other ties to foreign subjects?	Yes, parent company	96	39,0	**60,4**	39,6
	Yes, other	32	13,0	65,6	34,4
	No	118	48,0	79,7	**20,3**
Do you plan to establish contacts with foreign suppliers in the long-term?	Yes	156	61,9	**64,7**	35,3
	No	96	38,1	81,3	**18,8**
Do you plan to establish contacts with foreign customers in the long-term?	Yes	166	66,1	69,3	30,7
	No	85	33,9	74,1	25,9
In the long term, do you plan to enter the foreign market in another way (share issue, bond issue, etc.)?	Yes	8	3,2	75,0	25,0
	No	244	96,8	70,9	29,1
Are you thinking about reporting under IAS / IFRS?	Yes	9	4,9	55,6	44,4
	No	176	95,1	77,8	**22,2**
If you report according to IAS / IFRS or IAS / IFRS thinking - what is your main reason?	It is requirement of parent company	65	87,8	**56,9**	43,1
	Access to the issuance of bonds	1	1,4		100,0
	Easier reporting within the consolidated group	1	1,4		100,0
	Increase the credibility from the	2	2,7	50,0	50,0

	perspective of business partners				
	Improving the quality of internal information	1	1,4	100,0	
	Possibility of comparability of accounting data	3	4,1	66,7	33,3
	Other reason	1	1,4		100,0
If you do not report according to IAS / IFRS or IAS / IFRS thinking - what is your main reason?	We do not trade with foreign partners	16	9,5	81,3	18,8
	We are not issuers of securities	23	13,6	60,9	39,1
	We see no benefit	64	37,9	79,7	20,3
	We do not know any benefits of the use of IAS /IFRS	49	29,0	83,7	**16,3**
	Other	17	10,1	64,7	35,3
Do you have other experiences with IFRS?	Yes	33	13,1	**48,5**	51,5
	No	218	86,9	74,3	**25,7**
Accounting is conducted in your company:	In our own department(own employees)	236	93,3	69,9	30,1
	By accounting firm(contractor)	15	5,9	86,7	13,3
	By accountant sole physical person	2	0,8	100,0	
Have you ever participated in training in the area of IAS / IFRS?	Yes	114	45,4	57,0	43,0
	No	137	54,6	83,2	16,8
Does the accounting firm which you work, offer accounting according to IAS / IFRS?	Yes	5	31,3	80,0	20,0
	No	11	68,8	90,9	9,1
Are you interested in training / courses in the area of IAS / IFRS?	Yes	98	39,0	**60,2**	39,8
	No	153	61,0	77,8	**22,2**
What is the most comprehensive area in your company accounting?	Fixed assets	35	13,9	**51,4**	48,6
	Current assets	24	9,6	70,8	29,2
	Financial assets	4	1,6	100,0	
	Inventory	68	27,1	85,3	**14,7**
	Own funds	4	1,6	75,0	25,0
	Receivables	25	10,0	80,0	20,0
	Payables	10	4,0	90,0	10,0
	Accruals	3	1,2	100,0	
	Returns	10	4,0	50,0	50,0
	Costs	50	19,9	**58,0**	42,0
	Profit/loss	12	4,8	58,3	41,7
	Other	6	2,4	83,3	16,7
How do you create financial statements according to IFRS?	Transmission bridge of statements according to Czech accounting	33	48,5	66,7	33,3
	Keeping records in two separate ledgers	19	27,9	**47,4**	52,6
	Recalculating only selected items in financial statement	9	13,2	**33,3**	66,7
	Otherwise	7	10,3	57,1	42,9
In case that you prepare reports according to IAS / IFRS, do you have a support in the information system?	Yes	46	68,7	**56,5**	43,5
	No	21	31,3	57,1	42,9
What was the major problem of the transition to reporting according to IAS / IFRS?	The complicated nature of some learning concepts according to IAS /IFRS	16	23,5	56,3	43,8
	Czech national accounting system is subject to tax reporting	25	36,8	**52,0**	**48,0**
	A big difference between reporting under Czech law and IFRS	7	10,3	42,9	57,1
	Inadequate instructions to the first time adoption of IFRS	4	5,9	75,0	25,0
	Difficult to translate	3	4,4	66,7	33,3
	The absence of certain transactions that are accounted for in IFRS	2	2,9	50,0	50,0
	Another problem	11	16,2	63,6	36,4

How much was the total cost of preparation and transition to reporting according to IAS / IFRS? (In terms of your company annual turnover)	Less than 0.05% of the turnover	20	29,9	55,0	45,0
	0.05 to 0.5% of turnover	8	11,9	**25,0**	75,0
	0.5% to1% of the turnover	1	1,5	100,0	
	More than1% of the turnover	1	1,5	100,0	
	I cannot estimate	37	55,2	59,5	40,5
What kinds of costs were associated with the preparation of reports according to IFRS?	Staff training	46	67,6	**45,7**	**54,3**
	Wages	14	20,6	50,0	50,0
	Acquisition/development of new IT systems	30	44,1	**50,0**	50,0
	Consulting services	35	51,5	**51,4**	48,6
	Other costs	3	4,4	66,7	33,3
What results have been achieved by transition to reporting according to IAS /IFRS? - easier equity raising:	Yes	2	2,9		100,0
	Rather yes	11	16,2	**36,4**	63,6
	Rather no	12	17,6	50,0	50,0
	No	43	63,2	65,1	34,9
- easier access to credit	Yes	5	7,5	40,0	60,0
	Rather yes	10	14,9	**30,0**	70,0
	Rather no	9	13,4	55,6	44,4
	No	43	64,2	62,8	37,2
- easier access to the issuance of bonds	Yes	2	3,0		100,0
	Rather yes	6	9,0	16,7	83,3
	Rather no	8	11,9	87,5	12,5
	No	51	76,1	**56,9**	43,1
- simpler reporting within the consolidated group	Yes	42	62,7	**54,8**	45,2
	Rather yes	16	23,9	56,3	43,8
	Rather no	2	3,0	50,0	50,0
	No	7	10,4	57,1	42,9
- increase the credibility from the perspective of business partners	Yes	13	19,4	**30,8**	69,2
	Rather yes	14	20,9	57,1	42,9
	Rather no	11	16,4	63,6	36,4
	No	29	43,3	62,1	37,9
- better perception of the company by society	Yes	10	14,9	**30,0**	70,0
	Rather yes	17	25,4	52,9	47,1
	Rather no	13	19,4	53,8	46,2
	No	27	40,3	66,7	33,3
- better use of data in the framework of internal control	Yes	15	22,4	**40,0**	60,0
	Rather yes	16	23,9	68,8	31,3
	Rather no	10	14,9	**40,0**	60,0
	No	26	38,8	61,5	38,5
- improving the quality of internal information	Yes	15	22,4	**46,7**	53,3
	Rather yes	16	23,9	62,5	37,5
	Rather no	12	17,9	50,0	50,0
	No	24	35,8	58,3	41,7
- easier access to the EU funds	Rather yes	12	17,9	58,3	41,7
	Rather no	15	22,4	**46,7**	53,3
	No	40	59,7	**57,5**	42,5
- the possibility of comparability of accounting data	Yes	26	38,8	**50,0**	50,0
	Rather yes	23	34,3	60,9	39,1
	Rather no	5	7,5	20,0	80,0
	No	13	19,4	69,2	30,8
How long did the preparation and transition to reporting according to IAS / IFRS take?	lessthan6months	36	53,7	63,9	36,1
	6 months to1 year	21	31,3	57,1	42,9
	1-2 years	10	14,9	**20,0**	80,0

IS IFRS IMPLEMENTATION IN EMERGING JURISDICTIONS A KEY DRIVER FOR ECONOMIC DEVELOPMENT? A COMPARATIVE MULTIVARIATE ANALYSIS COVERING AN ENLARGED EUROPEAN AREA

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Abstract: *This paper investigates the relevance of adopting IFRS in Europe for emerging economies, as compared to developed ones, through the lenses of the impact on the foreign investments. A challenging connection to make, the association of IFRS adoption with the economic development is addressed in this paper to deepen research that advances toward identifying various factors that could influence or control for this relationship. Consistent with the aim of the study, a benchmark model based on multivariate analysis is used to control for different institutional factors established by seminal research, to be key drivers of foreign direct investment inflow. The IFRS adoption variable is subsequently introduced to respond the research question of this paper. Results of crosstabulation with Pearson Chi-Square test and independent t-test indicate an incremental relevance of IFRS adoption on emerging countries as compared to non-emerging ones when economic development, as measured by foreign direct investment, is considered. Moreover, the cumulative effect of incentives related to other elements in the institutional infrastructure, such as economic, political, and financial variables shows that the adoption of international financial reporting standards in emerging jurisdictions has a positive impact on their economic development, despite the opposite influence of governance factors and investment freedom. The two-fold contribution resides both in the literature on economic consequences of IFRS adoption by reconsidering the time span of IFRS implementation process within an adopting jurisdiction, and in empirical research on the determinants of FDI by extending the economic and political approach towards accounting facets.*

Keywords: *Economic development, Emerging jurisdictions, Foreign direct investment, IFRS adoption, Multivariate analysis*

1. INTRODUCTION

In the new global economy, accounting standardization has become a central issue for governments, capital providers, international organizations and enforcement agencies. This subject has received critical attention. Scholars agree that harmonised accounting standardization has played a significant role in impacting the economy of adopting countries (Brown et al., 2014; Cieslewicz, 2014; Hassan et al., 2014; Armstrong et al., 2010; Aharony et al., 2010). Results show that IFRS adoption provides many benefits to developing countries (Brown et al., 2014; Hassan et al., 2014; Humphrey et al., 2009) supporting the consensus that using global accounting standards have the potential to reduce information asymmetry through increased transparency (Bruggemann et al., 2013; Gordon et al., 2012; Shima and Gordon 2011; Humphrey et al., 2009; Barth et al., 2008). Bruggemann et al. (2013) provide arguments for non homogeneous effects and national institutional setting for financial reporting, while Brown et al. (2014: 2) see the process of IFRS adoption as ‘a transforming event in global financial markets’.

The aim of this research is to investigate the impact of IFRS adoption on foreign direct investments (FDI), as a measure for businesses and individuals in other countries' incentive to invest in the host country (Beneish et al., 2015; Daske et al., 2008). Quantifying the controlling interest of foreign companies in another countries, the foreign direct investment inflows are considered a key indicator of economic development (Gordon et al., 2012), especially in emerging jurisdictions (Ben Othman and Kossentini, 2015; WEF, 2013; UNCTAD, 2013).

The research question we address is whether the adoption of IFRS has a significant impact in increasing the economic development indicators of emerging jurisdictions. Accordingly, we examine the macroeconomic impact that the adoption of IFRS may have on foreign direct investment inflows at an extended regional level. Next, the analysis advances towards the incremental relevance when emerging economies are considered as opposed to developing ones. Consequently, the research hypotheses are projected to verify the statement that the IFRS adoption has a positive impact on the foreign investment decision related to a country, with a higher relevance for the emerging jurisdictions as compared to developed economies. Accordingly, the research geography is established at an enlarged European area, comprising the European Union member states along with a number of countries from eastern and central Asia, as classified by the World Bank database, for a time span within 1996-2013 periods. Multivariate analysis based on Ordinary Least Squared regression models crosstabulation with Pearson Chi-Square test and independent t-test are applied to grasp the incremental relevance of IFRS adoption on emerging countries as compared to non-emerging ones.

This study is distinguishing from similar ones when IFRS adoption variable is considered. Compared to other studies that use the IFRS adoption date as time limit for analysing pre-adoption consequences versus post adoption consequences, this study considers that IFRS adoption timeline (IASB, 2015) should be reflected by the date of effective adoption of IFRS, generating a one-year lag as compared to previouse studies. Despite the extensive literature on economic impact of IFRS adoption within either developed or developing countries, the emerging jurisdiction condition still needs answers in establishing the relevance of the previously proved impact on economic development. Thus, the present study provides insightful opportunity to advance the issues of international accounting harmonisation and its effects in emerging jurisdictions, using comparative analysis.

The remainder of this research advances as follows: the next section presents the prior research, referring to studies both supporting and contesting IFRS adoption in emerging countries and to the key factors identified to significantly impact the economic development of a jurisdiction. Studies conducted on the causality between IFRS adoption and foreign direct investment inflows are referred to, in order to motivate the research hypotheses. The subsequent section describes the research methodology, referring to method, study design, and sample used. A distinct section is dedicated to disclosure and interpretation of the results and their overall implications on the economic reality as compared to other studies. Concluding remarks, limitations, and future research are provided in the final section of the dissertation paper.

2. LITERATURE REVIEW AND RESEARCH HYPOTHESES DEVELOPMENT

The increasing globalization of capital markets has heightened the demand for higher transparency levels of financial reporting practices. Factors related to the internationalization of equity capital markets and global business development put pressure on countries to adopt an international accounting perspective (Adhikari and Tondkar, 1992). However, little attention has been paid to the IFRS adoption – economic development relationship in the context of emerging jurisdictions, in accounting research. We addressed this gap by using a benchmark model proved to explain macroeconomic impact on foreign direct investment, and, than, personalised the study by including research design features to control for education, financial and investment freedom, and investing climate factors such as financial resources invested in private sectors by financial corporations.

Foreign direct investment (FDI) is an indicator reflecting the net proceeds used to acquire investments of at least 10% of the voting rights of a company operating in a jurisdiction different from that of the investor (WDI, 2015). It is calculated as the difference between new investment flows generated by capital contributions, reinvestment of earnings, other short term or long term assets as they appear in the balance of payments and the divestments made. The indicator was used by Zeghal and Mhedhbi (2006) in the study on the factors influencing the adoption of international accounting standards by developing countries. Moreover, Gordon et al. (2012) developed a comprehensive study, finding out that IFRS adoption by countries with developing economy is positively associated with foreign direct investments inflows. Mandatory adoption of IFRS is recommended to the policy makers in developing countries.

A challenging connection to make, the association of IFRS adoption with the economic development invites researchers to deepen research that advances toward identifying various factors that could influence or control for this relationship. Reasons for explaining such results urged us to deepen research. Thus, we addressed incentives related to other elements in the institutional infrastructure (Beneish et al., 2015; Brown et al., 2014; Zaidi and Huerta, 2014); Bruggemann et al., 2013; Gordon et al., 2012; Leuz, 2010) such as economic, political, financial, and educational aspects that may converge towards the impact on economic development phenomena. Setting the research at a complementary level, Cieslewicz's (2014) empirical findings indicate that national supporting institutions are linked to accounting, hence, to IFRS adoption process, through cultural insights.

Consequently, the study investigates whether the mandatory adoption of IFRS (as by an enforcement organisation of that jurisdiction) may be a key driver for the decision of increasing the foreign investment portfolio at country level, along with various other factors. Standing on Leuz's (2010) assertion that other elements of the institutional infrastructure (such as economic, political, and financial aspects) may converge towards the impact on economic development phenomena, a benchmark model (as in Gordon et al., 2012) based on multivariate approach (Gujarati and Porter, 2008; Maddala and Lahiri, 2009) is used in order to settle the framework within the impact of IFRS adoption should be considered when debating on drivers of economic development. This approach is supported by the complex nature of international accounting research and the fact that the economic development may have multiple generating sources. This study is positioning on the research area of foreign direct investments (FDI), as a major driver for economic development of a country.

The primary key factor that drives the increase in FDI is the economic growth itself. According to Beneish et al. (2015), the changing in country's gross domestic product has a potential effect on the level of foreign investment. This is a basic economic indicator that measures the relative economic productivity of a nation and reflects the changes in its standard of living. In Gordon et al. (2012), the absolute value of GDP reflects the country's size, while the GDF growth captures the market factor that influences the FDI.

Economic freedom, in addition to other key drivers, is found to positively affect the economic development (Heritage Foundation, 2015; Dawson, 2003; Haan and Sturm, 2000). The economic freedom is a measure that characterizes the degree to which an economy is a market economy. The indicator, developed by Heritage Foundation, consists of ten quantitative and qualitative factors: property rights, freedom from corruption, fiscal freedom, government spending, business freedom, labour freedom, monetary freedom, trade freedom, investment freedom, and financial freedom. Drawing on the causality between economic freedom and economic growth, Haan and Sturm (2000:215) concluded that 'hat greater economic freedom fosters economic growth', the reversed relationship couldn't be proved. Dawson (2003), on the other hand, couldn't find enough evidence to support the causal relationship, but only a positive correlation between the two variables. Therefore, the expected influence of economic freedom factors such as investment freedom and financial freedom are expected to positively associate with foreign direct investment, as an economic development measure.

Other controlling variables used in seminal studies on incentives of economic development are different financial climate factors as: the country's currency rate and national lending interest rate (Gordon et al. 2012), and the financial resources provided to the private sector by financial corporations (Assenso-Okofo et al., 2011). This financial intermediation variable reflects the extent to which a particular jurisdiction uses capital obtained through bank loans instead of capital markets to finance its private sector.

Investor protection and enforcement environment are identified as drivers for the relationship between IFRS adoption and foreign investment (Hail et al., 2010; Ball et al., 2000). An inconsistent country approach related to those factors may lead in diminished impact of IFRS adoption on foreign investment, contrary to the significant improvement of financial reporting quality (Beneish and Yohn, 2008). The enforcement effectiveness was considered in research over time, and different measures were designed to capture this effect. Henceforth, in this study, using the political climate factors responds to the need of controlling for IFRS faulty enforcement.

One of the most used measures is the Kaufmann et al. (2010) governance index that capture perceptions of six governance dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. Both the aggregate index (Beneish et al., 2015) and the individual measures (Gordon et al., 2012) are used in multivariate analysis as control variables. This technique help to rule out the limitation raised by Daske et al. (2008) that the impact on increasing foreign investment to be engendered by the improvements in institutional policy rather than in the adoption of IFRS. Other enforcement variables, such as independent external auditors, enforcement bodies, and effective legal systems are used in similar approaches to enhance financial statements level of compliance with IFRS (IFAC, 2011; Leuz, 2010; Zeff, 2007).

Within this study, the expected sign of the association between governance index and the foreign direct investment is positive, hence, high values of governance indicators reflect high quality governance and investor protection (Beneish et al., 2015).

The focus on education as a determinant of economic development is found by Barro (2002) as having a significant explanatory value. The author used for the education variable the value at the start of each period of the average years of school attainment at the upper (secondary and tertiary) levels and the students' scores on science tests. Results provided a positive association between the increase in the quality and quantity of education to subsequent economic growth. More recently, Zaidi and Huerta (2014), using the literacy rate to measure the education variable founded a positive correlation to economic growth, however, not significant for the employed regression analysis.

Tweedie and Seidenstein (2005) highlighted the positive impact of IFRS adoption on the foreign investments facilitation based on increasing comparability of financial information disclosed by companies listed on different stock exchanges. A higher information transparency obtained through reducing information asymmetry (Armstrong et al., 2010; Bartov et al, 2005) when adopting a global set of reporting standards is expected to generate an increased incentive for foreign companies and individual to invest companies from in other countries (Gordon et al., 1012, Bushman et al., 2004). Other related factors that could support this statement refer to reduction of information processing costs, of financial risks, and of the cost of capital associated to foreign investments (Gordon et al., 2012).

Standing for the main objective of this study, the previous arguments lead to the first, general, hypothesis:

> *H1. The IFRS adoption by a country has a positive impact on the foreign investment decision in that jurisdiction.*

This positive impact of IFRS adoption on the foreign direct investment is expected to have a greater incremental relevance for emerging economies (Gordon et al., 2012) since switching from national unsophisticated standards towards international accepted standards is seen as a signal for a trustful credibility and relevance of disclosed financial information. This discussion leads us to the following related hypothesis that bring arguments for the comparative debate conducted on the need for different approach of IFRS adoption impact at country level depending on its economic development:

H2. The IFRS adoption is associated with a higher relevance for the foreign direct investment in emerging jurisdictions as compared to non-emerging jurisdictions.

The research hypotheses are tested using a research methodology described in the next section of the dissertation. Results of empirical study and their economic implications contribute then to the quality of this research.

3. RESEARCH METHODOLOGY

3.1 Research design

The examination of the value relevance of financial information disclosed under IFRS depicts the macroeconomic image for the impact of mandatory IFRS adoption on the foreign direct investment (FDI), considering a number of countries placed within an enlarged European area. The research advances a literature benchmark model based on cross-sectional, time-series variables by adding a variable named IFRS, to reflect the status of IFRS adoption by a given country (Gordon et al., 2012; Beneish et al., 2015).

The benchmark model is designed to control for a number of important determinants, as prior literature identified to be key factors of businesses and individuals from other countries to invest in a certain jurisdiction. These drivers are independent variables and participate to the benchmark regression model designed for this study, presented in *Equation (1).* The main argument for using the benchmark model is that it provides support for the relevance of control variables that are used, before analysing the impact of IFRS adoption on FDI. Details related to definitions, measurement, data sources and seminal research employing the independent variables used in the equations of the study are summarised in Appendix 1.

The independent variables employed by the benchmark model are chosen to capture various characteristics of the jurisdictions, as: market factors, labour cost factors, investment climate factors, financial climate factors, governance climate factors, and education climate factors.

The market factors are captured by the following variables (as used in Gordon et al., 2012): log of GDP in current USD (GDP), and growth rate of GDP per capita based on local currency (GDP_C_GR), while the labour cost factor is captured by GDP per capita in current USD scaled by 1000 (GDP_C). The investment climate factors are represented by financial resources provided to the private sector by financial corporations (FIN_RES) and freedom of investment (INV_FR) also used by Tiwari (2011). Lending interest rate (INTEREST), official exchange rate (EXCH), used by Gordon et al. (2012) and Beneish et al. (2015), and financial freedom (FIN_FR) are the variables that capture the financial climate.

The governance climate factors are covered by Kaufmann et al. (2010) study: voice and accountability (ACCOUNTABILITY), regulatory quality (REG_QUAL), government effectiveness (GOV_EFF), control of corruption (CORRUPTION), political stability (POL_STAB), and rule of law (R_LAW). Further analysis related to multicolinearity indicates that the research model should be adjusted by replacing the six governance variables with a single average index (GOV_INDEX) (*Eq.1_bis*).

Last, but not the least, the school enrolment, gross ratio (EDUCATION) is considered to control for education climate factors (Zaidi and Huerta, 2014). A dummy variable is included in the regression model with the purpose of reflecting the emerging/non-emerging category of the jurisdiction (EMERGING).

The benchmark model is the following:

$$FDI_{i,t} = \alpha_0 + \alpha_1 GDP_{i,t-1} + \alpha_2 GDP\_C\_GR_{i,t-1} + \alpha_3 GDP\_C_{i,t-1} + \alpha_4 FIN\_RES_{i,t-1} + \alpha_5 INV\_FR_{i,t-1} + \alpha_6 INTEREST_{i,t-1} + \alpha_7 EXCH_{i,t-1} + \alpha_8 FIN\_FR_{i,t-1} + \alpha_9 ACCOUNTABILITY_{i,t-1} + \alpha_{10} REG\_QUAL_{i,t-1} + \alpha_{11} GOV\_EFF_{i,t-1} + \alpha_{12} CORRUPTION_{i,t-1} + \alpha_{13} POL\_STAB_{i,t-1} + \alpha_{14} R\_LAW_{i,t-1} + \alpha_{15} EDUCATION_{i,t-1} + \alpha_{16} EMERGING_{i,t-1} + \varepsilon_{i,t} \qquad Eq(1)$$

The adjusted benchmark model controlling for the governance effects on foreign direct investment is expressed as follows:

$$FDI_{i,t} = \beta_0 + \beta_1 GDP_{i,t-1} + \beta_2 GDP\_C\_GR_{i,t-1} + \beta_3 GDP\_C_{i,t-1} + \beta_4 FIN\_RES_{i,t-1} + \beta_5 INV\_FR_{i,t-1} + \beta_6 INTEREST_{i,t-1} + \beta_7 EXCH_{i,t-1} + \beta_8 FIN\_FR_{i,t-1} + \beta_9 GOV\_INDEX_{i,t-1} + \beta_{10} EDUCATION_{i,t-1} + \beta_{11} EMERGING_{i,t-1} + \varepsilon_{i,t} \qquad Eq(1\_bis)$$

The subscripts assigned to variables reflect the country (i) and the time period (t). The time lag of one year is captured within the regression models, as FDI refers to values that may be driven by the explanatory factors, subsequent to the their disclosure or assessment.

Further, the benchmark model is extended in order to address the main objective of this research, regarding the relevance of IFRS adoption on the foreign investment decision. A third dummy variable (IFRS) is added, to reflect the status of the jurisdictions as related to mandatory IFRS adoption (Equation 2).

$$FDI_{i,t} = \gamma_0 + \gamma_1 GDP_{i,t-1} + \gamma_2 GDP\_C\_GR_{i,t-1} + \gamma_3 GDP\_C_{i,t-1} + \gamma_4 FIN\_RES_{i,t-1} + \gamma_5 INV\_FR_{i,t-1} + \gamma_6 INTEREST_{i,t-1} + \gamma_7 EXCH_{i,t-1} + \gamma_8 FIN\_FR_{i,t-1} + \gamma_9 GOV\_INDEX_{i,t-1} + \gamma_{10} EDUCATION_{i,t-1} + \gamma_{11} EMERGING_{i,t-1} + \gamma_{12} IFRS_{i,t-1} + \varepsilon_{i,t} \qquad Eq(2)$$

The time lag reflected by the difference between IFRS adoption date (as 1st of January 2005 for European Union countries that have to adopt EU Accounting Regulation 1606/2002) and the effective date, when financial statements are presented as complying to IFRS (31st of December 2006) is the argument for the necessity of using this time lag when we consider the effect or the impact of financial information disclosed by companies and various dependent variables whose value may be affected. Therefore, the year t-1 used in this study reflects the year of effective adoption of IFRS.

The estimation of the coefficients for the two equations is carried out using ordinary least squared (OLS) panel regression approach (Gujarati and Porter, 2008; Maddala and Lahiri, 2009). The regression model has been run for the total sample of countries, as well as for the two groups: the countries classified as emerging jurisdictions and the countries identified as not having an emerging economy. The assumptions of normality of the data, heteroskedasticity and multicollinearity are verified using IBM SPSS Statistics, version 20.

Additional assumptions are also verified. Thus, an examination for significant outliers that could negatively influence the results in the two groups is performed. Shapiro-Wilk test of normality and Levene's test for homogeneity of variances are applied to ensure the validity of the regression model as well as the validity of implementing the independent t-test for this study. Levene's test for homogeneity of variances verifies whether there are mean's differences for the variances in the first case presented and if the variances between groups (emerging versus non-emerging jurisdictions) are significantly different.

3.2 Sample selection

To test the research hypotheses, the first step in sample selection was to identify the countries that the study is meant to focus on, hence referring to an enlarged European area. According to World Bank database, Europe and Central Asia area, considered to describe the focused sample of this study, consists of 57 countries. The span time addressed within this study refers to 1996–2013 period, due to the availability of data. The need to control for the effects of the business cycle and those of the economic crisis are also considered when the time period established. Data for the 57 countries are examined in relation to the World Development Indicators (WB, 2015a) measured for the purpose of this research: GDP in current USD, growth rate of GDP per capita, GDP per capita in current USD scaled by 1000, financial resources provided to the private sector by financial corporations, lending interest rate, official exchange rate, and the school enrolment's gross ratio (further detailes in Appendix 1). For the data related to governance factors, as described by Kaufmann et al. (2010), the World Governance Indicators database (WB, 2015b) is used. The collected data related to: voice and accountability, regulatory quality, government effectiveness, control of corruption, political stability, and rule of law. In this step the number of countries is cut to 54, given the availability of the data. Next, the variables embodying the investment and financial aspects of economic freedom (Heritage Foundation, 2015) are added to the study's database, narrowing the number of countries to 46.

A detailed list of these jurisdictions is presented the Appendix 2. Further, the remaining countries are classified as the emerging/non-emerging jurisdiction and according to the IFRS adoption status. Information about the adoption year is collected after consulting and corroborating data disclosed on the IASB's webpage (http://www.ifrs.org/Use-around-the-world/Pages/Jurisdiction-profiles.aspx) and Deloitte-Touche database (http://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs). The emerging/non-emerging classification relay on Emerging Europe portal (http://emerging-europe.com/regional-opportunities/) and it is correlated with the developing/developed country classification provided by the Word Bank's country metadata. After the process of cleaning data, the initial database consisting of 828 observations was narrowed down to 611 observations.

3.3 Data analysis

Before estimating the regression coefficients, the data were analysed. At a first-level analysis, descriptive statistics are computed for the continuous regression variables. Due to the positive skewness, the FDI and GDP variables were transformed using natural logarithm for FDI and decimal logarithm for GDP, as used in Gordon et al. (2012) study. A significant variability characterises the majority of the variables, as the standard deviation is at a high level and extremes values are found for a number of variables (Table 1). Stem-and-Leaf Plot was used to triangulate the existence of outliers as revealed by data exploration.

Table 1. Descriptive statistics after data cleaning

Variables	N	Mean	Std. Deviation	Skewness	Kurtosis	Extreme Lowest	Extreme Highest
lnFDI	611	21.772	1.957	-.116	-.520		
logGDP	611	10.948	0.837	-.001	-.943		
GDP_C_GR	611	2.992	4.629	.278	5.176	13.00 (=<-7.1)	11.00 (>=13.0)
GDP_C	611	21378.932	21797.255	1.486	2.346		18.00 (>=78457)
FIN_RES	611	76.900	58.992	1.175	1.191		13.00 (>=217)
INV_FR	611	64.189	17.850	-.647	.101	3.00 (=<10)	
INTEREST	611	11.501	15.938	10.512	164.404		25.00 (>=30)
EXCH	611	112.788	605.591	10.736	135.835		111.00 (>=77)
FIN_FR	611	62.707	17.446	-.358	-.102	7.00 (=<10)	
ACCOUNTABILITY	611	0.664	0.837	-.822	-.236		
REG_QUAL	611	0.753	0.814	-.615	-.410		
GOV_EFF	611	0.694	0.964	-.117	-1.239		
CORRUPTION	611	0.587	1.103	.222	-1.267		
POL_STAB	611	0.411	0.758	-.584	-.464	1.00 (=<-2.2)	
R_LAW	611	0.590	0.989	-.169	-1.291		
EDUCATION	611	101.369	4.893	1.063	3.429	11.00 (=<92.0)	26.00 (>=110.2)
EMERGING	611	.54	.498	-.195	-1.969		
IFRS	611	.45	.498	.181	-1.974		

The low degree of data series' homogeneity requires the application of Shapiro-Wilk test in order to verify the normality of data distribution. The test was significant for all the variables, standing for the assumption that the data are normaly distibuted. Levene's test for homogeneity of variances are applied to ensure the validity of the regression model. The outputs confirm that the series of data are not heterogeneous and a regression model based on those variables is valid.

The ordinal variables are next explored.

Table 2. Sample's frequencies related to EMERGING and IFRS variables

IFRS * EMERGING Crosstabulation			EMERGING		Total
			No	Yes	
IFRS	NO	Count	147	186	333
		% within EMERGING	53.30%	55.50%	54.50%
		% of Total	24.10%	30.40%	54.50%
	YES	Count	129	149	278
		% within EMERGING	46.70%	44.50%	45.50%
		% of Total	21.10%	24.40%	45.50%
Total		Count	276	335	611
		% within EMERGING	100.00%	100.00%	100.00%
		% of Total	45.20%	54.80%	100.00%

A frequency analysis shows that the sample for examining the first hypothesis consisted of a total of 611 country-year observations. Out of the total observations used for OLS regression, 278 observations refer to IFRS adopters, whie 335 observations related to emerging jurisdictions. The cross tabulation frequency employed in order to thoroughly examine the sample shows that out of the 335 observations for emerging jurisdictions, 149 observations relate to IFRS adoption and 186 observations are for non-adopters.

4. EMPIRICAL RESULTS AND ECONOMIC IMPLICATIONS

Next, the analysis advances towards the incremental relevance of adopting IFRS in emerging economies as opposed to developing ones. Consequently, the research hypotheses, on the positive impact of IFRS adoption on the foreign investment decision, are tested and related results are explained. The strength of the association between IFRS adoption and the level of foreign direct investment is further tested using both parametric and nonparametric correlation. IFRS adoption is positively correlated (Pearson correlation coefficient=0.218, $p<0.01$) with the level of foreign direct investment, as hypothesised. Results are validated by the Spearman correlation coefficient value of 0.201 ($p<0.01$). Although the two variables are not independent, the low intensity of the association should be interpreted through the lack of control for other variables which influence the foreign direct investment. Nevertheless, counting for those limits, the basis for validating the first hypothesis, that IFRS adoption is positively associated with the foreign direct investment decision in adopting jurisdictions, is established. For the multicollinearity assumption to be met, Beneish et al. (2015) solution is used. The results of the Pearson-R and Spearman correlation coefficients (Appendix 3) provide arguments for the decision to replace the six variables related to governance factors (ACCOUNTABILITY, REG_QUAL, GOV_EFF, CORRUPTION, POL_STAB, and R_LAW) by an average index (GOV_INDEX).

4.1 Comparative analysis of economic development as result of IFRS adoption

The OLS regression results obtained for the benchmarked model, based on *Equation 1_bis* indicate a valid model, as shown by ANOVA test, with an F statistic of 153.017 and a related significance of 0.000 that explained in proportion of 76.1% the impact of study variables on the inflow of foreign direct investments in a country.

Table3. Ordinary Least Squares Regression – the transformed models for the total sample

Variables LnFDI		Benchmark model	t	Sig.	Total sample model	t	Sig.
(Constant)		-1.817	-1.647	.100	-1.571	-1.429	.154
logGDP	+	1.927*	29.373	.000	1.900*	28.908	.000
GDP_C_GR	+	.002	.228	.820	.009	.942	.347
GDP_C	+	1.883E-05*	5.694	.000	1.660E-05*	4.930	.000
FIN_RES	-	.003*	2.820	.005	.002***	1.683	.093
INV_FR	+	.000	-.081	.935	-.003	-.740	.460
INTEREST	-	-.007*	-2.712	.007	-.006**	-2.117	.035
EXCH	-	-7.325E-05	-1.062	.289	-8.189E-05	-1.194	.233
FIN_FR	+	.009**	2.471	.014	.010*	2.804	.005
GOV_INDEX	+	-.252*	-2.638	.009	-.175***	-1.779	.076
EDUCATION	+	.012	1.365	.173	.013	1.510	.131
EMERGING	+	.639*	4.074	.000	.487*	2.973	.003
IFRS	+				.290*	3.019	.003
Observations		611			611		
R		0.872			0.874		
R-squared		0.761			0.764		
Anova F statistic		153.017 (0.000)			141.475 (0.000)		

* Significance at the 0.01 level.
** Significance at the 0.05 level.
*** Significance at the 0.10 level.

The significance of ANOVA F statistic and the high level of R-squared determinant, obtained from running the benchmark model, support the decision of using its variables in order to control for the key drivers of foreign direct investment inflows, prior to reviewing the impact of IFRS adoption.

The results' consistency with prior studies in the field validates our choice of using it for this study. Detailing, it may be interpreted that the level of GDP (both absolute and per capita values), financial resources provided to the private sector by financial corporations, the lending interest rate, and the index embodying the governance factors are significant factors that influence the level of foreign direct investment inflows toward a given jurisdiction. Nevertheless, variety and differences from previous studies may be related to the level of significance. Most of the variables do impact FDI, following the predicted sign, according to the literature review. Thus, the GDP growth is positively associated with the FDI, the same as in Gordon's et al. (2012) results and Beneish's et al. (2015) expectations.

Ensuring the validity of the empirical model used for testing the influence of different factors on the foreign direct investment, by compliance with prior studies' results, we move forward with this research. The objective of analysing the impact of IFRS adoption on FDI targets the debate on the relevance of financial information disclosed to the public. For testing the first hypothesis that assumed a positive impact of IFRS adoption on FDI, the regression model was run for the total sample, and for each of the two groups: emerging and non-emerging countries.

The results related to total sample analysis support a positive association of IFRS adoption with FDI at a 0.01 significance level, higher than previous studies (Beneish et al., 2015; Zaidi and Huerta 2014; Gordon et al., 2012). At this point it must be pointed out the stronger association found for the jurisdictions situated within the enlarged European area considered for this study, that the association found in Gordon et al. (2012) and in Beneish et al. (2015), significant at a 0.05 level. In addition, the present results show that the decision of adopting IFRS by a certain jurisdiction has an impact of 30% in the increase of the foreign direct investment of that country, after the effective application of the standards. As compared to the 19.2% impact of IFRS adoption found by Gordon et al. (2012), this study's outcomes support the choice of measuring the IFRS adoption impact beginning with its effective date and not to the adoption date. However, Zaidi and Huerta (2014) showed a not significant negative impact of IFRS adoption on economic growth, with the limit of only three years period of time, although enforcement may potentiate the relationship.

Considering the above debate, the first hypothesis of the study is accepted. Consequently, the effective IFRS adoption has a positive impact on a country's FDI inflows. This finding has to be highlighted in conjunction with the idea that the correlation among the variables used in the extended model, IFRS adoption variable included, is not very powerful. Hence, a strong argument for the IFRS adoption variable is capturing a highly important driver of foreign direct investment inflows.

4.2 The impact of IFRS adoption: emerging versus non-emerging jurisdictions

The next table presents the results of testing the two sub-hypothesis depicted to explain the incremental relevance of IFRS adoption on FDI inflow relative to emerging / non-emerging distinction for the studied jurisdictions.

In order to analyse the impact of IFRS adoption on the FDI, for each of the two groups of countries, we splited the total sample of 611 country-year observations, accordingly. The OLS regression was run on each of the two sub-samples, resulting in two valid models, as revealed by the results presented in Table 4.

Table 4. Ordinary Least Squares Regression – the transformed models for the sub-samples

Variables LnFDI		Emerging jurisdictions	t		Non-emerging jurisdictions	t	Sig.
(Constant)		-.107	-.078	.938	-2.109	-1.155	.249
logGDP	+	1.960*	20.740	.000	1.794*	15.640	.000
GDP_C_GR	+	.005	.537	.592	.046***	1.909	.057
GDP_C	+	-4.658E-05*	-2.695	.007	1.852E-05*	4.517	.000
FIN_RES	-	.009*	2.724	.007	-9.697E-06	-.006	.995
INV_FR	+	-.008***	-1.768	.078	.009	1.510	.132
INTEREST	-	-.007*	-2.664	.008	-.003	-.449	.654
EXCH	-	-6.470E-05	-.985	.325	-.001**	-2.253	.025
FIN_FR	+	.003	.789	.431	.018*	3.094	.002
GOV_INDEX	+	.261	1.575	.116	-.455*	-2.812	.005
EDUCATION	+	.005	.462	.645	.022	1.509	.133
EMERGING	+						
IFRS	+	.471*	3.644	.000	.232	1.485	.139
Observations		334			276		
R		0.839			0.793		
R-squared		0.704			0.629		
Anova F statistic		69.93 (0.000)			40.607 (0.000)		

* Significance at the 0.01 level.
** Significance at the 0.05 level.
*** Significance at the 0.10 level.

It may be noticed that coefficients are still significant, but with debatable differences between the two groups. While for non-emerging jurisdictions the significant factors affecting FDI are economic growth per capita, exchange rate, financial freedom and governance index, for emerging countries the significant impact relates to financial resources offered to private sector, investment freedom, and lending interest rate. This reality may be argued by the idea that the emerging countries are at the stage of attracting new investments, new funds to be allocated to the economy for it to grow in a "climbing" phase. Instead, the developed economies are struggling to maintain their economic growth rate using more "subtle" leverages as the exchange rate, the financial freedom, or the governance policies. Following the same distinction, the IFRS adoption is proved to differently impact the level of FDI inflows. The IFRS adoption variable is positive for both types of jurisdictions and statistically significant for the total sample (Table 3) and for the emerging countries (Table 4) at a 0.01 level. This is a highly significant impact endowed with IFRS adoption variable on the FDI in emerging countries. The strength of the impact is of 47% increase in FDI flows when an emerging jurisdiction effectively adopts the IFRS. The confidence on financial statements disclosed in compliance with IFRS is a key driver for foreign investors, minimising future risks that may easily occur within an emerging economy. All these arguments support the validity of the first sub-hypothesis of the study, that the adoption of IFRS is positively associated with the foreign investment decision in the jurisdictions classified as having an emerging economy.

The significance level of 0.139 accounted for developed economies cannot provide sufficient evidence to support the hypothesis that for non-emerging countries the IFRS adoption may significantly impact the FDI inflows. Rather than concluding on the lack of influence of IFRS adoption in developed countries, a more proper explanation could be that this variable is not a key driver for the level of FDI, as it is in emerging economies. The IFRS adoption positively impacts the FDI inflows in non-emerging jurisdictions, but with an elusive strength.

Notwithstanding the above arguments, there may be an endogeneity limitation (Gordon et al., 2012) implied by non-addressing the relation between IFRS adoption and FDI when the regression in run on each of the two samples. To tackle this limit, and to respond to the second hypothesis of the study, a comparison besed on chi-square test is further debated.

4.3 Incremental relevance of IFRS adoption decision on emerging jurisdictions as compared to non-emerging economies

The study objective concentrated in the second hypothesis is to identify and compare the incremental relevance of IFRS adoption on FDI inflows in emerging jurisdictions relative to non-emerging ones. Hence, significance tests are performed for validating this assumption.

The first assumption verified is whether there is no difference between emerging and non-emerging countries when they decide to apply IFRS. The validation of the null hypothesis contributes to overcome the endogeneity limit raised earlier in the study. This assumption is addressed by performing a cross-tabulation on the two categorical variables, IFRS and EMERGING.

Table 5. Chi-Square Tests

IFRS * EMERGING	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.312[a]	1	.576		
Continuity Correction	.228	1	.633		
Linear-by-Linear Association	.312	1	.577		
N of Valid Cases	611				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 125.58.

The Pearson Chi-Square value of 0.312 (Table 5), with a related significance of 0.576 ($p>0.05$) allow to accept that there is not enough evidence to conclude that the decision of adopting IFRS is related to the economic development type of the country. Therefore we may conclude that a possible difference on the impact of IFRS adoption on FDI inflows in emerging versus non-emerging countries is not biased by a possible influence of the developing level of the country over the decision of adopting IFRS.

To enhance the results of OLS regression models run on the two groups of jurisdictions, independent t-test was used to validate the differences related to the relevance of IFRS adoption's impact on the foreign direct investment between the two groups.

Table 6. Independent t test between groups, for EMERGING independent variable

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig.(2-tailed)	Mean Diff.	Std. Error Diff.	95% Confidence Interval	
									Lower	Upper
lnFDI	Equal variances assumed	1.052	.305	17.376	609	.000	2.2618	.1302	2.006	2.517
	Equal variances not assumed			17.300	576	.000	2.2618	.1307	2.005	2.519

The significance of 0.305 corresponding to the Levene's F statistic generates the specific interpretation that *lnFDI* is a heterogeneous variable. The results, when equal variances not assumed (Table 6) reveal that there is a significant difference in the level of FDI for emerging as compared to non-emerging countries. The group statistics allow the interpretation according to which non-emerging countries have a higher FDI level, of 2.2618 points, corresponding to approximately 23 billion US dollars, in absolute amounts, as compared to emerging countries.

5. CONCLUSIONS AND DEBATES

Investigating the mandatory adoption of IFRS (as by enforcement organisation of that jurisdiction), this paper has been designed to cover a current research subject addressed equally by academic environment and by professional organisations. The specific topic of the association between IFRS adoption and FDI has been debated in the context of emerging jurisdiction as compared to non-emerging ones. Advances on the influence of other independent variables (GDP, governance index, interest, exchange rate) have been carried out using the dependence analysis. Additional controlling variables (financial freedom, investment freedom, and financial resources) were also considered for better understanding the context of IFRS adoption by analysed jurisdictions.

The results indicate that the jurisdictions applying IFRS are more likely to benefit from a higher increase in economic development, as measured by foreign direct investment, that the non-adopters. Moreover, the impact is driven by the countries classified as having emerging economies as opposed to non-emerging or developing jurisdictions. The results are consistent with Beneish et al. (2015), Akisik (2013), and Gordon et al. (2012). The cumulative effect of incentives related to other elements in the institutional infrastructure, such as economic, political, and financial variables shows that the adoption of IFRS in emerging jurisdictions has a positive impact on their economic development, despite the opposite influence of governance factors and investment freedom. Controlling for government enforcement effectiveness allow opening the research towards the quality of IFRS implementation and the credibility of governments' commitment to IFRS adoption practice.

Despite the extensive literature on the economic impact of IFRS adoption within developing countries, the European emerging jurisdiction condition still needs answers. Thus, the present study provides insightful opportunity to advance the issues of international accounting harmonisation and its effects in such jurisdictions. This study adds to the growing literature on the macroeconomic effects of IFRS adoption and holds interest for many groups, primarily national and international regulatory bodies. It contributes to the research on incremental relevance of financial information disclosed under IFRS in emerging countries by adding to the literature of economic consequences of IFRS adoption. Particularly, reconsidering the time span of IFRS implementation process within an adopting jurisdiction this study adds new insights on the research area, through extending the economic and political approach towards accounting facets.

Finally, a number of important limitations need to be considered. First, due to data availability, the initial sample of 57 countries had to be reduced to 46. Second, several factors suggested by the accounting literature that may have a significant effect on economic development (eg, type of culture or legislative framework) could not be included in the research model. Notwithstanding study limitations, new incentives for future research were outlined. Future research should focus on the study of the economic impact of IFRS adoption within emerging countries by taking into consideration additional factors and extending the research area from European to international one.

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Appendix 1 List of variables used

Variable	Abbreviation	Description	Database
Foreign direct investment, net inflows (BoP, current US$)	FDI	Foreign direct investment refers to direct investment equity flows in the reporting economy, computed as the sum of equity capital, reinvestment of earnings, and other capital. Direct investment is a category of cross-border investment associated with a resident in one economy having control or a significant degree of influence on the management of an enterprise that is resident in another economy. Data are in current U.S. dollars.	World Development Indicators (WDI) http://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD
GDP (current US$)	GDP	GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars. Dollar figures for GDP are converted from domestic currencies using single year official exchange rates.	World Development Indicators (WDI) http://data.worldbank.org/indicator/NY.GDP.MKTP.CD
GDP per capita growth (annual %)	GDP_C_GR	Annual percentage growth rate of GDP per capita based on constant local currency. Aggregates are based on constant 2005 U.S. dollars. GDP per capita is gross domestic product divided by midyear population. GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources.	World Development Indicators (WDI) http://data.worldbank.org/indicator/NY.GDP.PCAP.KD.ZG
GDP per capita (current US$)	GDP_C	GDP per capita is gross domestic product divided by midyear population. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in current U.S. dollars.	World Development Indicators (WDI) http://data.worldbank.org/indicator/NY.GDP.PCAP.CD
Domestic credit to private sector (% of GDP)	FIN_RES	Domestic credit to private sector refers to financial resources provided to the private sector by financial corporations, such as through loans, purchases of non-equity securities, and trade credits and other accounts receivable, that establish a claim for repayment.	World Development Indicators (WDI) http://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS/countries
Lending interest rate (%)	INTEREST	Lending rate is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing.	World Development Indicators (WDI) http://data.worldbank.org/indicator/FR.INR.LEND
Official exchange rate (LCU per US$, period average)	EXCH	Official exchange rate refers to the exchange rate determined by national authorities or to the rate determined in the legally sanctioned exchange market. It is calculated as an annual average based on monthly averages (local currency units relative to the U.S. dollar).	World Development Indicators (WDI) http://data.worldbank.org/indicator/PA.NUS.FCRF
Investment freedom	INV_FR	In an economically free country, there would be no constraints on the flow of investment capital. Individuals and firms would be allowed to move their resources into and out of specific activities, both internally and across the country's borders, without restriction. Data are measured on a 0 to 100 scale.	Heritage Foundation http://www.heritage.org/index/investment-freedom
Financial Freedom	FIN_FR	Financial freedom is a measure of banking efficiency as well as a measure of independence from government control and interference in the financial sector. State ownership of banks and other financial institutions such as insurers and capital markets reduces competition and generally lowers the level of available services. Data are measured on a 0 to 100 scale.	Heritage Foundation http://www.heritage.org/index/financial-freedom
Voice and Accountability: Estimate	ACCOUNTA-BILITY	Voice and Accountability captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (WGI) http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
Regulatory Quality:	REG_QUALITY	Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and	Worldwide Governance Indicators (WGI)

Variable	Abbreviation	Description	Database
Estimate		regulations that permit and promote private sector development. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
Government Effectiveness: Estimate	GOV_EFFECT	Government Effectiveness captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (WGI) http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
Control of Corruption: Estimate	CORRUPTION	Control of Corruption captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (WGI) http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
Political Stability and Absence of Violence/Terrorism: Estimate	POL_STAB	Political Stability and Absence of Violence/Terrorism captures perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (WGI) http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
Rule of Law: Estimate	R_LAW	Rule of Law captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence. Estimate gives the country's score on the aggregate indicator, in units of a standard normal distribution, i.e. ranging from approximately -2.5 to 2.5.	Worldwide Governance Indicators (WGI) http://databank.worldbank.org/data/views/variableselection/selectvariables.aspx?source=worldwide-governance-indicators
School enrollment, primary (% gross)	EDUCATION	Gross enrollment ratio is the ratio of total enrollment, regardless of age, to the population of the age group that officially corresponds to the level of education shown. Primary education provides children with basic reading, writing, and mathematics skills along with an elementary understanding of such subjects as history, geography, natural science, social science, art, and music.	World Development Indicators (WDI) http://data.worldbank.org/indicator/SE.PRM.ENRR/countries
IFRS adoption	IFRS	Dummy variable showing whether the country effectively applies IFRS in the given year (0- IFRS non effective; 1 – IFRS effective) as in Appendix 2	IASB's webpage (http://www.ifrs.org/Use-around-the-world/Pages/Jurisdiction-profiles.aspx), Deloitte-Touche database (http://www.iasplus.com/en/resources/ifrs-topics/use-of-ifrs)
Emerging jurisdictions	EMERGING	Dummy variable showing the country type (0 – non-emerging country; 1 – emerging country) as in Appendix 2	Emerging Europe portal (http://emerging-europe.com/regional-opportunities/

Appendix 2 List of sampled countries

Crt. No.	Country	IFRS effective since	Country type
1.	Albania	2006	Emerging
2.	Armenia	2011	Emerging
3.	Azerbaijan	2007	Emerging
4.	Belarus	2008	Emerging
5.	Bosnia and Herzegovina	2006	Emerging
6.	Bulgaria	2007	Emerging
7.	Croatia	2010	Emerging
8.	Czech Republic	2007	Emerging
9.	Estonia	2007	Emerging
10.	Georgia	2006	Emerging
11.	Hungary	2007	Emerging
12.	Kosovo	2013	Emerging
13.	Latvia	2007	Emerging
14.	Lithuania	2007	Emerging
15.	Macedonia	2000	Emerging
16.	Moldova	2012	Emerging
17.	Montenegro	2008	Emerging
18.	Poland	2007	Emerging
19.	Romania	2007	Emerging
20.	Serbia	2004	Emerging
21.	Slovakia	2007	Emerging
22.	Slovenia	2007	Emerging
23.	Turkey	2008	Emerging
24.	Ukraine	2012	Emerging
25.	Austria	2006	Non-emerging
26.	Belgium	2005	Non-emerging
27.	Cyprus	1996	Non-emerging
28.	Denmark	2007	Non-emerging
29.	Finland	2007	Non-emerging
30.	France	2007	Non-emerging
31.	Germany	2007	Non-emerging
32.	Greece	2007	Non-emerging
33.	Iceland	2007	Non-emerging
34.	Ireland	2007	Non-emerging
35.	Italy	2007	Non-emerging
36.	Luxemburg	2007	Non-emerging
37.	Norway	2007	Non-emerging
38.	Portugal	2007	Non-emerging
39.	Russia	2012	Non-emerging
40.	Spain	2007	Non-emerging
41.	Sweden	2007	Non-emerging
42.	Switzerland	Non-adopter	Non-emerging
43.	The Nederland	2007	Non-emerging
44.	United Kingdom	2007	Non-emerging

Appendix 3 Multicollinearity (parametric and nonparametric) test for studied variables

Pearson Correlation	**lnFDI**	**logGDP**	**GDP_C_GR**	**GDP_C**	**FIN_RES**	**INV_FR**	**INTEREST**	**EXCH**	**FIN_FR**	**GOV_INDEX**	**EDUCATION**	**IFRS**	**EMERGING**
lnFDI	1												
logGDP	.849**	1											
GDP_C_GR	-.311**	-.326**	1										
GDP_C	.557**	.525**	-.353**	1									
FIN_RES	.473**	.436**	-.430**	.682**	1								
INV_FR	.337**	.299**	-.270**	.507**	.486**	1							
INTEREST	-.328**	-.281**	.084*	-.338**	-.350**	-.246**	1						
EXCH	-.098*	-.067	.071	-.115**	-.135**	-.270**	.057	1					
FIN_FR	.295**	.207**	-.202**	.440**	.484**	.699**	-.291**	-.323**	1				
GOV_INDEX	.517**	.531**	-.334**	.775**	.671**	.675**	-.402**	-.222**	.617**	1			
EDUCATION	.263**	.297**	-.162**	.105**	.253**	.179**	-.077	-.019	.072	.202**	1		
IFRS	.218**	.108**	-.318**	.208**	.306**	.205**	-.197**	.035	.115**	.062	.014	1	
EMERGING	-.576**	-.663**	.348**	-.741**	-.709**	-.391**	.299**	.125**	-.287**	-.710**	-.275**	-.023	1
Spearman's Correlation	**lnFDI**	**logGDP**	**GDP_C_GR**	**GDP_C**	**FIN_RES**	**INV_FR**	**INTEREST**	**EXCH**	**FIN_FR**	**GOV_INDEX**	**EDUCATION**	**IFRS**	**EMERGING**
lnFDI	1.000												
logGDP	.859**	1.000											
GDP_C_GR	-.403**	-.412**	1.000										
GDP_C	.673**	.694**	-.507**	1.000									
FIN_RES	.575**	.560**	-.554**	.858**	1.000								
INV_FR	.360**	.319**	-.290**	.579**	.547**	1.000							
INTEREST	-.537**	-.562**	.398**	-.762**	-.760**	-.531**	1.000						
EXCH	-.369**	-.340**	.241**	-.366**	-.421**	-.251**	.366**	1.000					
FIN_FR	.299**	.213**	-.200**	.496**	.494**	.659**	-.503**	-.231**	1.000				
GOV_INDEX	.515**	.524**	-.388**	.886**	.767**	.644**	-.691**	-.279**	.583**	1.000			
EDUCATION	.316**	.347**	-.200**	.220**	.308**	.232**	-.268**	-.167**	.152**	.208**	1.000		
IFRS	.201**	.107**	-.365**	.262**	.326**	.195**	-.239**	-.155**	.134**	.053	.048	1.000	
EMERGING	-.589**	-.668**	.446**	-.802**	-.750**	-.402**	.630**	.381**	-.283**	-.724**	-.290**	-.023	1.000

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

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

PUBLIC SECTOR ACCOUNTING SYSTEM REFORM IN BALTIC STATES – THE CASE OF LITHUANIA AND ESTONIA

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Abstract: *European Union countries governments have been adopting and implementing accrual accounting systems. Since the last decade the International Public Sector Accounting Standards Board (IPSASB), which used to be the Public Sector Committee (PSC) of the International Federation of Accountants (IFAC), has developed a set of International Public Sector Accounting Standards (IPSAS), in order to streamline and support these reforms. This paper focuses on the reform of budgetary accounting of the new countries of euro zone – Baltic States. The Baltic States success in driving public finance management transformation holds many lessons for developing countries. The study used the following test method: (a) analysis of the literature on the subject, (b) analysis of normative acts.*

Keywords: *accounting system reform, Baltic states, International Public Sector Accounting Standards, accrual accounting, public sector*

1. INTRODUCTION

The evolving sovereign debt crisis has demonstrated that there is an urgent need for change in the way public sector financial information is collected and presented in Europe. For the monetary union to function properly it is necessary to have high quality and comparable information about balance sheet items (especially liabilities) and the true annual costs for items that do not currently require cash resources (such as public sector pension obligations) for all Member States. The costs of not acting and thus not having reliable financial information available for internal decision-making and the potentially protracted loss of the markets' and investors' trust as a result could be considerable. The benefits would still outweigh costs in the medium and long term. Implementation of International Public Sector Accounting Standards (IPSAS) in EU Member States would provide a uniform accounting framework and accounting standards for determining deficit and debt levels that would enhance the consistency, transparency and comparability of public sector financial statements. This would help to prevent a situation where negative performance, in breach of the Stability and Growth Pact, was concealed in order to avoid an excessive deficit procedure. Whether full implementation of IPSAS is necessary to achieve this remains unclear. An accruals basis[1] such as that of IPSAS would provide a more meaningful picture of a government's financial position and performance, thus

[1] There are two principle methods of accounting – cash and accruals – which differ as to the time at which a transaction is recorded. Cash-based accounts record transactions when the amount is received or paid. Accruals based accounts record when the transaction occurs, regardless of when the payment is actually received or made. Financial management, whether at the macro level (general government) or at the micro level (the government entity) should be based on the principle of accruals accounting. It is important, nevertheless, to note that moving to accruals-based accounts need not mean that the cash basis is abandoned. Cash data remain important, and in many Member States they are used as the basis for government budgeting.

reducing uncertainty for ratings agencies and other users of financial statements. Opportunities for is representation of financial positions and performance (i.e. by making payments in subsequent years) are reduced. It would enhance stewardship and financial management by identifying entities' assets and liabilities, facilitating a long-term perspective in financial management by identifying current liabilities that will need to be met in future (e.g. borrowings, guarantees, pension liabilities, social contribution, etc.), and better facilitate inter-generational fairness by identifying assets and liabilities. The recognition, measurement and reporting of liabilities, especially those of a long-term and uncertain nature, would be the main advantage of any future implementation of IPSAS in the EU Member States. A single set of public accounting standards such as IPSAS would reinforce the free movement of capital in the internal market and help investors to compare the financial activities of governments and consequently permit Member States to compete on an equal footing for financial resources available in EU markets and in world capital markets

This paper focuses on the reform of budgetary accounting of the new country of euro zone – Lithuania and Estonia. Lithuania's and Estonia's success in driving public finance management transformation holds many lessons for developing countries.

The study used the following test method:

- analysis of the literature on the subject,
- analysis of normative acts.

2. THE SUITABILITY OF IPSAS FOR THE MEMBER STATES

The sovereign debt crisis has underlined the need for governments to clearly demonstrate their financial stability and the necessity of rigorous and transparent reporting of fiscal data.

Transparency, accountability and comparability of private business accounts have been bolstered by the adoption at EU level of harmonized accounting standards. The implementation of EU harmonized public sector accounting standards would similarly bolster, the quality, transparency, comparability and accountability of public entities in the EU (Berit, 2013).

However, recent experiences have shown that the quality of the upstream data sources (the accounts of public entities) for these statistics has to be strengthened. This need is at the core of the so-called "6 Pack" of legislation, and in particular Council Directive 2011/85/EU (the Budgetary Frameworks Directive). In this context, EU harmonized public sector accounting standards at micro level would also bolster the quality of the macro fiscal reporting under the Excessive Deficit Procedure (Towards implementing…2013).

The Budgetary Frameworks Directive sets out the rules on Member State budgetary frameworks necessary to ensure compliance with the Treaty obligation to avoid excessive government deficits. It requested the Commission to assess the suitability of the International Public Sector Accounting Standards (IPSAS) for the Member States. The European Commission has forwarded its assessment to the Council and European Parliament, based on information received through consultations with Commission services, international organizations, Member States' experts and other interested parties. It concludes that, even if IPSAS cannot be implemented in EU Member States as it stands currently, the IPSAS standards represent an indisputable reference for potential development of European Public Sector Accounting Standards (EPSAS), based on a strong EU governance system.

Council Directive 2011/85/EU (the Budgetary Frameworks Directive) recognizes the crucial role in EU budgetary surveillance of complete and reliable fiscal data, comparable across Member States. It therefore sets out the rules on Member State budgetary frameworks that are necessary to ensure compliance with the obligation under Article 126 of the Treaty on the Functioning of the European Union (TFEU) to avoid excessive government deficits. On the one hand, fiscal discipline plays an essential role in safeguarding Economic and Monetary Union, and on the other hand, financial stability is based on trust (Towards implementing…2013)..

Article 3 of Directive 2011/85/EU requires Member States to 'have in place public accounting systems comprehensively and consistently covering all sub-sectors of general government and containing the information needed to generate accrual data with a view to preparing data based on the ESA 95 standard. It thereby acknowledges the essential incoherence between public sector accounts, which only record cash flows, and the fact that EU budgetary surveillance is based on ESA 95 accruals data. This means that cash data have to be converted into accruals through approximations and adjustments involving macro-based estimates. Moreover, where accruals accounts do not exist at the micro level, financial transactions and balance sheets have to be derived from a variety of different sources, leading to a 'statistical discrepancy' between the deficit compiled via non-financial accounts and that compiled via financial accounts (Towards implementing…2013, Kasperowicz-Stępień, Stępień, 2008).

The lack of coherence between primary public-sector accounts and ESA 95 accruals data is also acknowledged in the Commission communication of 15 April 2011 to the European Parliament and the Council *Towards robust quality management for European Statistics*. This communication draws attention to the high dependence of the quality of European-level statistical information on the appropriateness of the entire production process. Eurostat therefore promotes a system of harmonized accruals-based accounting standards, consistent with the ESA, for all entities of the government sector.

IPSAS is currently the only internationally recognized set of public-sector accounting standards. It is founded on the international financial reporting standards (IFRS) widely applied by the private sector and at this point consists of a set of 32 accruals accounting standards, plus one cash-based standard. It is in this light that Article 16(3) of Directive 2011/85/EU requires an assessment of the suitability of IPSAS for the Member States (Christiaens, Reyniers, 2009).

As noted above, IPSAS is currently the only internationally recognized set of public sector accounting standards. It stems from the idea that modern public sector management, in line with the principles of economy, effectiveness and efficiency, depends on management information systems that provide timely, accurate and reliable information on the financial and economic position and performance of a government, as would be the case with any other type of economic entity.

However, despite recognition of the high value of IPSAS, no Member State has implemented it in full.

Taking into account the views that Member State authorities and others put forward in the public consultation, the overall conclusion is twofold. On the one hand, it seems clear that IPSAS cannot easily be implemented in EU Member States as it stands currently. On the other hand, the IPSAS standards represent an indisputable reference for potential EU harmonized public sector accounts. On the one hand, the following concerns will need to be addressed (International Public Sector…2015):

- Currently, the IPSAS standards do not describe sufficiently precisely the accounting practices to be followed, taking into account that some of them offer the possibility of choosing between alternative accounting treatments, which would limit harmonization in practice;
- At its current state of development, the suite of standards is not complete in terms of coverage or its practical applicability to some important types of government flows, such as taxes and social benefits, and does not take sufficient account of the specific needs, characteristics and interests of public-sector reporting. A major issue is the capacity of IPSAS to resolve the problem of consolidating accounts on the basis of the definition used for general government, which is now a core concept of fiscal monitoring in the EU;
- At present, IPSAS can also be regarded as insufficiently stable, since it is expected that some standards will need to be updated once work is completed on the current project of completing the IPSAS conceptual framework; and
- At present, the governance of IPSAS suffers from insufficient participation from EU public-sector accounting authorities. Any reform should ensure that the independence of the standard-setting process is strengthened, while public-sector-specific needs are effectively addressed. In addition, the IPSAS Board currently seems to have insufficient resources to ensure that it can meet with

the necessary speed and flexibility the demand for new standards and guidance on emerging issues in the evolving fiscal climate, particularly in the wake of the crisis.

On the other hand, most stakeholders agree that IPSAS would be suitable as a reference framework for the future development of a set of European Public Sector Accounting Standards, referred to below as 'EPSAS' (International Public Sector…2015).

EPSAS would give the EU the capacity to develop its own standards to meet its own requirements with the requisite rapidity. It would offer a set of harmonised accruals-based public-sector accounting standards, adapted to the specific requirements of EU Member States, that could be implemented in practice. The EU-wide implementation of EPSAS would dramatically reduce the complexity of methods and compilation processes used to transform these data onto a quasi-harmonised basis and minimise risk as regards the reliability of the data notified by Member States and published by Eurostat. It can be envisaged that the first step would be to establish EU governance for this project with the objective of clarifying the conceptual framework and the aim of common EU public sector accounting. EPSAS could initially be based on the adoption of a set of key IPSAS principles. EPSAS could also use IPSAS standards that were commonly agreed by Member States. EPSAS should, however, not regard IPSAS as a constraint for the development of its own standards. However, it should be noted that drawing up a set of harmonised European public sector accounting standards would not in itself guarantee timely and high quality public accounting data. Additional conditions would have to be met, including (Towards implementing…2013):

- Strong political support and joint ownership of the project;
- Public administrations capable of running a more complex accounting system in each individual public entity;
- Integrated IT systems for budget, payment, contract management, double-entry book-keeping, invoice management and statistical reporting;
- Timely reporting (e.g. monthly) of all economic events in the integrated accounting system of the public entities;
- Availability of resources, human and modern IT; and
- Effective internal control and external financial audit of public accounting.

For all Member States, but in particular those that currently use only cash accounting, the implementation of EPSAS accruals accounting would be a major reform. Some of the issues that would arise are (Towards implementing…2013):

- Conceptual and technical accounting issues;
- Staff and consultant expertise, training skills;
- Communicating with and educating managers and decision-makers;
- Liaison with, and training of, auditors;
- Adjustment or modernisation of IT systems; and
- Adapting the existing national regulatory frameworks.

If the principle of EPSAS were adopted, the Commission could envisage providing assistance in some of these areas, for instance by playing a role in organising the sharing of training and expertise, assisting Member State governments on conceptual and technical matters, or coordinating and sharing the planning of Member States' public accounting reforms.

If a Member State had significant and evident gaps, weaknesses and inconsistencies in its public financial management information systems, it would be appropriate to consider these in plans to implement EPSAS and this would have to be reflected in the implementation timetable.

The establishment of the EPSAS governance structure would be guided by, but not follow exactly, the model used by the Commission in establishing the governance of IFRS in the EU context, because of the specificity of the public sector and the focus on intra-EU comparability. It should seek to use, where possible, the experience and expertise of national public-sector accounting governance structures in the Member States.

Nevertheless, EPSAS would need to establish and maintain close links to the IPSAS Board in order to inform its agenda and decision-making and because EPSAS standards may need to differ in some cases from IPSAS standards. It would be important not to create unnecessary divergence between EPSAS and IPSAS, and between EPSAS and IFRS, given that government-controlled entities may already be required to report on an IFRS basis or according to national commercial accounting standards.

EPSAS should also be developed with a view to minimizing differences with the ESA, in order to give the perspective, ultimately, of complete integrated systems applicable at micro and macro levels.

3. PUBLIC SECTOR ACCOUNTING AND FINANCIAL REPORTING SYSTEM REFORM IN LITHUANIA

In 2005, Accounting and Financial Reporting System Reform (hereinafter – accounting reform) of public sector including budgetary bodies, State social insurance funds, other reserve funds, tax funds, controlled health care public bodies, State and municipalities as separate legal entities was started by Lithuania. The aim of the accounting reform was the transition of the public sector to accruals-based accounting starting with 2010 (Bikienė, 2011).

The implementation of the accounting reform required the drawing up of new public sector accounting and financial reporting standards, model accounting manuals, plans of accounts, consolidation manual, recommendations for individual groups of public sector entities; harmonization of legislation with the intended requirements of accounting standards; the analysis of information systems and software used for the management of accounting in the public sector; as well as the formulation of alternative optimization solutions for IT systems and software in the public sector.

During the implementation of the accounting reform as well as during the enforcement of the Law on Public Sector Reporting, 26 standards on public sector accounting and financial reporting were drawn up. Provisions of some of the standards were supplemented and/or specified taking into consideration remarks and recommendations of public sector entities, which had started applying new standards since 2009, shortcomings found in the submitted financial accounts, questions presented by public sector entities, as well as non-conformities identified during the development and introduction of the design of information system for consolidation of financial accounts in public sector entities (Bikienė, 2011).

New accounting information system for the management of the State treasury accounting was introduced; State treasury processes concerning the financial management and accounting were described and optimized. Information system for the consolidation of public sector accounting and accounts is being introduced.

All of these developments are a huge challenge and responsibility both for internal audit and external audit, as well as for public auditors.

Proceedings of the Reform (Muckutė, 2013):

I stage (2005–2008) The Concept Paper of the Reform was approved in 2005:

Related legal acts, NPSAS, instructions prepared:
- Public Sector Accountability Law (2007)
- 26 NPSAS based on IPSAS
- Unified chart of accounts
- Accounting manuals
- Feasibility study of IT systems preparation
- Trainings

II stage (2009–2015) Standardization and consolidation:
- standardized accounting IT system in 150 public sector entities (2009–2011)
- centralized accounting IT system for public sector consolidation (2009–2011)
- Help desk in the MoF (since November 2010)
- Additional trainings, consultations, seminars for public sector accountants

- The First State Consolidated Financial Statements for 2010 – on 1 October 2011
- The First National Set of Financial Statements (State, municipalities, Social Funds) for 2012 – supposed on 30 June 2013

Lithuania has been one of the front runners in kick-starting the transition to IPSAS, with consolidated financial reports on both state and municipal levels being prepared based on these new accounting standards since 2010. The switch to this new system of financial reporting has been a big challenge and required precise and intensive preparation and coordination (Public sector in transition…2014).

Partly, this is because the reforms did not encompass merely a change of accounting principles but also aimed to increase the effectiveness of the accounting function itself. With this in mind, policy-makers at both central and municipal levels began working on the reforms five years before they were implemented. This preparatory phase included pilot programs by several public sector organizations, as well as the development of regulations, detailed accounting manuals and instructions for transition. There was also extensive training for public sector accountants and the completion of standardized IT solutions and automated accounting related transactions. Another key initiative was the implementation of a centralized IT solution for national financial statements for more than 4,000 public sector organizations (Public sector in transition…2014).

Given the far-reaching nature of these activities, it is perhaps not surprising that it did not prove to be a painless transformation process. The reforms, which demanded changes in the qualifications of all public sector accountants and initially resulted in greater workload, were treated with a high level of resistance at first. Although strong political support and firm leadership from the Ministry of Finance were crucial in ensuring their successful implementation, there was still a delay of one year from the original launch date. This was primarily due to a lack of preparation by a number of separate public sector organizations and the rapid spread of new finance instruments (Paškevičius, Sačilka, 2010).

Now, though, the new system is firmly in place and there has already been two cycles of financial statements based on IPSAS. And to safeguard the reforms in the future, the Ministry of Finance is now focusing on amending and improving standards and other regulations. It is also deploying ongoing support to a call center set up to deal with IPSAS-related enquiries and delivering on site training and consultations to improve the quality and consistency of financial data steadily.

Implementation of these reforms has been only one step in the transformation of public financial systems, however. In order to maximize the potential advantages of this new system, a country needs to have a consistent vision on public finance reform as a whole, in both the short and long term. Lithuania, having implemented IPSAS, has strengthened the qualification of public sector accountants and moved toward optimizing the IT systems used for its government accounting. Although the process is ongoing and the country still faces many challenges, the successful implementation of IPSAS has given the country a crucial head start toward achieving long-term public finance excellence and efficiency.

4. MODERNIZATION OF GOVERNMENTAL ACCOUNTING IN ESTONIA

During the process of improving Estonian financial accounting and reporting regulation, one can distinguish between three stages (Haldma, 2004, Tikk, 2010):

1. The introductory stage (1990–1994).
2. The system building stage (1995–2002).
3. The system improvement stage (since 2003).

In the introductory stage of the development of accounting the main emphasis was laid on the regulation of accounting in business entities.

The regulation of accounting in public institutions was under serious focus only in the system building stage. The situation was analyzed by the Ministry of Finance and the conclusion was that the existing regulations did not meet the expectations set for the public accounting system both from the aspect of internal and external users. The Accounting Act almost did not touch upon the regulation of accounting in the public sector. However, the given field was regulated by the regulation of accounting for public institutions and decrees by the Minister of Finance. The accounting methods used were a mixture of cash basis and accrual-basis accounting, and therefore the outcome was unsystematic both in content and in form. The lack of systematic methods also casts doubt upon the reliability of the data. Thus, we can claim that the state did not have a true overview about its assets, liabilities, accrual revenues and expenses. There were two parallel accounting and reporting systems – bookkeeping and fulfillment of the budget, whereas the latter was considered of primary importance. The mentioned systems did not have any logical connection. It was not possible to consolidate the data (Jansen 2004).

The system improvement stage saw a breakthrough in the regulation of accounting in public sector entities. The harmonization of the legal acts regulating financial accounting with the International Financial Reporting Standards fell into the same time period with the reformation project of public sector accounting. A new accounting act was worked out, which was enforced on January 1, 2003 and it also applied to the public sector with a few exceptions. Accounting in the public sector was converted into accrual basis accounting and harmonized with the International Accounting Standards. The new general regulations of public sector accounting were already based on the International Public Sector Accounting Standards (IPSAS). Nowadays, the new general rules for organization of the accounting and financial reporting of the state and the state accounting entities that became effective from January 1, 2004 are in use as the Estonian equivalent to the IPSASs. The new general regulations as they apply to public sector entities, are very similar to the IPSASs. In the given stage the accounting principles in the public and private sector were harmonized. The reformation of accounting in the public sector was characterized by the top-down implementation approach. The leading role in the reformation process was taken by the Ministry of Finance. It is necessary to emphasizes better co-ordination, decision-makers' sufficient access to information and pressure to carry out the reform as the positive aspects of such an approach. Negative aspects are seen, for instance, in limited flexibility, lack of motivation in subdivisions and possible distortion of the situation, as subdivisions might want to present data that are expected instead of the actual data (Curristine 2007). It is obvious that cameral accounting as an information system is not a satisfactory management tool for decision makers. The major drawback of the traditional accounting is the inability to provide complete data of assets (especially claims and fixed assets), liabilities (especially long-term liabilities), revenues and expenses. Under the accrual accounting basis the transactions and events are recorded and recognized in the statements when they occur. Therefore, financial statements prepared in accordance with the rules of the accrual based accounting represent true and fair information of the assets, liabilities, revenues and expenses over the reporting periods. At the same time, the public sector entities have introduced the accounting approach for the business sector which leads to increased transparency and improved performance measurement.

5. THE PROBLEMS IN INTRODUCING ACCRUAL BASED ACCOUNTING IN THE PUBLIC SECTOR LITHUANIA AND ESTONIA

During the modernisation of the accounting policy in the public sector certain problems have arisen:

- Consolidation of statements – problems arising from the complexity of administrative structure. In accordance with accrual-basis accounting a true and fair collection of information about all assets, liabilities, revenues and expenses is of great significance at the level of both an individual organization and the whole system.
- Problems arising from the development of the structure of the governmental accounting system (the change in the number of municipal authorities)
- Lack of qualified personnel. It should be emphasized that accrual accounting is much more complex than cash basis accounting. At present we can feel that accountants do not have enough

theoretical knowledge. This finding confirms the fact that there are numerous errors in financial reporting
- The pace of reform – the reform has been slower in the public than in the business sector. It should be noted that reforms in the public sector began later and progressed at a lower speed than in the business sector.
- Problems arising from internationalization of accounting system – the implementation and amendment of equivalents of the international public sector accounting standards. Ensuring the transparency and understanding of the statements. Increased complexity of financial control.

The reform of budgetary accounting in the Baltic countries should improve the quality of public administration. It should be noted that the accrual accounting leads to financial information that fulfils needs for true and fair accounting data for decision making purposes. Moreover, reform of public sector financial accounting can improve the quality and the quantity of services provided to the citizens. It is obvious that the main attention should be paid to the quality and transparency of the accounting data.

6. CONCLUSIONS

Public finance management has become one of the hottest topics in developing countries and developed economies, especially given the ongoing challenges surrounding fiscal sustainability and the debt crisis. With accountability and transparency increasingly perceived as key elements of sustainable public finance management, international public sector accounting standards (IPSAS) are now viewed as one of the key measures for obtaining transparent, comparable and complete financial information. Based on accrual accounting principles, these standards could be an opportunity for the European Union (EU) member states to modernize their existing accounting systems. The interest to establish such an accounting framework would especially be justified, since the sovereign debt crisis requires a tighter fiscal and accounting discipline and a greater control of public accounts.

Baltic states have been one of the front runners in kick-starting the transition to IPSAS, with consolidated financial reports on both state and municipal levels being prepared based on these new accounting standards. The switch to this new system of financial reporting has been a big challenge and required precise and intensive preparation and coordination. Remaining reform challenges are as follows:
- Optimization of accounting and financial reporting function.
- Establishment of competence centers.
- Encouraging the use of financial statements amongst management of public sector entities.
- Analysis of financial statements information.
- Interrelation to budget execution and statistical reporting.
- Long-term fiscal sustainability planning.

The reformation of the public sector accounting, will bring along improved quality of services, including information. However, it will be a long-term and expensive process, the benefit of which can be seen to full extent only after decades.

In summary, the implications of not having robust and transparent accruals accounting for financial reporting and financial management may include an increased risk that government services are being delivered ineffectively or inefficiently, and that investment decisions do not take full account of the potential costs and benefits, for example because they are made with a short-term focus, without paying due regard to their full future costs and benefits. Robust accounting standards are important to ensure that, in difficult financial times, the reported financial information remains both reliable and credible (i.e. trustworthy and accepted as such). Strong standards reduce the scope and the temptation to manipulate information in order to hide problems. The sooner a problem is recognized the sooner it can be addressed. Having early warning of problems often means that their impact is much less than otherwise.

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PROCEDURES OF AN AUDIT IN THE PROSPECTIVE VERIFICATION OF THE GOING-CONCERN PRINCIPLE

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Abstract: *The article presents an analysis of opinions of the auditors issued after auditing the financial statements of the selected companies listed on the Warsaw Stock Exchange comparing to the results of evaluating a fulfillment of the going-concern principle and the analysis was made by use of the known discriminant models used in the Polish practice which allow "predicting" bankruptcy. The studies were made on basis of the financial data of 20 listed companies in the construction branch for years 2010–2014. On basis of the results obtained it can be stated that in such an important area of the audit which is an evaluation of a financial situation of the audited entities there are no uniform standards, and the models used in practice often provide divergent results. There is a need to develop and recommend the auditors methodically uniform ways of the going – concern principle verification.*

Keywords: *audit, accounting, financial analysis, financial liquidity, models of verification of a threat to continuation of activity*

1. INTRODUCTION

The place and role of the audit in the accounting system result from its up-to date development, and it is affected, first of all, by a demand for credible economic information (Andrzejewski, 2012). The audit of financial statements as a discipline dates back to XIXth century in the economic practice, and Great Britain is its cradle (Fedak, 1998). In the subject literature it is emphasized that a development of the capital market had an influence on the development of the financial statement audit (Gabrusewicz, 2009). A profession of the auditor began to form mainly in the cities of England and Scotland, where in years 1840–1850 only several dozen certified auditors were active (Cosserat, 2000). This situation changed after adopting the Capital Companies Act, which implemented a mandatory balance sheet audit in Great Britain (Hendriksen, van Breda, 2007) (Pfaff, 2007). In 1862 the British Companies Act was adopted in this country. At that time the auditors were needed primarily to detect frauds. As we know, with time that main goal of the activity of the auditors became a secondary goal, and today the ultimate goal of auditing the financial statements is to confirm its credibility by the certified auditors.

The auditors from Great Britain emigrated to the USA where this profession of public trust developed rather quickly too. In the Unites States the American Association of Public Accountants – AAPA, which had a nationwide character, was founded in 1887. Nowadays the auditors are associated in the American Institute of Certified Public Accountants – AICPA), which was founded in 1957 (Grabinski, Kedzior, Krasodomska, 2013).

Work of the auditors (Sunder, 1997) who did not fulfill their obligations resulting from the standards of auditing the financial statements, and they often took an active part themselves in forging or destroying accounting records, is mentioned among the reasons for the economic crisis of years 2000–2002, which began in the USA. This situation took place in the case of the Enron Company (Benston, 2006) of which the auditor – the firm included into so called big five (Barton,

2005) – did not refer to the going-concern principle in his opinions. However, we can say today that those events quickened “ a reform” of the audit system. This reform resulted in the SOX act (Report Pursuant to Section 704 of the Sarbanes-Oxley Act of 2002) in the USA and directive 43/EC/2006 dated 17.06.2006 on statutory audits of annual financial statements and consolidated financial statements, which specifies a scope of the latest solutions for the contemporary audit system. Unfortunately, the financial crisis, which began in 2008 from the fall of the Lehman Brothers Bank, revealed lots of flaws in functioning of the audit system in the countries of the European Union. The European Commission noticed it quickly and on 13th October 2010 it issued so called the Green Paper entitled ”Audit Policy: Lessons from the Crisis”. In this document, in the introduction the European Commission poses a crucial question about how it is possible that majority of the banks in the EU which had substantial problems with financial liquidity in years 2007–2008 and were to go bankrupt, obtained positive opinions from the auditors. Those activities have resulted in changes in the audit system, which implements both Directive of the European Parliament and Council 2014/56/EU dated 16th April 2014 (L.158/196), amending directive 2006/43/EC on statutory audits of annual financial statements and consolidated financial statements and Regulation of the European Parliament and Council (EU) No 537/2014 (L. 158/77) dated 16th April 2014 on detailed requirements for statutory audits of annual financial statements and consolidated financial statements of public interest entities, reversing the decision of the Commission 2005/909/CE.

As it turns out, in spite of substantial changes in the audit development, there are still lots of areas which require improvements in the audit of the financial statements still. Those changes, as it results from an analysis of the literature sources, first of all, are a result of information needs that are raised by the capital market. In Poland, pursuant to the Accounting Act, three types of opinions are differentiated: an unqualified, qualified and negative opinion. In special situations an auditor may also refuse to express an opinion, what often takes place in the conditions of great uncertainty caused by limitations of the audit scope. It is worth emphasizing that in the Polish practice of auditing a new type of an opinion which can be termed as an unqualified opinion, but with explanations, was developed. According to the authors this new type of the opinion is a consequence of unwillingness of the auditors to issue the qualified opinions and it can be perceived as a situation consisting in a specific way of “dodging” the law, in this case the balance sheet law. It should be noted that in the situations analyzed in this work there were no negative opinions present at any time. In Poland the auditors complete the statutory audit of a financial statement with issuing an opinion and a report. The opinion and the report from the audit of the financial statements should not have only a character of a report made in the ex post perspective, but also as products of the financial audit should constitute a specific analysis of the financial situation of the audited entity in the ex ante sense. In the ex ante approach, particularly for the participants of the capital market, one of more needed economic information about a particular company is an evaluation of its financial situation, what in the extremely bad cases means that fulfillment of the going-concern principle has to be verified. The auditors always have an obligation to refer to this issue if there is any threat in this scope. The pioneer in this field is E.I. Altman (1968) and its discriminant model which underwent lots of modifications, what was and is a subject of a lot of scientific research. It should be emphasized that the investigation results of E.I. Altman are a guidepost in searching for this kind of models in particular countries. Thus, it is worth pointing out that the accounting system of which important elements of the structure are: financial reporting and financial audit differ significantly in particular countries. Reasons for those differences are in different factors forming accounting systems. J. Krasodomska (2013), quoting investigations, among others, of D. Aleksander, C. Nobes (2010), enumerates the following factors in this scope: origin of capital, a legal system, taxation and a profession of accounting. According to the authors, in an indirect way those factors also justify a necessity of developing different discriminant models used to evaluate the going-concern principle of entities depending on a country.

An aim of this work is to investigate dependence of a type of the opinions issued by the auditors on results of the financial situation evaluation of the audited entities which we obtain from the models verifying the going-concern principle.

2. COMPARATIVE ANALYSIS OF AUDITORS' OPINIONS WITH RESULTS OF MODELS VERIFYING THREATS TO CONTINUITY IN OPERATIONS IN THE SELECTED STOCK EXCHANGE LISTED COMPANIES

In this work auditors' opinions from an audit of unit financial statements of the analyzed construction companies listed on the Warsaw Stock Exchange (a list of the analyzed companies is presented in table 9) were compared with indicators of their financial situation with use of the selected models verifying threats to continuity in operations. The analysis was made on basis the unit financial statements of the analyzed entities with a report and an opinion of an auditor from the audit of this statement for years 2010 – 2014. The opinions of the auditors obtained were compared with indicators of the models of a threat to continuity in operations developed by A. Hołda (2001), B. Prusak (2007), T. Maślanka (2012) and the Poznań model (Hamrol, Czajka, Piechocki, 2004).

In the second part of the work there was an emphasis on the construction companies in question which declared bankruptcy in the analyzed period (open to composition agreements or liquidation bankruptcy). The companies mentioned are:

- ABMSolid SA – bankruptcy declared in 2012,
- Budopol Wrocław SA – bankruptcy in 2013,
- Energomontaż Południe SA – bankruptcy in 2012; in year 2014 the Company was withdrawn from public trading,
- INTAKUS SA (at present CFI Holding SA) – bankruptcy in 2012,
- PBG SA – bankruptcy in 2012 ,
- PBO Anioła SA – bankruptcy in 2014.

In this case the opinions issued by the auditors and indicators of the models of bankruptcy prediction in the years before declaring bankruptcy by the Companies mentioned were subjected to a detailed verification.

Basic information on verification models of a threat to continuity in operations used in the investigations is presented below.

Model of A. Hołda

$$\mathbf{Z_H = 0{,}605 + 0{,}681 * X_1 - 0{,}0196 * X_2 + 0{,}00969 * X_3 + 0{,}000672 * X_4 + 0{,}157 * X_5}$$

Table 1. Definitions of indicators in the model of A. Hołda

Indicator	Definition
X_1	Current assets / current liabilities
X_2	Liabilities / total assets *100
X_3	Net result / average assets * 100
X_4	(Average current liabilities / cost of products, goods and materials sold) *360
X_5	Total revenues / average assets

Source: A. Hołda, Wstępna weryfikacja skuteczności funkcji dyskryminacyjnej ZH w warunkach gospodarki polskiej, Rachunkowość Nr 10/2001, pg. 625–628

Table 2. Criteria of classification of enterprises in the model of A. Hołda

	chance of bankruptcy
$Z_H \leq (-0{,}3)$	high
(-0,3; 0,1)	undefined
$Z_H \geq 0{,}1$	low

Source: A. Hołda (2001), Wstępna weryfikacja skuteczności funkcji dyskryminacyjnej ZH w warunkach gospodarki polskiej, Rachunkowość Nr 10/2001, pg. 625–628

Model of B. Prusak

$$Z_{BP} = 6{,}5245 * X_1 + 0{,}1480 * X_2 + 0{,}4061 * X_3 + 2{,}1754 * X_4 - 1{,}5685$$

Table 3. Definitions of indicators in the model of B. Prusak

Indicator	Definition
X_1	Operating profit / assets
X_2	Operating costs (without other operating costs) / current liabilities (without special funds or financial liabilities)
X_3	Operating assets / current liabilities
X_4	Operating profit / revenues from sales

Source: B. Prusak (2007), Ekonomiczne i prawne aspekty upadłości przedsiębiorstw, Difin, Warszawa

Table 4. Criteria of classification of enterprises in the model of B. Prusak

	chance of bankruptcy
$Z \leq -0{,}13$	high
(-0,13; 0,65)	undefined
$Z \geq 0{,}65$	low

Source: B. Prusak (2007), Ekonomiczne i prawne aspekty upadłości przedsiębiorstw, Difin, Warszawa

Model of T. Maślanka

$$Z_M = - 0{,}41052 + 1{,}59208 \times x_1 + 4{,}35604 \times x_2 + 5{,}92212 \times x_3$$

Table 5. Definitions of indicators in the model of T. Maślanka

Indicator	Definition
X_1	Net working capital / total assets
X_2	Net operating cash flows / revenues from sales
X_3	(Operating profit + depreciation) / total liabilities

Source: T. Maślanka (2012), Weryfikacja skuteczności modeli predykcji bankructwa polskich przedsiębiorstw, Zeszyty Naukowe PTE nr 12, Kraków, pg. 199–206

Table 6. Criteria of classification of enterprises in the model of T. Maślanka

	chance of bankruptcy
$Z_M<0{,}0$	high
$Z_M \geq 0{,}0$	low

Source: T. Maślanka (2012), Weryfikacja skuteczności modeli predykcji bankructwa polskich przedsiębiorstw, Zeszyty Naukowe PTE nr 12, Kraków, pg. 199–206

Model of Poznań

$$Z_P = 3{,}562 * X_1 + 1{,}588 * X_2 + 4{,}288 * X_3 + 6{,}719 * X_4 – 2{,}368$$

Table 7. Definitions of indicators in the Poznań model

Indicator	Definition
X_1	Net result / assets
X_2	(Current assets – stocks) / current liabilities
X_3	Fixed capital / assets
X_4	Profit on sales / revenues from sales

Source: M. Hamrol, B. Czajka, M. Piechocki (2004), Upadłości przedsiębiorstwa – model analizy dyskryminacyjnej, „Przegląd d Organizacji" Nr 6/2004, pg. 35–39

Table 8. Criteria of classification of enterprises in the Poznań model

	chance of bankruptcy
$Z_M < 0,0$	high
$Z_M \geq 0,0$	low

Source: M. Hamrol, B. Czajka, M. Piechocki (2004), Upadłości przedsiębiorstwa – model analizy dyskryminacyjnej, „Przegląd d Organizacji" Nr 6/2004, pg. 35–39

A profile of the opinions issued on basis of the audit of the unit financial statements of the construction companies in question in years 2010-2014 is presented in the table below. The issued types of the opinions are marked in the following way:

- OK – an unqualified opinion,
- OK + ZU – an unqualified opinion with explanations (pointing out to some problems),
- Z – a qualified opinion,
- Od – refusal to issue an opinion.

As it is seen from the profiles below the unqualified opinions (53.9%) or the unqualified opinions with pointing out to some problems in business operating (29%) prevailed among the opinions issued by the auditors on the financial statements of the construction companies in question. The qualified opinion occurred only in one situation, that is in the AWBUD company in year 2011. The qualification concerned the fact that verification of valuation of the financial assets held by the Company could not be made.

Table 9. A profile of the opinions issued in the audited construction companies in years 2010–2014

No.	Company	2010	2011	2012	2013	2014
1	ABMSolid	OK	OK + ZU	Od	OK + ZU	OK + ZU
2	AWBUD	no data	Z	OK + ZU	OK + ZU	OK
3	Budimex	OK	OK	OK	OK	OK
4	Budopol Wrocław	OK	OK	Od	Od	no data
5	CFI (d. INTAKUS)	OK	Od	Od	OK + ZU	OK
6	CNT (d. ENERGOPOL PŁD)	OK	OK	OK	OK	OK
7	Dekpol	no data	no data	no data	no data	OK + ZU
8	Elektrobudowa	OK	OK	OK	OK + ZU	OK + ZU
9	Elektrotim	OK + ZU	OK + ZU	OK + ZU	OK + ZU	OK + ZU
10	Energoaparatura	OK	OK	OK	OK	OK
11	Energomontaż Południe	OK	OK + ZU	Od	no data	no data
12	ERBUD	OK	OK	OK + ZU	OK + ZU	OK + ZU
13	Herkules	OK	OK	OK + ZU	OK	OK
14	Instal Kraków	OK	OK	OK	OK	OK
15	Mostostal Płock	OK	OK	OK	OK	OK
16	MSXRESOURCES	OK	Od	Od	Od	no data
17	PBG	OK	OK + ZU	Od	Od	Od
18	PBO Anioła	no data	OK + ZU	OK + ZU	Od	Od
19	Polimex-Mostostal	no data	OK + ZU	OK + ZU	OK + ZU	OK + ZU
20	Projprzem	OK	OK	OK	OK	OK

Source: the author's own elaboration on basis of the opinions of the auditors from the unit financial statements of the companies mentioned

In 16% of the analyzed cases the auditor withdrew from issuing an opinion, justifying mostly groundlessness of the premise about continuation of activity of the entity while preparing a financial statement. The refusals to issue an opinion happened in majority of cases in the situation of actual bankruptcy (or its high probability). Six (the companies mentioned in the earlier part of the work) out of seven companies for which the auditor refused to issue an opinion went bankrupt in the analyzed period. The seventh Company, that is MSX SA (former Mostostal Export SA) until the end of June

2015 did not publish a financial report for year 2014. Furthermore, it should be emphasized that at present (July 2015) bankruptcy proceedings are pending against the company (27.05.2015 the Management Board of the Company filed a liquidation bankruptcy petition with the court).

Table 10. A consolidated profile of the opinion issued in the audited construction companies in years 2010–2014

No.	Type of opinion	2010	2011	2012	2013	2014	total	structure
1	unqualified opinion	15	10	7	7	9	48	53,9%
2	unqualified opinion with pointing out to some problems	1	6	6	7	6	26	29,2%
3	qualified opinion	0	1	0	0	0	1	1,1%
4	opinia negatywna	0	0	0	0	0	0	0%
5	refusal to issue an opinion	0	2	6	4	2	14	15,7%
	total	16	19	19	18	17	89	100,0%

Source: the author's own elaboration

While analyzing the above profiles of the opinions issued by the auditors on the unit financial statements of the audited construction companies it should be pointed out that the financial situation of those companies has worsened since year 2011. In the starting year all the analyzed opinions were unqualified (one opinion with pointing out to a problem) In the subsequent years there situations of a refusal to issue an opinion (the culminating point was in year 2012 when such a situation occurred in six entities out of which four went bankrupt in year 2012). At the same time in the unqualified opinions about statements for years 2011–2014 a risk of liquidity loss or insolvency of the audited entities is pointed out rather frequently. In the opinions on the statements for year 2013 the half of the unqualified opinions were broadened by remarks on the financial situation of an entity, valuation methods used or impossibility of verifying values of some assets or liabilities.

An evaluation of the analyzed entity with use of the discriminant models in the situation of issuing the unqualified opinion, the unqualified opinion with explanations or in the situation of refusal to issue an opinion is presented in the next tables. Values below zero in the T. Maślanka models and in the Poznań model were taken as an indicator of a threat to continuity of activity. In the A. Hołda model the critical value was o (-0,3), whereas in the B. Prusak model (-0,13).

Table 11. An evaluation of the audited construction company with use of the models verifying threats to continuity of activity in the situation of issuing the unqualified opinion

No.	Evaluation of a company with use of bankruptcy prediction model	number	structure
1	no indicators of a threat to continuity of activity	31	63,3%
2	one indicator of a threat to continuity of activity	8	16,3%
3	two indicators of a threat to continuity of activity	9	18,4%
4	three indicators of a threat to continuity of activity	1	2,0%
5	four indicators of a threat to continuity of activity	0	0,0%
	Total	49	100,0%

Source: the author's own elaboration

In the case of the unqualified opinion on the financial statements the models verifying threats to continuity of activity used mostly in the studies, did not show a bad situation of the audited business entity (63% unqualified opinions). However, in some cases, worsening of the financial situation of the audited companies could be concluded on basis of the analyzed models. Nevertheless, it should be emphasized that 11 out of 18 indicators of a threat to continuity of activity resulted from the B. Prusak model what can suggest that this model evaluates severely the financial situation of the audited companies (it classifies correctly the companies in the bad financial situation, but simultaneously some entities being in the good situation will be evaluated as threatened with bankruptcy by this model).

Table 12. An evaluation of the audited construction company with use of the models verifying threats to continuity of activity in the situation of issuing the unqualified opinion with pointing to a problem (with explanations)

No	Evaluation of a company with use of bankruptcy prediction model	number	structure
1	no indicators of a threat to continuity of activity	7	26,9%
2	one indicator of a threat to continuity of activity	6	23,1%
3	two indicators of a threat to continuity of activity	6	23,1%
4	three indicators of a threat to continuity of activity	2	7,7%
5	four indicators of a threat to continuity of activity	5	19,2%
	total	26	100,0%

Source: the author's own elaboration

There is a slightly different situation while analyzing opinions on the unqualified financial statements, but with pointing out to a problem by the auditor. Importance of these remarks is very different. For example at Herkules SA in the opinion on the financial statement for year 2013 failure to publish the financial statement for year 2011 in the Official Gazette of the Government of the Republic of Poland B (for which the company was obliged to do at that time) was pointed out. On the other hand in the opinion on the financial statement of ABM Solid SA for year 2011 a real threat to continuity of activity of the audited entity was pointed out rather laconically. On basis of the same financial data presented in this work the bankruptcy prediction models showed an exceptionally bad financial situation of the Company which was finally brought into bankruptcy in 2012.

Table 13. An evaluation of the audited construction company with use of the models verifying threats to continuity of activity in the situation of a refusal to issue an opinion

No.	Evaluation of a company with use of bankruptcy prediction model	number	structure
1	no indicators of a threat to continuity of activity	1	7,1%
2	one indicator of a threat to continuity of activity	1	7,1%
3	two indicators of a threat to continuity of activity	1	7,1%
4	three indicators of a threat to continuity of activity	4	28,6%
5	four indicators of a threat to continuity of activity	7	50,0%
	total	14	100,0%

Source: the author's own elaboration

In majority of cases the refusal to issue an opinion by the auditor was in the very bad financial situation of an enterprise (what is confirmed by lots of negative indicators generated by use of the models discussed earlier) or when some information included in the financial statement of the entity could not be verified.

3. ANALYSIS OF FINANCIAL DATA OF THE LISTED COMPANIES BEING IN BANKRUPTCY

In the further part of the work there is a focus on the analyzed listed construction companies which declared bankruptcy in the period in question. Those are (as it has been mentioned earlier): ABMSolid SA, Budopol Wrocław SA, Energomontaż Południe SA, INTAKUS SA (at present CFI Holding SA), PBG SA and PBO Anioła SA.

Table 14. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for ABM Solid SA in years 2010–2014 (The company went bankrupt in year 2012)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	0,28	-0,41	-3,43	-2,57	-2,68
2	Model of B. Prusak	-0,28	-1,65	-8,47	-1,04	-0,47
3	Model of T. Maślanka	0,03	-1,57	-4,71	-3,50	-2,72
4	Poznań Model	1,62	-1,21	-11,40	-7,60	-7,83
5	Number of indicators suggesting a threat to continuity of activity	1	4	4	4	4
6	*Type of the opinion issued*	*OK*	*OK+ZU*	*Od*	*OK+ZU*	*OK+ZU*

Source: the author's own elaboration

Table 15. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for Budopol Wrocław SA in years 2010–2014 (The company went bankrupt in year 2013)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	1,36	1,14	1,02	-7,79	no data
2	Model of B. Prusak	-0,35	-1,38	-2,37	-63,47	no data
3	Model of T. Maślanki	0,41	-2,29	0,20	-13,29	no data
4	Poznań Model	3,37	1,86	0,78	-34,85	no data
5	Number of indicators suggesting a threat to continuity of activity	1	2	1	4	-
6	Type of the opinion issued	OK	OK	Od	Od	no data

Source: the author's own elaboration

Table 16. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for Energomontaż Południe SA in years 2010–2014 (The company went bankrupt in year 2012)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	0,65	0,00	-7,51	no data	no data
2	Model of B. Prusak	-0,83	-1,29	-27,14	no data	no data
3	Model of T. Maślanka	-0,86	-0,48	-11,05	no data	no data
4	Poznań Model	1,49	0,20	-28,72	brak danych	brak danych
5	Number of indicators suggesting a threat to continuity of activity	2	2	4	-	-
6	Type of the opinion issued	OK	OK+ZU	Od	no data	no data

Source: the author's own elaboration

Table 17. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for INTAKUS SA (at present CFI Holding SA) in years 2010–2014 (The company went bankrupt in year 2012)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	0,96	-1,25	-2,50	1,13	0,29
2	Model of B. Prusak	-0,06	-6,63	-6,43	-4,40	3,72
3	Model of T. Maślanka	0,65	-4,88	-4,68	-2,88	-0,13
4	Poznań Model	2,41	-6,17	-9,39	-5,24	2,55
5	Number of indicators suggesting a threat to continuity of activity	0	4	4	3	1
6	Type of the opinion issued	OK	Od	Od	OK+ZU	OK

Source: the author's own elaboration

While analyzing the tables presented above it should be emphasized that in all cases in the year in which the companies in question went bankrupt the auditors refused to give a positive opinion from the financial statement audit. In the analyzed five entities on basis of the unit financial statement the bankruptcy prediction models indicated a very bad financial situation of those entities. Only in PBO Anioła two analyzed models did not suggest a threat to continuity of activity.

Table 18. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for PBG SA in years h 2010–2014 (the company went bankrupt in year 2012)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	1,64	0,59	-2,55	-1,38	-1,35
2	Model of B. Prusak	0,44	-0,08	-29,88	1,19	-2,24
3	Model T. Maślanki	1,54	0,16	-8,07	-1,68	-4,06
4	Poznań Model	6,37	2,75	-15,27	-4,97	-6,36
5	Number of indicators suggesting a threat to continuity of activity	0	0	4	3	4
6	Type of the opinion issued	OK	OK+ZU	Od	Od	Od

Source: the author's own elaboration

Table 19. Values of the obtained indicators of the discriminant models in the particular years of the analysis with a kind of the opinion issued for PBO Anioła SA in years 2010–2014 (the company went bankrupt in year 2014)

No.	Specification	2010	2011	2012	2013	2014
1	Model of A. Hołda	0,29	0,55	0,26	-0,04	1,21
2	Model of B. Prusak	0,27	-0,16	-0,75	-1,92	-18,40
3	Model of T. Maślanka	0,68	0,00	-0,08	-1,85	1,30
4	Poznań Model	1,73	1,55	0,87	-0,82	-9,83
5	Number of indicators suggesting a threat to continuity of activity	0	1	2	3	2
6	Type of the opinion issued	no data	OK+ZU	OK+ZU	Od	Od

Source: the author's own elaboration

In three cases a year before bankruptcy the auditors refused to issue an opinion referring to a high threat to continuity of activity of those entities. In the case of and INTAKUS SA and PBO Anioła SA all the models (in the case of the model of A. Hołda the indication was ambiguous) suggested a very bad financial situation of those entities. While the Budopol Wrocław company was evaluated negatively only by the B. Prusak model.

In other three cases (ABMSolid SA, Energomontaż Południe SA, PBG SA) the auditors issued positive opinions and they only pointed out a threat to continuity of activity of the audited entities in their opinions.

In ABM Solid SA existence of uncertainty regarding solvency of the entity was underlined and it was pointed out simultaneously that the management board had undertaken activities aiming at debt restructuring and improving liquidity of the Company. It should be also stressed that all the models used in the studies showed a high probability of bankruptcy of the entity.

In Energomontaż Południe SA the auditors drew attention mainly to financial problems of the dominant entity, that is PBG SA. The comment of the auditor concerns attempts to restructure the debt and investment made within the Capital Group. Considering the bankruptcy prediction models – two of them (the model of B. Prusak and the model of T. Maślanka) showed a high threat to continuity of activity. At the same time other two models showed a significant decrease comparing to indications based on the financial data for year 2010. Thus, a threat to bankruptcy of an entity could be concluded on basis of the economic-financial tools (including the discriminating analysis).

In the case of PBG SA remarks provided by the auditor were similar to the remarks which appeared in the opinion issued on the statement of Energomontaż Południe SA (a company form the PBG SA capital group). On basis of the data of year 2011 all the discussed models showed significant worsening of the financial situation comparing to year 2010, although they did not indicate a threat to continuity of activity.

4. SUMMING UP

A few important conclusions can be made on basis of the obtained investigation results:

- there are different structures of the discriminant models developed according to the proposal of E.I. Altman and its effectiveness is different,
- there is a necessity to conduct continuous studies monitoring effectiveness of the discriminant models used to verify the going-concern principle,
- national and international bodies establishing standards of auditing should recommend solutions in a scope of use of the models verifying the going-concern principle, providing in such a way comparability of the economic information included in the opinions of the auditors,
- recommendations of the organs establishing national and international standards of auditing should consider factors differentiating accounting systems in particular countries, and also differences in the evaluation of the obtained results depending on a branch.

From the obtained results it can be concluded that two out of four models analyzed yield rather good results, although they cannot be regarded as fully satisfactory. In the case of the analysis of the data from the companies which declared bankruptcy the results obtained for all four models did not foresee bankruptcy of those firms.

After the fall of the Lehman Brothers bank and entering the global economy into the deep crisis, an issue of a role of auditors, whose statements are subject to thorough check, at evaluating a financial situation of entities was retaken. On basis of the analysis performed in this article it can be stated that the auditors are able to make such analyses in the ex ante approach, but they need tools determining explicitly which will be recognized as mandatory at least in the particular country.

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ACCOUNTING POLICY AND ESTIMATED VALUES IN THE CONTEXT OF THE COMPARABILITY OF FINANCIAL STATEMENTS OF ENTERPRISES

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Abstract: *Accounting policy and the estimated values have a significant impact on the financial position of the company presented in financial statements. Changes in accounting policy and estimated values often result in a lack of comparability of financial statements, and their uselessness in decision-making. The aim of this study is to analyze the semantic content of concepts such as: the accounting policy, the estimated values and to determine the relationships existing between them, and consequently their impact on the comparability of financial statements. The following research methods have been used: an analysis of the literature, an analysis of normative acts, deduction method and comparison method.*

Keywords: *accounting policy, comparability of financial statements, estimated values, provisions, write-downs of assets*

1. INTRODUCTION

The primary source for materials to carry out various types of financial analyses within a company is its financial statement. Thanks to financial statements it is possible to assess both the condition of assets and capital of a company and the effects of its activities. On the basis of a financial statement, a wide range of its receivers can make various economic decisions.

In order for financial statements to be useful to a wide group of stakeholders, they must be not only reliable but also comparable. Comparability is an important feature of reporting information, particularly in the context of periodical financial analysis and it makes it possible to determine trends in business activities of an enterprise. The significance of comparability is reflected also in the process of analysis in a particular business area, thus making comparisons between entities that operate in the business environment of an enterprise, e.g. in the same industry.

Financial statements comparability requirements are (Stępień 2013c, pp. 813–814):

- presenting reporting information for prior periods,
- using the same principles of asset appraisal and determination of financial result every period
- adopting a uniform way to present entries on a financial statement
- informing statement users of an entity's accounting policy, any changes and the effects of these changes,
- informing statement users of changes to assets which are appraised based on estimated values.

As can be seen from the presented financial statements comparability requirements, accounting policy and the use of the so-called estimated values play an important role in ensuring comparability. Changes in the company's accounting policies, as well as the estimated values often prevent the comparability of reporting data for individual reporting periods. An additional difficulty is the ambiguity of interpretation of the terms "accounting policy" and "estimated values" and not recognizing the connection between these concepts. Lack of comparability of financial statements prevents making a reliable assessments of the economic or financial condition or of the financial results of a studied company.

The aim of this study is to analyze semantic concepts like accounting policies and estimated values, determine the relationship between them, in particular the discussion of changes in accounting policies in order to ensure the comparability of reported data.

2. THE ESSENCE AND SIGNIFICANCE OF COMPANY'S ACCOUNTING POLICY

The term “accounting policy” has a few meanings and definitions in the theory of accountancy. In English language literature or Polish Accountancy Law, for example, the term “accounting policy” is used, whilst in German language literature the term “balance sheet policy” is used. Some authors use them as synonyms, whilst others find differences between them.

The concept of accounting policy was introduced into Polish theory of accountancy by W. Brzezin (2000, pp. 34, 36). It is “standardization of accountancy through regulations, standards, methodological directives, with the purpose of specifying accountancy rules in a given country (union of countries) over a certain period of time”. Later he started to differentiate between the macro and micro levels of accounting policies.

W. Brzezin (200, p. 35) states, that “macro level accounting policy sets an accountancy model in a country or creates compulsory or voluntary patterns through: laws, standards, methodological directives”. In turn micro level, accounting policy is “the creation of financial statements according to goals set by the entity owner, but also under current accountancy laws and standards”. Moreover, the author makes a connection between the establishment of accountancy standards and limiting the flexibility to set basic rules and issues connected to accountancy (macro level). He connects decisions (arrangements, guidelines) with accountancy rules adopted by a specific enterprise (micro level).

According to E.A. Hendriksen, M. F. van Breda (2002, p. 250) “accounting policy is a set of accounting standards, opinions, interpretations, rules and laws used by companies in the financial reports”. The authors provide an opinion that “the management of an entity choose methods to use these rules in order to present a genuine financial position, changes in financial position and results of operations. All of which follow generally accepted accountancy rules and have therefore been chosen to prepare financial statements” (Accounting Principles…, § 6.). The authors identify accounting policy with accounting rules used in financial statement preparation.

D.E. Kieso and J.J. Weygandt (1992, p. 1391) make the same connection. In their opinion “an entity’s accounting policy is a strict set of rules and accounting methods, currently used and considered most appropriate to provide a genuine financial statement of an enterprise”.

A. Jurgowa, presents a different definition of accounting policy. In her opinion, “accounting policy is the management’s application of rules, principles and practices picked to properly show the actual financial position, the income and achievements […]. The selection and application of rules, principles, etc. is described as accounting policy, should be done to fulfill the purpose of creating financial statements, and include relevant and genuine information”. “If alternative rules are provided, policy used (in accordance to balance sheet law) should be clearly stated” (Jarugowa, Walińska 1997, pp. 23–24). An analysis of this definition provides an observation that A. Jarugowa puts emphasis on the act of implementing, choosing and selecting accountancy rules rather than the rules themselves.

M. Remlein (2007, p. 296) defines accounting policy as “a clever and consistent way to measure, describe and interpret economic activities leading to a specified goal“. It is worth noting that this definition is very vague. It does not refer directly to accountancy rules or sets accounting policy as a goal. It too, emphasizes the act, which is more related to the policy of conducting accountancy.

Based on the above quoted definitions, accounting policy of an enterprise is in many cases identified with accounting principles. It must be taken into account that accounting policy is a term used to describe an alternative to accounting principles. It provides an enterprise with the opportunity to choose accounting principles from a vast selection of accounting rules (as stated in the balance sheet laws), which are guaranteed by law but at the same forcing an enterprise to choose a set of rules.

"Politics and policies" are clever, consistent operations of an entity or a group to achieve a specified goal" (Słownik wyrazów…1971, p. 589). They are also "someone's clever, polite actions to reach a goal" (Słownik języka… 1988, p. 786) or "a thought out way of behavior which should lead to a goal; a tactic; a strategy" (Wielki Słownik…2009, p. 487), and also "the setting of consistent principles and methods by the management of organized groups to achieve specified goals" (Encyklopedia…2000, p. 660).

These general definitions indicate that policy refers to something consistent, carefully considered actions which deal to the accomplishment of a specified goal. The definitions lead to a conclusion that an entity's actions over an unspecified object are performed to reach a specified goal. In light of the above, accounting policy is not determined by accounting principles, but by the act of choosing the principles (principles selection). The chosen accounting principles are an effect, result, product of accounting policy used and a proof of it realization.

During the analysis of accounting policy characteristics it is worth noting the freedom of choice which is given to the economic entities has a significant purpose. The key purpose is to ensure appropriate quality of financial statements, in others words provide a genuine picture of a company's financial position so that the financial statements are useful to its recipients. E. Walinska (Rachunkowość… 2010, pp. 391–392) emphasizes that purpose accounting policy is to show in *a true and fair* way the achievements of an entity and it financial situation.

It should be noted that, the Balance Sheet Law, only provides general rules and a general form of enterprise accountancy. It does not provide detailed methods to use these rules. The Balance Sheet Law, cannot create an ideal model or sample of enterprise accountancy because economic entities perform diversified operations and operate under different conditions. Due to these differences, the management of an enterprise is given the right to choose among many methods accepted by law, the method which best suits their business activities, and will allow the enterprise to display its position through financial statements in the best and most genuine and accurate way. Thus, it is the management that choose the solutions which make up the accounting policy. When choosing the criteria, they must bear in mind the corporate image (Rachunkowość w teorii… 2007, p. 296).

It can be stated that, in the context of the above deliberations, ***accounting policy is carefully thought out selections and their consistent use by the management of an economic entity (specific solutions) as described and stated in accountancy regulations (acts, domestic and international standards), with the purpose of a genuine (real) presentation of size and quality in a financial statement*** (Stępień 2014, p. 67). It seems that this definition – putting an emphasis on doing, selecting and employing – differentiates between accounting policy and accounting principles, and provides and full picture of the topic.

Various definitions of accounting policy can be found in literature. However, normative definitions of the term are binding for the practice of accounting, and therefore accepted in accounting law: Polish Accounting Act and IAS (including International Accounting Standards, International Financial Reporting Standards and related interpretations published as regulations of the European Commission).

According to Polish accountancy laws, accounting rules (policy) is "selected and used solutions permitted by law, also listed in the IAS, which ensure the proper quality of financial statements". Based on this definition, accounting policy is adopted rules, which have been chosen by a company to achieve a specific goal. The goal is to ensure the required quality of financial statements.

According to International Accounting Standards (IAS 8), "accounting policy – specific rules, methods, principles, practices used by an entity to draw and present a financial statement" (MSSF 2011, p. A485). It is worth to note, that both accountancy acts and IAS, define accounting policies in a similar way. The difference between that is that the accountancy acts directly state the goals of accounting policy (ensuring the quality of financial statements). It also points to a broader spectrum of accountancy regulations (the acts and IAS). The IAS provide more detailed descriptions of solutions for accounting policy, and name them as rules, methods, principles, practices.

3. THE ESSENCE AND SIGNIFICANCE OF ESTIMATED VALUES

The term "estimated values", as opposed to the term "accounting policy", is not directly defined in IAS. It is also not defined the Polish Accounting Act. IAS 8 defines "the change of estimated value" in accounting, stating that it is "an adjustment of the carrying amount of an asset or liability, or the periodic consumption of an asset component, which is the result of an assessment of the current condition and expected, future benefits and obligations associated with these assets and liabilities. Changes in estimated values may be a result of new information or new activities, and therefore, are not corrections of errors".

In contrast to actual values determined on the basis of carried out and documented business transactions, estimated values are subject to uncertainty. Estimation involves judgments based on available, reliable information.

Despite the imperfections in the appraisal of resources based on estimated values, accounting permits such solutions. The aim is to reduce business risk and it allows to take pre-emptive actions. These actions are based on estimated values, which may differ from actual values, but they are intended to protect the entity against threatening losses, the adverse effects of other foreseeable future economic events or overvaluation of assets.

Examples of estimates values in accounting are primarily provisions created for liabilities, as well as write-offs which update asset values of a company.

Provisions are an economic category of very many controversies related to both the method of their classification in the balance sheet, as well as the method of their valuation. Provisions in the balance sheets are displayed as one of the liabilities. They are a way to finance the assets of a company. However, this is a specific type of financing that can theoretically be treated both as its own source of funding – an element of equity, as well as an outside source of financing – an element of foreign capital (Stępień 2011, p. 370).

Provisions are a source of financing of company's assets, contributing at the moment of their creation to costs and hence lower profits of a company and so provisions can be treated as part of equity. If the provisions are not used, they are dissolved, which usually results in an increase in revenues and thus an increase in the financial result (Stępień 2013a, p. 72).

According to M. Gmytrasiewicz i A. Karmańska (2006, pp. 380–381), provisions „represent the equivalent of assets accumulated during a given period to cover expected losses, costs, liabilities, etc. cut backs of assets. Estimating the expected, but uninfluenced by the company, loss of assets, guarantees the company will keep its equity, reproducing – from period to period – its net assets. This directly protects the rights and interests of the owners of capital, making it easier for managers to facilitate the going concern principle".

It is worth noting that, without the creation of provisions an increase in profits in a given reporting period could occur, which in turn could lead to an "exit" of a part of the assets (cash assets) from the company, in the form of paid out dividends or other types of disposal of earned equity surplus.

On the other hand, the recognition of provisions as a component of foreign capital (liabilities) is supported by the fact that, provisions are established for future certain or highly probable liabilities of a company. In the event of the occurrence of circumstances for which the provisions were created, the provisions are dissolved, resulting in an increase in liabilities of a company (sometimes followed by expenditure). Thus, at the time when the company is highly probable to have liabilities provisions are created, which are dissolved when a probable liability becomes a real liability (Stępień 2011, pp. 370–371).

In contrast, M. Wojas stresses that "provisions for liabilities, despite the fact that they are classified as foreign capital, will not become a real liability, as long they are a similar source of financing assets as the net profit, with the difference that the net profit may be in the future be withheld by the entity or (and) allocated for the purposes of consumption, and the provisions must in the future be used in accordance with its intended purpose or dissolved for the benefit of the financial result" (Wojas 2008, p. 205).

In view of the above, it is worth noting that both the Polish Accounting Act and International Accounting Standards (IAS), treat provisions as liabilities. In accordance with Art. 3. 1 Section 21 of the Accounting Act and IAS 37 § 10 provisions are liabilities whose maturity or amount are not certain (Fil, Michalczyk 2007, p. 117).

At the core of creating provisions lie major accounting principles such as the principle of accrual basis, principle of matching revenues and the precautionary principle. These principles determine the necessity and purpose of measuring the size of the impact on the financial result of a company during a given period. This applies both to the actual amount, which can be easily measured, but also those that are highly probable, and their value is determined based on estimates (Accounting Act, Art. 7).

The result of the application of the precautionary principle in accounting is also the making of write-downs of assets of a company. The essence of the precautionary principle is expressed in the fact that, the assets and revenues of a company cannot be overestimated and liabilities and costs cannot be underestimated. This principle derives from the constant uncertainty and risk associated with running a business. Therefore, when the book value of assets of a company is higher than their true value determined by the market value or fair value, reducing the book value of assets to the true value is recommended.

The impairment loss of an asset shall be understood as the amount of reduction for the balance sheet date, or any other day, of the book value of this component, resulting from the register during a reporting period. As a rule, the effect of the impairment loss is a cost, and therefore a write down of assets value. As a result, impairment losses are a balance sheet category – reducing the value of assets, but also are a cost of the revaluation of assets (Kutera, Hołda, Surdykowska 2006, pp. 91–92).

In accordance with the accounting practices, impairment losses may result from two, main reasons, namely (Kutera, Hołda, Surdykowska 2006, pp. 91–92):

- loss of asset value,
- valuation of assets according to specific parameters[1].

The loss of assets value, which requires a relevant impairment loss to be carried out, is a reduction of the carrying value of assets, a reduction which differs from the normal, expected consumption, expressed in amortization write offs. This applies to extraordinary circumstances that indicate a loss in the potential of assets to generate economic benefits. The use of impairment loss write offs is very important for the preservation of equity and continuation of the enterprise.

4. RECOGNITION OF CHANGES IN ACCOUNTING POLICY AND ESTIMATED VALUES IN FINANCIAL STATEMENTS

As previously mentioned, the accepted accounting rules (policy) should be used on a continuous basis to ensure comparability of reporting. This does not mean, however, that you cannot change a currently used accounting policy.

According to the Polish Accounting Act, in order to present the condition of an entity in a reliable and clear manner, effective from the first day of the fiscal year, regardless of the decision date, it can change existing solutions to others which the law provides. However, according to IAS 8 an entity changes the accounting policy only when a change is required by the IFRS or when it will make financial statements contain reliable and more relevant information about the effects of transactions, other events and conditions on the financial situation, financial results or cash flow of an entity. A change in accounting policy is not the application of accounting rules (policy) in

[1] Pertains to valuation of short-term investments, especially financial assets.

transactions, other events or conditions that differ from those previously occurring and also not the application of new accounting rules (policy) for transactions, other events or conditions that did not occur previously or were insignificant.

There are two approaches to changes in accounting policies (Krzywda 2013a, p. 26): retrospective and prospective approach.

According to IAS 8 a retrospective application of accounting rules (policy) is the application of new accounting rules (policy) for transactions, other events and conditions in such a way as if these rules had always been applied. While the prospective application of accounting rules (policy) assumes that the application of the new accounting rules (policy) for transactions, other events and conditions occurs from the moment the accounting rules (policy) changed.

IAS 8 specifies changes in accounting policy due to the following three reasons:

a) the first /and earlier/ application of the IFRS in accordance with the specific transitional provisions of that IFRS, if any,
b) the first application of the IFRS which does not include specific transitional provisions,
c) voluntary changes in accounting policy.

Early application of an IFRS is not a voluntary change in accounting policy. The amendments referred to in point a) should be applied in accordance with the transitional provisions contained in specified IFRS. The amendments referred to in points b) and c) should be applied retrospectively. Justifying the retrospective application of the change, the standard requires an adjustment of the initial state of each component of equity at the earliest period presented and the other comparative amounts disclosed for each previously presented period, as if the new accounting policy had always been applied. Corrections related to periods prior to those presented in the financial statements are recognized as an adjustment to the initial state of the corresponding component of equity at the earliest period presented. A corrected equity entry is generally the "Retained earnings" (Previous years profit), but adjustments can be made to other equity entries (Krzywda 2013b, p. 134).

If a retrospective application of changes in accounting policy is required, but it is not possible in practice to determine the impact of the change on individual periods or the influence in general, the entity applies new accounting policy towards the balance sheet values of assets and liabilities at the beginning of the earliest period for which retrospective application is feasible /it can be the current period/ and makes appropriate adjustments to the initial state of each component of equity during the period covered by the change (Krzywda 2013b, p. 134).

If, at the beginning of the current period, it is impossible in practice to determine the cumulative impact of adopting the new accounting rules (policy) for all prior periods, the entity makes adjustments of comparative data for the purpose of prospective application of amended accounting rules (policy), starting with the earliest, possible date. In this case, there is no need to adjust the values of assets, liabilities and equity for the part resulting from cumulative adjustments carried out before the change (Krzywda 2013b, p. 134).

When speaking about estimated values, it should be noted that estimated values may require verification as a result of changes in circumstances present at the time of appraisal or as a result of acquiring new information or more experience.

IAS 8 points out that the verification of estimated values does not relate to prior periods and is not considered a correction of error. Hence, the standard requires that the effect of changing the estimated value is prospectively accounted for by including in the result: the period in which the change occurs if it refers only to the current period (for example, the effect of changing the value of doubtful receivables) or the period in which the change occurs and future periods if it applies to all of these periods (e.g. change in the estimated useful life of an amortized asset). If the change of estimated value causes a change in value of assets and liabilities or equity components, then it is recognized in the period in which the change is made, as an adjustment to the balance sheet values of relevant assets, liabilities or equity.

5. CONCLUSIONS

The need to distinguish accounting policy from estimated values is essential in the process of preparing financial statements. This is because it is associated with how changes are applied – retrospectively or prospectively.

It is worth noting that, in accordance with IAS 8, in the event of difficulties in distinguishing accounting policy from estimated values, the change is treated as a change in estimated value. The effects of this change are recognized prospectively and therefore labor-intensive activities that bring comparable values close to the comparability of reporting data are avoided.

Both in theory and practice of accounting, the tendency for a broad interpretation of accounting policy which goes beyond the essence of this concept can be observed, and this results in an unreasonable desire for retrospective recognition of changes, which essentially are estimated values.

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COMMUNICATING UNCERTAINTY IN FINANCIAL STATEMENT NARRATIVES: GOODWILL IMPAIRMENT TESTING

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Abstract: *The goal of this paper is to determine how uncertainty can be communicated in the notes to financial statements. We focus on narrative disclosures in a setting of high uncertainty: disclosures concerning the results of goodwill impairment tests. The data come from Polish companies characterised by high uncertainty relative to the main markets of the European Union or the USA. We use qualitative methods, interviews and content analysis, and we draw on the genre theory to understand how the narratives are formed and why. We find that uncertainty is not communicated directly, because it would be against the rules of the genre. In cases where significant doubts concerning the reliability of goodwill valuation exist, preparers place clues that professional readers can notice and follow to determine the level of uncertainty. Preparers may only be encouraged to provide this information directly by introducing specific disclosure requirements.*

Keywords: *financial statements, narrative reporting*

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1. INTRODUCTION

This paper is devoted to the ways in which estimation uncertainty can be communicated in financial statements. Principle-based financial reporting standards recognize explicitly the need to use judgments and estimates when preparing financial statements. They allow preparers the flexibility required to create financial statements that represent the true and fair view of their diverse businesses. At the same time, the users of financial statements need to be aware of new sources of uncertainty which arise as a result: judgment uncertainty associated with the recognition and classification of transactions, and estimation uncertainty associated with measurement. International Accounting Standard IAS 1 stipulates that the sources of uncertainty must be disclosed, if a significant risk of a material adjustment exists. There is no standard on how this information needs to be presented and research has focused so far on non-compliance (Glaum, Schmidt, Street, & Vogel, 2013; Petersen & Plenborg, 2010) and managerial discretion (AbuGhazaleh, Al-Hares, & Roberts, 2011; Hayn & Hughes, 2006) rather than the methods of communication. This study contributes an analysis of the discourse of accounting disclosures and provides conclusions regarding the effectiveness of disclosure methods, which can be of interest to standard setters and preparers alike.

We study the communication of uncertainty in goodwill impairment testing by Polish companies reporting under the International Financial Reporting Standards (IFRS), a high-risk setting selected to make sure that it is reasonable for preparers to disclose the sources of uncertainty. Poland is a relatively new member of the European Union and has been undergoing a rapid economic transformation for the past 25 years, so the economic setting is deeply uncertain in terms of both opportunities and risks. The recognition of goodwill is not common yet, because Polish companies have reached sufficient maturity to engage in mergers and acquisitions only about ten years ago and there was no need for goodwill accounting before the transformation. When economic uncertainty is coupled with estimation uncertainty inherent in goodwill impairment testing, it is reasonable to assume that significant uncertainty is present and that prepares would consider the methods of communicating that uncertainty.

We study the discourse of disclosures concerning goodwill impairment testing, following the narrative turn in financial reporting research, well summarized by Beattie (2014). We view financial statements as a genre (Rutherford, 2013) and proceed to analyze the context, form and content of disclosures. In order to understand the communicative context, we carry out interviews with preparers, auditors and users of financial statements. We find that the respondents view financial statements primarily as decoration used by the management in presenting their achievements, which convinces us to adopt the approach of Goffman (1959) to the analysis of relationships between actors involved with financial reporting. Next, we analyze the discourse of the disclosures in the notes to financial statements, we examine the use of pragmatic strategies by the preparers, especially hedging techniques which have recently been introduced to the study of professional financial communication (Resche, 2015). In order to understand how the content of the disclosures is formed, we explore the interconnections between financial statements and the management report.

Goodwill reporting is a complex and controversial issue, the current IFRS 3 standard being a result of a long and difficult evolution (Rutherford, 2007). On the one hand, current methods of financial statement consolidation and recognition of goodwill components undoubtedly increase the transparency of reporting by capital groups. On the other hand, the reliability of measurement and relevance of goodwill amounts reported in financial statements remain doubtful (Jifri & Citron, 2009; Petersen & Plenborg, 2010). Uncertainty in the measurement of goodwill arises already at the time of initial recognition, usually following an acquisition. Initially, the amount of goodwill is capped by the total consideration exchanged, but it can be reduced by the revaluation of tangible assets and recognition of specific intangible assets held by the acquired firm according to IFRS 3. Subsequently, the amount of goodwill remains constant, but it is tested annually for impairment, in accordance with IAS 36, by comparing the carrying amount of goodwill with the recoverable amount. Estimations of the recoverable amount are usually based on budgets and forecast assumptions which cannot be voluntarily disclosed, as that could cause commercial harm, so the assumptions of the tests are not transparent to the users.

The IASB discussion of the estimates needed for the measurement of the recoverable amount in the basis for conclusions makes it clear that estimation uncertainty is particularly high:

> *These estimates involve assumptions about items such as the risk adjustment to cash flows or discount rates used, future changes in salaries and future changes in prices affecting other costs. No matter how diligently an entity estimates the carrying amount of assets and liabilities subject to significant estimation uncertainty at the end of the reporting period, the reporting of point estimates in the statement of financial position cannot provide information about the estimation uncertainties involved in measuring those assets and liabilities and the implications of those uncertainties for the period's profit or loss.* (IAS 1: BC 80)

The standard setters further argue that the *disclosure of information about assumptions and other major sources of estimation uncertainty at the end of the reporting period enhances the relevance, reliability and understandability of the information reported in financial statements* (IAS 1: BC 81). The main concern is that these estimates *require management's most difficult, subjective or complex judgments* (IAS 1: BC 81).

The scope of the disclosures concerning goodwill impairment testing is specified in IAS 36 (§134–135). The disclosures should include the carrying amounts of goodwill allocated to cash generating units, the basis on which the recoverable amount is determined, a description of key assumptions and of the management's approach to determining them, periods over which the projections were made, and the discount rates used. If the risk of impairment is particularly high, the standard requires companies to disclose a sensitivity analysis for key assumptions. The basis for conclusions show that the IASB had considered broader disclosures but decided against them. One of the reasons is that the amounts reported in the financial statement are based on an estimated range of values, rather than a single point. The preparers select an amount from that range to be reported, such that the amount is a reliable representation of the underlying transactions. The IASB reaffirmed that position in the 2013 revisions to IAS 36: for annual periods beginning in 2014 the sensitivity analysis in high-risk cases can be reduced in scope, with early application allowed if the company applies IFRS 13. General disclosures on the sources of estimation uncertainty are usually placed in the introduction to the financial statements following IAS 1.

2. NARRATIVES IN FINANCIAL REPORTING

The complex and multi-faceted nature of financial reporting needs no proof other than a reference to the abundance of accounting studies and the diversity of methodologies applied by researchers. In our study of the communication of uncertainty in financial statements, we take a positivist approach, but we focus on narratives, which are not the object of mainstream accounting research. Hence, we find that the genre-theoretic approach presented and applied by Rutherford (2005, 2013) offers a lens to approach our research question. A genre is commonly defined as a category of formal expression, but the use of genre analysis in the study of professional discourse shows that the concept of a genre can help explain why professionals use language the way they do (Bhatia, 1993).

Bhatia (2004, p. 23) summarizes the elements of a genre, which are common among the major theoretical perspectives:

1. genres can be recognized by members of the professional community as communicative events, which serve specific purposes and occur regularly,
2. genres are subject to conventions which constrain the intentions one can express, the form and style which can be used,
3. the members of a given professional community are able to understand the use of genres better than outsiders,
4. professionals exploit various resources to express their intentions beyond those specified by conventions,
5. genres reflect professional and organisational cultures,
6. each professional genre has integrity of its own.

Swales (1990, p. 33), the main reference for genre analysis, points out that an array of approaches exist. From a literary perspective genres can be viewed as forms of expression which persist over time and are recognised by readers as distinct. Structuralist theories of communication view narratives as cultural artefacts. The phenomenological perspective, on the other hand, takes the reader's interaction with the text as the focal point. In a manner, this perspective can be linked to sociological approaches to genre analysis, which rely on the readers' perception of texts, their form and meaning and can be tied to the study of social interactions as described by Goffman (1959), which has been used in impression management studies of corporate reporting. Finally, the methods of linguistics can be coupled with critical philosophy in the form of critical discourse analysis, which aims to uncover the motivations hidden behind the words (Bhatia, 2014).

This paper follows the phenomenological perspective and combines genre analysis with study of social interactions. Nevertheless, each of the approaches described above illuminates the problem of narratives in annual reports in its own way. Taking the structuralist view first, it is clear that financial statements rely on defined methods of classification and measurement, which constitute the fabula. Finance professionals would agree, that the same set of accounting numbers can be viewed in various ways, hence creating the potential for many stories to be developed. Then, the process of writing the stories in the report can yield a variety of texts concerning the same story. Taking the phenomenological viewpoint, one can easily imagine, that the readers of annual reports can interpret the narratives in various ways depending on their experience, an observation which is recognised by standard-setters and regulators who develop disclosure requirements. The critical perspective brings the power struggles between corporations and their stakeholders into the spotlight, struggles which are often discussed in business media.

Rutherford (2005) took the genre-based approach to the study of annual reports in the UK. He introduced tension into the study design by grouping companies by oppositions, for example the most profitable vs. loss companies. This allowed him to study the stability in the communications, because it is reasonable that differences in the way narratives are used would occur between companies in such diverse economic situations. He then used word counts as the basis for analysis of stability, which he indeed identified. However, the study also revealed a common occurrence of the Polyanna effect (i.e. attribution of positive results to the management's actions) and a prevalence of positively charged words. The stability of words used indicates that financial statements narratives are a genre, characterised by specific rules of communication, but Rutherford is careful when making this conclusion (Rutherford, 2005, p. 353): *the notion of genre must be deployed with care in cases where communication is taking place within a complex social setting, such as the use of corporate annual reports to provide information to a variety of stakeholders.* Thus, he makes a point that in viewing financial reports as a genre one needs to go beyond the text and study the social setting both on the preparer and on the user side. He develops this approach further in his review article (Rutherford, 2013).

We extend this approach by following the suggestions in the literature concerning the analysis of the prepares and their audience (Beattie, 2014; Rutherford, 2005) and we carry out interviews with preparers, auditors and financial analyst before we proceed to the analysis of the narratives. This allows us to situate the communications in their particular setting and determine the communicative aims, but at the same time it introduces another level of complexity to our study. We manage this challenge by referring to the literature on social interactions (Goffman, 1959), which has been adopted by the impression management literature. Then, we study the content of goodwill impairment test disclosures, we explore the interconnections between them and the management report. We study the format, style and content manually. We pay particular attention to the use of pragmatic strategies associated with hedging and deception.

Hedging is a useful strategy in situations where the preparer is obligated to communicate uncertain information. The notion of hedging strategies in spoken language is attributed to Lakoff (1973), who referred to specific words as hedges, but they are commonly defined as rhetorical devices used for blurring the speaker’s commitment to the truth of the preposition (Prince, Frader, & Bosk, 1982). In the financial reporting context, hedges have recently been suggested as an interesting avenue of research into accounting narratives (Beattie, 2014). Resche (2015) has contributed one of the first papers on hedging in financial communication, in which she studies the use of hedges by central bankers. She argues that hedging needs to be defined broadly and qualitatively when studying complex, professional communication. She lists the classical types of hedges, but shows that these fail to capture many important aspects of professional speech, as do the classical test of a hedge such as the Crompton test. We follow her suggestions by thoroughly reading the financial statements and management reports studied here, rather than rely on automated searches. Given the strict style of financial statement narratives, we find that the preparers use two strategies involving a modification of the subject: subjectivisation and depersonalisation.

Deception strategies may be associated with financial statements and management reports in cases where the preparers deliberately attempt to take unfair advantage of the users. Deception is usually associated with lies, but it may take other forms such as deception by omission (Saul, 2012). Deception by omission does not involve lying but the purpose of the preparer is still malevolent, because the preparer purposefully keeps relevant information covert from the users. As a result, the users make a wrong inference as to what the preparer believes to be the actual state of affairs, and more importantly, what beliefs the preparer means to communicate. The problem of truth, lies, humbug and bullshit in accounting narratives has been thoroughly discussed by Macintosh (2006), who argues that accounting needs to be understood as a process of constructing linguistic meaning rather than a technology. We follow these insights and explore the meanings communicated in accounting narratives in conjunction with other sources of information.

3. THE SETTING

Unlike the major international markets of London, Frankfurt or Paris which have been evolving over much of the twentieth century, the Polish stock market needed to be created from basics after the fall of communism in 1989. The new national accounting law was initially created with the purpose of increasing tax revenue and serve the needs of creditors, rather than those of investors, which was a response to the concerns associated with the turbulent development of the free market in the initial stage. The future of the Polish accounting regime was uncertain at the time (Jaruga, 1993). It wasn't until 1991 that the Warsaw Stock Exchange began operations with 9 companies listed initially. In subsequent years, the dynamic development of the capital market was accompanied by rapid regulatory adjustments (Dobija & Klimczak, 2010). The number of listed companies exceeded 200 in the year 2000. At the end of 2014, there were 471 companies listed in the main market (including 51 foreign companies) and a similar number listed in the alternative market called NewConnect, positioning the Warsaw Stock Exchange as the leading market in the region. By 2004 Poland joined the European Union and adopted EU regulations, including the requirement for consolidated financial statements to be prepared in accordance with the International Financial Reporting Standards (Grabinski, Kedzior, & Krasodomska, 2014). Today, Poland is ranked among high income, developed economies, but it continues to exhibit characteristics typical of a transformation country. Companies are relatively small, with only a handful exceeding USD 10 bn in capitalization, 35 exceeding USD 1 bn, and two-thirds of the market below USD 100 mln. This results in low significance of goodwill, as few companies have the resources to engage in mergers and acquisitions. Poland is usually classified as a low-enforcement country in international accounting research, despite the fact that it is a member of the European Union (Christensen, Hail, & Leuz, 2013).

The Warsaw Stock Exchange can be described as a tightly regulated market, a characteristic to which its success is often attributed (Stringham, Boettke, & Clark, 2008). The main act regulating companies whose shares are traded in a regulated market in Poland is the Act of Parliament (29.07.2005), which incorporates EU directives. Reporting requirements are set in the Regulation of the Minister of Finance (19.02.2009), which enumerates the required contents of annual, semi-annual and quarterly reports but allows companies to include additional information. The required elements are:

1. A letter from the CEO, commenting on the results and future perspectives,
2. Selected financial data, including comparable data for the past year, in PLN and EUR,
3. The annual financial statements, prepared in accordance with the IFRS or Polish accounting standards (an option for entity statements only),
4. The management report, the contents of which are also enumerated in the regulation,
5. An attestation of the management board as to the reliability of the report,

6. An attestation of the management board concerning the selection of the auditor,
7. The audit report.

4. THE PREPARERS AND THE USERS

We conducted direct, semi-structured interviews with two preparers, an auditor and two analysts in 2014 and 2015. The respondents were all in professional ranks, aged below 40, which means that their career development took place after Poland joined the European Union and the use of IFRS became a legal requirement. Interviews lasted up to an hour, they were recorded, transcribed and coded on the basis of genre theory.

The respondents highlighted the complexity and diversity of corporate communications. Financial statements are used by analysts in conjunction with current disclosures, quarterly statements, informal communications and the media. In comparison to the other sources of information financial statements are dominated by mandated disclosures. Preparers avoid providing more information than required, but companies that value investor relations use analyst presentations, meetings and conference calls to communicate additional, useful information. Information that is provided in legally binding documents need to be certain enough to be presented as a fact, so any uncertain information needs to be communicated by non-formal channels.

The management board is the main user of the financial statements, because the statements are a tool for the communication of the management's performance to the supervisory board and major shareholders.

> *(...) I personally think about people... The corporate management board, who "face" and then put their names, sign, take the greatest responsibility for it, that seems to me are the most important users.* [R5]

Analysts, investors or banks[1] are considered as a less important audience by the preparers, and all respondents recognized that fact. A low regard for the needs of analysts and investors is visible also in poorly organized and maintained investor relations websites, but notable exceptions to the rule exist, such as media companies.

The preparation of financial statements is delegated to the accounting function, with the auditors, the management board and investor relations or marketing departments negotiating with the accounting function. The management and the accounting function form a team, with the goal of supporting the management's presentation of its achievements, which means that the accounting function needs to be loyal to the management. However, professional independence demonstrates itself in the existence of limits on what constitutes an acceptable influence of the management. Neither of the respondents questions the reliability of financial statements and they consider the influence of the management to be within acceptable bounds.

The respondents present nuanced views regarding the reliability of financial statements, generally supportive, but they criticize the narrow extent of disclosures and limited usefulness resulting from insufficient coverage of relevant information.

> *(...) the management board put their best will, their best efforts, so that the report is fair, but at the same time, if that is only possible, they make sure it fits their expectations, so that it can be presented as their own success.* [R4]

One of the reasons for the professional independence of the accounting function is the complexity of IFRS-based financial statements:

[1] Banks request special purpose statements when they need additional information.

I don't sign my name anywhere. My signature is not there. I'm the only person who knows what's in there. Who really knows what's in there. [R1]

Auditors strengthen the reliability of financial statements by negotiating with the management, but this role is not mentioned by analysts. In fact, analysts do not discuss the inner workings of the financial statements preparation, but rather link the statements directly to the management, as if the financial statements were a decoration used in the management's presentation of their achievements. Depending on the situation, the management rely on this decoration to a greater or lesser extent, which has an impact on the extent of information provided, as well as the resources devoted to the reporting process and investor relations. If the management makes excessive use of public relations or marketing functions in the investor relations domain, the reliability of information decreases. Analysts need to rely on the information in the media, especially news of product development or trends in sales, but they are acutely aware that the media present information of low reliability.

The extent of disclosure is a cause of tension between analysts and the management, and this tension influences the dynamics between the actors responsible for the preparation of financial statements. The preparers are clear that the disclosures tend to be limited in scope:

The IAS tells us [to disclose], and if the IAS doesn't tell us, well, then the auditor tells us [to disclose]. [R5]

We just don't want to disclose some of the information required by IAS. Or we disclose it in a very limited way, or a very aggregated way. Because we just don't feel like disclosing it. Because we think it goes to deep into our, into our business. [R1]

Analysts are particularly interested in segment disclosures and detailed information on future capital expenditures, working capital and sales, which are necessary for discounted cash flow modeling. The management view segment disclosure as harmful, because it allows competitors to learn about the resources allocated to lines of business, sales and margins. Even the largest companies disclose no more than two or three segments. Geographic segments are disclosed as required but the information on currencies is rarely provided. Similarly, companies tend to aggregate disclosures of financial instruments, including debt, so that the structure of maturities is unclear. The management negotiate such disclosures with auditors, especially if a firm is in a poor financial condition:

The key and critical disclosures are those associated with the liquidity of the firm, all kinds of information about problems in acquiring loans, retiring loans, breaking covenants or other elements of loan agreements, other ratios; and that is, of course, a life-and-death discussion for the firm. [R4]

Forecasts sales, earnings or budgeted expenditures are not, in general, disclosed in official documents. The management rely on informal settings, meetings with analysts or media stories, to communicate their plans and expectations. Meetings with analysts seem to play a particularly important role, because they are held in person, and thus offer an opportunity to provide off-the-record information that can always be denied. Analysts need to be careful in interpreting the information they receive, so they tend to put a great emphasis on the consistency of information they acquire from various sources:

It's best, if what a company tells insitutional investors in such meetings, let's say private meetings, it's good if it's also written in the report. [R2]

Similarly, companies tend to respond to private inquiries, although they take care to stay within the limits of the insider trading regulations in this regard. The Polish market is small enough in terms of the number of companies and geographic distribution, to make it feasible for analysts to attend such meetings. Nevertheless, analysts would welcome a greater use of conference calls, as well as more information provided directly in official statements, to limit the time spent on attending multiple meetings and making private calls to the management. In this regard the main global markets offer good practices:

> *I was amazed when I began covering foreign companies that I just, you know, enter their site and I've got the whole call recorded there the next day or the same afternoon (...)* [R3]

Regarding the format and style of financial statements, all respondents were critical of the length of the documents:

> *Does a man really read two or three hundred pages of information in small print? No. Only when he actually needs to, very, very much. There is quite a lot of information in the report, which is only understandable to the auditor and the preparer. Not even to the management, but to the preparer.* [R4]

Analysts read the reports extensively when they begin covering a new company or cover an IPO. Otherwise they are selective: they read the notes or the management report if they find an inconsistency or they miss a key piece of information. In reading, they focus on the amounts and numbers provided, rather than the text:

> *We are, we have brains that are more analytical, financial, not linguistic.* [R2]

The format of presentation matters to the analysts: the documents should be searchable, not scanned, tables need to be easy to navigate, key information should be put in a convenient spreadsheet file. However, a great diversity of approaches is found among reporting companies, with some making real efforts to increase readability, while others tend to multiply lengthy, copy-paste disclosures, the users need to sieve. All of the respondents referred to this issue.

The style of financial statements needs to be factual and communicate certainty as to the information presented. This style is acquired by following past practices and mimicking the standard practice of other preparers, but it is also required by auditors. The following statements are typical:

> *R: I usually try to write in a neutral way. Neutral, definitely never negative. Even if it is negative, to use such words that it wouldn't sound very bad. M: OK. R: But I don't do this because somebody told me to. (...) But I try to avoid words, in general I try to avoid adjectives in the first place. M: Why? R: So that it's neutral.* [R1]

The style of the management report is much more liberal:

> *The management report, as the name suggests, is a report of the management's successes. Adjectives are welcome there.* [R4]

The management report is not audited in full, the auditors verify only the amounts for consistency with the financial statements and they make sure all the disclosures required by the accounting and commercial regulation are included. The report may be written by the preparers of the financial statements, but the marketing or public relations departments tend to be included in the process. In some companies, it is the latter that write the report in full, and the preparers of financial statements are asked to review and verify it.

Financial statements being a domain of professionally ascertained facts, there is little room for communicating uncertainty. That view is shared among preparers and auditors. On a technical level, uncertainty cannot be present, because uncertain valuations need to be corrected to levels at which certainty exists. On a narrative level, certainty is necessary as a form of presentation:

> *If the management say they are uncertain then who's supposed to be certain in that firm?* [R4]

This approach is carried directly into the goodwill impairment test disclosures, even though the respondents appreciated the uncertainty involved:

> *The management put their names under the successful acquisition, so now they must stand firm.* [R4]

Since the forecasts of future performance, which are needed for the estimation of the recoverable amount, are based on budgets, the management exert a direct influence on the result of impairment tests. However, the preparers negotiate valuations in areas which require their input, such as forecasts beyond the budgets and the determination of the terminal value. Analysts do not put much weight on goodwill valuations, because they tend not to affect future performance or dividends. Their concern is with the management's plans and budgets which are never disclosed.

5. GOODWILL DISCLOSURES

In this section we focus on notes concerning tests for the impairment of goodwill arising from acquisitions and in the next section we explore management reports to find interconnections between the two elements of the annual report. All through the analysis we use the 2013 and 2014 annual reports of companies listed at the Warsaw Stock Exchange, all of which are required by law to use the IFRS. We select large companies, included in the WIG30 index, so that we can assume they allocate sufficient resources to the reporting processes. There are nine companies in that index, other than banks, which report goodwill in their assets: Asseco Poland, Grupa Azoty, Boryszew, Cyfrowy Polsat, Energa, Eurocash, LPP, Kernel, Tauron, and TVN. The sample is diverse in terms of size and performance, as Table 1 shows, but the companies are much smaller than the blue chips from the top international exchanges. Three companies report goodwill at above 20% of total assets. Market-to-book ratios range from 0.54 to 8.85.

Table 1. Overview of the companies studied [EUR million, %]

Name	Sector	MCap	Sales	Earnings	Goodwill/ Assets	MCap/ BV
Asseco Poland SA	Software	1 040	1 502	86	48.75%	0.54
Boryszew SA	Commodity Chemicals	262	1 219	38	2.36%	0.76
Cyfrowy Polsat SA	Broadcasting & Entertainment	3 785	1 786	70	39.54%	1.72
Energa SA	Conventional Electricity	2 300	2 552	242	0.79%	1.12
Eurocash SA	Food Retailers & Wholesalers	1 208	4 088	44	22.19%	4.85
Grupa Azoty SA	Specialty Chemicals	1 733	2 385	64	0.13%	1.11
Kernel Holding SA	Farming & Fishing	592	577	-24	7.24%	2.39
LPP SA	Clothing & Accessories	3 495	1 149	116	7.16%	8.85
TAURON PE SA	Conventional Electricity	2 085	4 444	286	0.57%	0.48
TVN SA	Broadcasting & Entertainment	1 374	384	46	3.77%	5.89

Note: MCap stands for average market capitalization over 2014, BV stands for book value of equity.

The format of the descriptions of goodwill testing is predictable, given the requirements of IAS 36. The narratives contain elements of accounting policy referring to goodwill, a description of the key assumptions and methods used in the tests and the conclusions. The degree of detail in the descriptions varies greatly, however. Grupa Azoty SA is the only company to report recoverable amounts. Preparers state that they have carried out sensitivity analysis in Tauron, Energa and Asseco Poland, but only the latter presents the results for discount and growth rate assumptions. Parts of the text referring to standard accounting policies do not change from year to year, while the rest of the narrative can change substantially as in Asseco, or not at all as in Boryszew, where only a handful of amounts change between 2013 and 2014.

The style of the narratives corresponds with the interview results: they are written in a factual style, the preparers avoid adjectives, adverbs and other signals of evaluation. Hedging strategies are present, however, in the form of depersonalisation and subjectivisation. Depersonalisation allows the preparers to detach themselves from the text, reducing their perceived responsibility for the information they communicate, and strengthening the neutral style of the text. Depersonalization is usually achieved by using the word Group as the subject, as in the example of Kernel where we read that *the Group reviews its subsidiaries* [*Grupa dokonuje przeglądu poszczególnych jednostek*], and in the statement of Energa we find that *the Group has carried out impairment testing* [*Grupa przeprowadziła test na utratę wartości*]. When the results of judgements are communicated, however, preparers resort to the impersonal as in the statement of Eurocash, where we find that *as a result of the effected analysis, it is confirmed an impairment is not required* [*w wyniku przeprowadzonej analizy potwierdzono brak konieczności dokonania odpisu aktualizującego z tytułu utraty wartości*]. Note that in the Polish language the personal pronoun is omitted and a special impersonal form of the verb is used, rather than the passive voice.

Statements referring to the uncertainty in the test assumptions, as required by IAS 36 §134, are attributed to the management. This subjectivisation strategy allows the preparers to express a judgment as the personal perspective of the management, rather than as an objective fact. Thus, these statements are clearly separated from from the dominant factual style. Note that the form of this statement concerning management judgments is not dictated by IAS 36, but the form of the statements is similar across the sample. The following excerpt from Kernel is a typical example:

> *The management believe that any possible changes in the key assumptions, on the basis of which the recoverable amount was calculated (...), would not cause a situation in which their book value would exceed the recoverable amount.* [Kernel]

The use of the words *any possible change* seems surprisingly strong, given that IAS 36 uses the words *a reasonably possible change* in the relevant paragraph. Sometimes the statements attributing judgements to the management are awkward, as in the case of Boryszew:

> *A change of factors is not probable (...). The Management believe that even if justified and probable changes in the key assumptions took place, (...) the book value (...) would not exceed the recoverable amount.* [Boryszew]

This statement may have been crafted by the auditors of Boryszew, which would explain its unusual style, but the reader may nevertheless wonder which changes are of concern. Is it the probable ones which are claimed not to exist, or the improbable ones, which can occur? How is it then, that even improbable changes would not cause changes in the results of impairment tests? This seems to be a clue for professional readers, that the uncertainty concerning estimates of value in use is particularily how. For that reason we examine Boryszew again in the next section.

One element a casual reader would miss while reading reports, is the variation in the disclosure of recoverable amounts, sensitivity analysis and the occurrence of the management's statement concerning possible changes in assumptions. According to IAS 36 recoverable amounts and sensitivity analysis must be disclosed only if the recoverable amount exceeds the carrying amount by a narrow margin, so that it is possible that a change in assumptions would affect the results of the impairment test. In such a case, the management's statement concerning the assumptions is not needed any more. The narratives do not contain a relevant explanation, so the reader needs to be aware that the mere occurrence of these disclosures carries a message concerning uncertainty.

Impairments of goodwill are extremely rare among Polish companies, a clear sign that many goodwill impairment tests are conducted with unwarranted optimism. Out of the sample companies only TVN wrote goodwill off in 2012, but this was not a result of impairment testing. TVN sold its wholly owned subsidiary Onet.pl in 2012 for a price below the book-value, so the impairment was an objective fact. The financial statement contains little comment about the impairment, other than a statement of fact and the relevant amounts. Another interesting case is the impairment of investments in a Russian subsidiary of Asseco Poland SA, ZAO R-Style Softlab. An impairment of PLN 25 million, more than a third of the carrying amount, is reported in the entity statement, where the subsidiary is presented as an investment carried at cost. One paragraph is devoted to this impairment, with a description of the test assumptions and a brief note on the causes (economic situation in Russia and the depreciation of the ruble). A sensitivity analysis table shows that the amount of impairment could range between PLN 15-34 million depending on changes in the cash flow growth rate and the cost of capital. Interestingly, the consolidated financial statement discusses the same subsidiary in the context of goodwill recognition, because the acquisition was a multi-step transaction and the amount of total consideration exchanged was not fully determined until the end of 2014. While there may be technical reasons for not recognising the impairment at that point in time, it is worth noting that as much as PLN 59 million of goodwill is recognised, given that the carrying amount of the investment in the entity statement is PLN 68 million. No explanation of this discrepancy2 is provided by the preparers even though the note on the allocation of the purchase price is over one page long.

6. INTERCONNECTIONS

The management report is a mandatory element of the annual report, but it is governed by lax rules concerning its content and style. It contains information complimentary to the financial statement and it is an element of the communicative context in which financial statements are used. Consequently, the exploration of interconnections between the two documents leads to a better understanding of the preparer's strategies in communicating uncertainty. Moreover, it is only by examinig additional documents that we can determine if the preparers of accounting narratives use deception by omission. We analyzed the management reports by searching for text relevant to the companies and segments subject to goodwill impairment testing. Out of the companies studied, we focus on the ones associated with the highest significance of goodwill (Asseco Poland, Cyfrowy Polsat, Eurocash) as well as TVN and Boryszew, where the financial statements contained unusual statements.

Asseco Poland SA is a company where goodwill constitutes almost 50% of total assets, but at the same time the market-to-book ratio is as low as 0.5. The note on impairment tests is quite detailed in comparison to other companies, so it allows the reader to notice that the market capitalizations of three out of five major subsidiaries are below their carrying amounts. Nevertheless, the companies were tested by the preparers for impairment using the value in use method and no reason for impairment was found. Sensitivity analysis, on the other hand, reveals that changes in assumed discount and growth rates of as little as a third of a percentage point would lead to impairments in two out of three reporting segments. When we examine the relevant elements of the management report, all we can find are stories of success and growth of the company and its subsidiaries as in the following extract:

In 2014, ASEE has generated better results than in 2013. Total revenue from sales

[2] Entity earnings are 20% lower than consolidated earnings for this and other reasons.

increased by PLN 30.3 mln in 2014, that is 6.5%, to PLN 499.3 mln. [Asseco]

The report goes on to discuss new contracts and growth of sales in particular areas of activity. What is missing is a reference to the sensitivity analysis, which shows that the minimum growth rate over the 2015-2019 forecast period for this subsidiary needs to be as high as 15% if no impairment is to be recognized. Reported growth is nowhere near that number. Apparently, both the accounting narrative and the management report omit significant information in an attempt to create a positive message. However, the preparers of financial statements are bound by the IFRS and their professional integrity, so they do disclose bits of information that a professional reader can notice and fill in the gaps.

Cyfrowy Polsat SA is a complex capital group, resembling Asseco Poland in this respect, but the style and content of the two reports more aligned here. The company recognizes goodwill equal to about 40% of its total assets, most of it arising as a result of the acquisition of Metelem Holding Company Limited in 2014. The note on impairment testing is brief, but well written. It contains a description of key assumptions, the discount rate beyond the forecast horizon and the growth rate, the values of the two rates used in 2014 and 2013, and a statement of the management concerning the possible changes in assumptions. The note reporting the acquisition and goodwill allocation is more complex, because Metelem is a company with a number of subsidiaries (notably a telecom operator Polkomtel SA), the main shareholder of Cyfrowy Polsat is also the ultimate owner of two of Metelem's shareholders, and a number of operations concerning the debt structure of Metelem and Cyfrowy Polsat took place at the same time. The note states that the fair values of assets were not fully determined at the time the statement was being published (the acquisition took place half a year later, the deadline for goodwill alocation is 12 months under IFRS 3). Consideration exchanged is valued at about PLN 6 billion and goodwill is valued at PLN 8.2 billion because the net assets of Metelem are negative. The management report is written in a factual style, similar to the financial statement narratives. Little can be found about the future plans of Cyfrowy Polsat, which seems to be consequence of the factual style adopted in the management report. Information relevant to the acquisition is easy to find, as is operational information and the presentation of risk factors concerning the acquisition. However, there is no discussion concerning the amount of consideration exchanged, which would be warranted given that the acquisition was not an arm's length transaction and the amount of goodwill is high. Again, a significant issue is missing from the report.

Eurocash SA is the third company to hold the largest amount of goodwill relative to its total assets. The notes to the financial statements are brief and give no indication of uncertainty. However, one may notice that the management statement concerning possible changes to the assumptions is missing, which would normally happen if a sensitivity analysis was presented, but it is not. The largest amount of goodwill is associated with Tradis Group, a major FMCG distributor, which was taken over in 2011 and then merged with Eurocash SA in 2014. The management report presents the integration of Tradis as a challenge, a source of temporary costs and a source of a temporary drop in sales. In fact, the acquisition was a lengthy process involving power struggles with the management of Emperia SA, the former owner of Tradis, but these issues are not discussed in the reports.

The reduction in sales must be particularily worrying for the shareholders, since Eurocash operates at low margins and sales have been stagnant for three years. In the 2013 management report, the company attempted to place the negative events firmly in the past, while reserving positive events for the future. It is difficult to determine whether this is an attempt at deception a reflection of the management's beliefs. The decrease in sales resulting from the loss of a major client (and former owner) of Tradis is removed from the historical growth rate calculations, and the reader’s attention is refocused on “continued sales”:

The main reason for the lack of dynamics in sales was the market situation and internal factors associated with the acquisition and the consolidation process of Tradis. (...) The

> *decrease of sales of Tradis was caused by the withdrawal from sales to the Stokrotka network (...) Taking into account only continued sales, Tradis experienced an increase of 1.6%. (...) The full synergy effects (...) will be possible to achieve within 3 years of acquisition.* [Eurocash 2013]

TVN SA does not hold large amounts of goodwill, but it is a rare example of goodwill impairment. In 2012, TVN reported an impairment of goodwill resulting from the acquisition of Grupa Onet.pl, although this was a result of the sale of 75% of the subsidiary's shares below their book-value, not impairment testing. There are many passages devoted to this topic in the 2012 annual report describing the technical details of the transaction, but the passage below is the first one to appear:

> *After the sale of the shares in Grupa Onet.pl to Ringier Axel Springer (...) we lost the control over our online business dominated by Onet (...) Both transactions are perceived by the TVN Group as long-term investments, the goal of which is (...) the development of the online market (...) through the use of economies of scale and synergies resulting from the cooperation with our strategic partners.* [TVN 2012]

The sale of Grupa Onet.pl is thus portrayed as a positive event, an investment, despite the fact that TVN sold 75% of its shares and used the proceeds to retire debt. This is a creative element, a play of words, because the term investment refers to the classification of the remaining 25% of shares in Grupa Onet.pl as "investments in associates", rather than the common meaning of the term. Thus, the statement is true, but it may be an attempt at deception, since it is hard to believe the management sincerely believe this transaction to be a source of future benefits. Further, TVN reports a "corrected" EBITDA in the discussion of financial performance, from which it excluded the impact of the goodwill impairment. The difference is significant, because the reported EBITDA was negative, while the corrected one is positive, making this a classic attempt at earnings management.

Boryszew, which we discussed in the previous section, draws attention because of an awkward statement of management's certainty concerning test assumptions. Boryszew allocated the largest amount of goodwill to its German subsidiaries, especially Theysohn Kunstoff GmbH and Boryszew Kunststofftechnik GmbH. There is already a hint in the financial statements, that growth of sales in these companies is of concern, because the note states, without any explicit reason, that the acquisition of new contracts is seen as "probable". This statement is identical in both the 2013 and 2014 financial statements, which suggests this probability did not materialise. Little discussion of these subsidiaries can be found in the management report, until one notices, that those companies are included in Boryszew Automotive Plastics Group, or BAP, which is in turn included in the Automotive segment, the results of which are discussed in the 2013 management report:

> *Lower sales were associated with a decrease of demand in the European automotive industry and lower sales as a result of contractual discounts and the contract life-cycle. In 2013 old contracts gradually expired and were not being (...) replaced (...). In the case of BAP Group companies we expect, that [the situation will improve] in mid 2015. [Boryszew]*

The 2014 management report states, that improvements have been noted, but a full replacement of lost contracts is not expected until 2016. It seems that the accounting narrative contains hints as to the sources of uncertainty, but only a professional reader would be able to discover the relevant information.

7. CONCLUSIONS

The analysis of interview results and accounting narratives shows that uncertainty is out of place in the financial statements of Polish companies for two reasons. First, the financial statements are a domain of professionally ascertained facts, which by definition need to be certain. Second, since financial statements serve as a decoration in the management's presentation of its own performance, uncertainty would suggest the management doubt their own skills. For the same reason no complimentary information concerning uncertainty can be found in the management reports.

Importantly, the reliability of financial statements is not affected by the lack of information concerning uncertainty, as the interview results show. The users of the financial statements accept the rules of the genre, just as the preparers do. In other words, the observation that there are areas in the financial statements which systematically deviate from economic reality does not affect the perceived reliability of the statements as a whole. The users may complain about the time and effort required to process the statements, but they are more concerned about the extent and format of disclosures in critical areas (segments, capital expenditure, financing) than about estimation uncertainty.

The analysis of interconnections between the financial statements and management reports shows that accounting narratives uphold a standard of professional integrity, which the management reports need not maintain. Preparers of accounting narratives use a factual style, refraining from the use of excessive explanations or evaluations, though they do use hedging strategies. They follow the IFRS diligently, but their concern seems to be more with the letter of the standard and the auditor's recommendations than with the economic reality of their company. Nevertheless, in cases where significant doubts exist, they may place clues that professional readers can find and follow to determine the level of uncertainty themselves. In contrast, narratives in management reports are written in diverse styles and may contain deception strategies. Preparers of financial statements refrain from using such strategies, but it can be argued that they engage in deception by omission in cases where significant information is not discussed in accounting narratives just because it is not required explicitly by a relevant standard.

The results of this study suggest, that preparers in Poland cannot be expected to communicate uncertainty explicitly in the financial statements narratives beyond the specific requirements of the IFRS. A voluntary introduction of uncertainty into accounting narratives would break the rules of the genre which the readers expect the preparers to follow, thus negatively reflecting upon such a company. An extension of IFRS requirements may be the only method of improving the disclosure of uncertainty. Such requirements would need to be specific enough for uncertainty to become a fact and thus comply with the rules of the genre. However, the current approach of the IASB is the opposite, because the revision to IAS 36 allows companies to reduce the extent of sensitivity analysis disclosured.

This paper shows that studying accounting narratives along with their communicative context, including the authors and the audience, is an effective method of uncovering the multifaceted nature of financial reporting. One limitation arises, however, as the results of this study may be generalized only to countries with a similar cultural and institutional setting, such as the neighboring countries of Central and Eastern Europe. Research covering more settings is needed to discover the extent of global diversity of accounting discourse and practice. This stream of research can lead to the definition of accounting languages.

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SHADOW ACCOUNTING AND FINANCIAL STATEMENTS OF THE INSURANCE COMPANIES

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Abstract: *Commercial insurance companies prepare financial statements in accordance with International Financial Reporting Standards for several years. The financial statements to be compiled and are comparable to the users print information from the annual reports provide a wealth of useful information. In the case of insurance undertakings, entities decided in accordance with the application of IFRS 4 Insurance Contracts and about the application shadow accounting. Insurance companies must notify its applications, respectively. his nonaplikation provide information in the annual report. The article is focused on the commercial insurance within a single accounting period and at the rate applying shadow accounting in preparing the financial statements.*

Keywords: *accounting systems, shadow accounting,, financial statements, insurance company*

1. INTRODUCTION

To the processing of results from the application of shadow accounting, the financial statements of commercial insurance companies which are undertaking in the Slovak Republic, we used the annual reports of individual insurance companies. They are available on the websites of all insurance and provide lot of information about a particular entity[1]. Based on the processed data were divided into insurance groups according to their relation to the use of shadow accounting. In conclusion, we verify the hypothesis that all insurance companies that prepare financial statements in accordance with International Financial Reporting Standards, and apply shadow accounting.

2. SHADOW ACCOUNTING

The notion of shadow accounting is the most illegal activity is carried out in order to manipulate the results, t. j. manipulate financial statements. Uninitiated readers of financial statements to be

[1] TUMPACH, M. – MANOVÁ, E. – MELUCHOVÁ, J. (2014). Relevantnosť národného podnikového finančného výkazníctva v Slovenskej republike z pohľadu veriteľov ako neprivilegovaných používateľov. KEGA MŠVVaŠ 023EU-4/2012. In Ekonomický časopis: časopis pre ekonomickú teóriu, hospodársku politiku, spoločensko-ekonomické prognózovanie = journal for economic theory, economic policy, social and economic forecasting = Journal of economics: journal for economic theory, economic policy, social and economic forecasting. Bratislava: Ekonomický ústav SAV: Prognostický ústav SAV, 2014. ISSN 0013-3035. Roč. 62, č. 5 (2014), s. 495–507.

confused with creative accounting[2]. Shadow accounting has nothing to do with the handling of financial results, but it serves a completely different purpose – used as a form of caution when capturing selected facts arising at the balance sheet date.

The international standard for preparing financial statements IFRS 4 – Insurance Contracts defines shadow accounting as a way of reporting of unrealized gains or losses on assets in the same way as realized gains or losses. The insurer may decide whether its accounting policies adjusted to take advantage of this opportunity. In the definition of shadow accounting under IFRS 4 – Insurance Contracts states: "An insurer may, but is it not required, to change its accounting policies so that a recognized but unrealized gain or loss from asset influenced those measurements in the same way that a realized gain or loss."[3]

The distinction between realized and unrealized gains or losses is that where there is the accounting for valuation differences. To realized gains or losses occur during the accounting period, resulting from valuation differences that are charged to him during the marketing of financial assets in transactions under normal conditions. Unrealized gains or losses arise on the end of the year, due to valuation differences charged to the date on which the financial statements. This means that financial assets held by an undertaking in possession of the date on which the financial statements remeasured to fair value, with valuation differences may arise.

Within acceptable accounting policies based on the standards IFRS 4 Insurance contracts, realized gains or losses on the assets of the insurance company direct impact on pricing:

- Liabilities, or parts thereof, arising from insurance contracts.
- Deferred acquisition costs, which are part of intangible assets.
- Another related intangible assets, such as those assumed liabilities under insurance contracts and insurance assets acquired in a business combination.

If the insurance company decides to shadow accounting, it means that unrealized gains or losses on assets will have the same effect on the valuation of the above items. The related adjustment was recognized in equity if the exhibit in equity and unrealized gains or losses. The most frequent method of applying the principle of shadow accounting is to regulate the establishment of technical provisions life insurance with a corresponding entry in other comprehensive income in the amount of unallocated shares of surpluses arising from valuation differences of financial assets available for sale. Items under the shadow accounting are recognized in the financial statements of insurance companies in the statement of comprehensive income – Other comprehensive income and also in the statement of changes in equity – Other comprehensive income or loss.

The application of shadow accounting helps to faithfully display the profit or loss of each of the related assets or liabilities.[4] The rules for the application of shadow accounting are as follows:

- Unrealized gains or losses on the same conditions as for realized gains or losses.
- Can be applied only to liabilities arising from insurance contracts, investment contracts not.
- Does not apply if the valuation of insurance liabilities is not directly controlled by realized gains or losses on the underlying assets.
- It can not be applied in case of negative valuation differences from financial assets.

3. INANCIAL STATEMENTS OF THE INSURANCE COMPANIES

The analysis of shadow accounting applications include all insurance companies that have their registered office in the Slovak Republic and carries on its insurance activities. The data were

[2] Creative accounting can be characterized as a process of manipulation of accounting data in order to transform the financial accounting statements in a form which should be at the fair presentation of and which they would like those who are responsible. Creative accounting to include the taking of such transactions, which are intended to exhibit the desired financial position, performance and cash flows of the company.

[3] IFRS 4 – Insurance Contracts, Shadow accounting.

[4] MELUCHOVÁ, J. 2009. *Účtovníctvo a vykazovanie poisťovní podľa IFRS*. Bratislava: Iura Edition, 2009. 279 s. ISBN 978-80-8078-278-8.

divided into three groups. The first group consists of insurance companies, which in the annual report have no mention of shadow accounting. The second group we included those undertakings which in the annual report mentioned the possibility of application of shadow accounting, but do not use it. The third group consists of insurance companies which have decided to apply shadow accounting.

Table 1

Insurance companies	**1. group**	**2. group**	**3. group**
The definition of shadow accounting in the annual report	no	yes	yes
Application of shadow accounting	no	no	yes
The number of insurance companies	12	1	3

Source: Own processing

As part of a more detailed analysis, we focused on the insurance companies of the third group, which includes three commercial insurance companies.

The first insurance company in accordance with IFRS 4 Insurance Contracts use the opportunity to adjust their accounting procedures. Unrealized gains or losses on assets recognized in other comprehensive income and affects the amount of insurance liabilities in the same way as if they were implemented. The insurance company therefore by applying the principle of shadow accounting adapted the technical reserves in life insurance in correlation with other comprehensive income in the amount corresponding to the unallocated profit share arising from the price revaluation of securities available for sale (reported also in other comprehensive income).

The analysis of financial statements, we see that insurance reserves increased by an amount representing the unrealized gain on revaluation written to policyholders. The value of comprehensive income has diminished due to the increase of technical reserves, the insurance company which made use of shadow accounting application, as stated in its annual report.

The second insurance company in its annual report that unrealized gains and losses arising from changes in fair value of financial assets available for sale are recognized in equity, including exchange differences and deferred tax. In the case of financial assets available for sale are sold or there is a reduction in its value and the accumulated gains and losses previously recognized in equity are recognized in the income statement. In its annual report an undertaking referred to the paragraphs on shadow accounting, which states that an undertaking in accordance with IFRS 4 Insurance Contracts progresses so that recognized but unrealized revaluation of financial assets affect the measurement of liabilities in the same way as if they were implemented. Corresponding changes in life insurance are recognized in equity, as revaluation of financial assets is also recognized in equity.

The insurance company applying shadow accounting team that created a provision "Deffered profit sharing" (DPS) to which they would been entitled if the unrealized gains became realized. Revaluation differences in equity are therefore lower on the balance sheet recorded provision for DPS, which is part of life insurance. The insurance company also used the shadow accounting of provisions for income shares. It is the DPL margin (deffered profisharing liability), which forms on the future expected income shares. Is derived based on revalued assets held for sale, the change in the amount is recognized through equity, t. j. application of shadow accounting.

The third insurance company in the annual report states that the valuation differences on financial instruments represents the cumulative revaluation of financial assets classified as "held for sale". The insurance company in the annual report provides a definition of shadow accounting as follows: Unrealized gains or losses on investments recognized in other comprehensive income and losses affect the amount of insurance liabilities. For this reason, the insurance company increased its technical reserves in life insurance compared to other comprehensive income and losses of the corresponding shares not allocated to policyholders of unrealized profits arising from the price revaluation of securities available for sale. Application of shadow accounting, we can see the increase of technical reserves in life insurance.

4. CONCLUSIONS

The survey showed that only three insurance companies operating on the Slovak Republic, apply shadow accounting. For the application of shadow accounting, insurers can decide voluntarily in which case the unrealized gain or loss recognized in the same way as a realized gain or loss. As we are in the analysis of annual reports of insurance companies convinced shadow accounting application consists primarily provides for the establishment of technical reserves of life insurance. Its importance lies in the fact that the insurance company helps to show the profit or loss of each of the related assets or liabilities and the separated components obtained this result by that part of the profit, usually profit, which is then used for its distribution. It is therefore reflected in the statement of comprehensive income while the statement of changes in equity. We assume that the application for insurance is a further additional shadow accounting obligations, and therefore most of them decided for its application.

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STOCK VOLATILITY CONSEQUENCES WHEN USING THE EQUITY METHOD IN PARENT COMPANY

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Abstract:
OBJECTIVES AND RESEARCH QUESTIONS
This paper contributes to the recent literature on the information transparency and its impact on stock price volatility. Some authors claim that more disclosure might reduce volatility of the stock price. Since 2005 the use of IFRS is mandatory for listed companies in the EU. In some countries, like Demark, corporate law allows the use of the Equity Method in separate financial statements to measure investments in subsidiaries, which is contrary to IFRS. Lately, IFRS has re-allowed the use of the Equity Method (probably to be approved by the EU soon). This study investigates the stock volatility consequences of using the Equity Method so far in Denmark.

DATA AND METHODS
We hand collected all Danish non-financial and non-insurance companies disclosing consolidated Group and Parent company financial statements. Also, we selected volatility measures by use of the ORBIS-database, and analysed it all together.

RESULTS
Our tests showed lower volatility for the Equity Method using group of companies compared to the non-Equity Method using group of companies, also after controlling for differences in industries and transparency levels in the two groups' companies. Regression analyses confirmed the tendency that Equity Method and lower volatility follows each other. However, we did not find evidence that the specific account "Reserve for net Revaluations under the Equity Method" should be a significant part of the relation.

CONCLUSIONS
It seems that most important for the size of the volatility is the difference between consolidated Group Equity and Parent Equity. However, whether a smaller difference stems from a relatively high part of group income being realised in parent's financial statements, or whether it stems from relatively high part of group income being recognised in subsidiaries by use of the Equity Method seems not to be important.

Keywords: *equity method, financial accounting information, IFRS, volatility*

1. INTRODUCTION

The relationship between accounting information disclosure and stock volatility is stimulating considerable interest across researchers and importantly capital market investors, forecast analysts and management. Volatility is simply defined as a measure of dispersion around the mean or average return of a security. It is a measure of the range of an asset price about its mean level over a fixed amount of time (Abken & Nandi, 1996). It follows that volatility is associated with the variance of an asset price. If a stock is labelled as volatile, then it is plausible that there will be a systematic variance of its mean over time. Conversely, a less volatile stock will have a price that will deviate relatively little over time. There are several reasons why an increase in disclosure of accounting information should reduce stock volatility. First, is the effect on stock volatility arising from the role of accounting information disclosure in mitigating uncertainty? Accounting disclosures may reduce the magnitude of the impact of news about a firm's performance, which would reduce stock price volatility (Lang & Lundholm, 1993; Bushee & Noe, 2000). Second, retrospectively, the market microstructure theory also suggest that by increasing the amount of public information, disclosure is likely to reduce information asymmetries in the market value that result in pronounced price changes in response to changes in demand for the stock (Diamond & Verrecchia, 1991). Finally, disclosure may reduce heterogeneity of beliefs about the true value of the firm. It may thus reduce both the volume traded and the volatility of the stock price.

Conversely, one can also think of a number of reasons why an increase in disclosure might increase stock volatility. First, an increase in disclosure implies that more information is released, which in and of itself might move the price and increase volatility (Ross, 1989). Second, an increase in the disclosure of information relies on sophisticated investors to interpret and put the disclosed information into context. Indeed specific disclosure requirements could provide the markets with more data that might be misconstrued by analysts. More disclosure might thus inject more market volatility (Institute of International Finance, 2003; Shleifer & Vishny, 1997).

Consequently, several plausible theoretical links can be established between accounting information and stock return volatility. However, fundamentally the theory of market efficiency suggests that conditional variance of accounting information is part of the conditional variance of stock returns. Thus if current accounting information is more uncertain, thereby increasing the uncertainty of firm's future cash flows, future stock returns are expected to be more volatile (see as example Krische & Lee, 2000).

As an example of this setting we focus on the use of the equity method in parent companies for recognising income in subsidiaries. Per se the equity method contributes more information since it presents income recognised in the parent when recognised in the subsidiaries, no matter if the parent has realised it by receiving dividends, as cash or as receivables or not. For the parent's shareholders this information is valuable since it shows the total equity of which each shareholder holds a part. Since 2005, the IASB in their appropriate accounting standard, IAS 27, "Consolidated Financial Statements and Accounting for Investments in Subsidiaries", has not permitted the use of the equity method for measurement of investments in subsidiaries in the separate financial statements of the parent.

In some countries, corporate law requires or allows the use of the equity method in separate financial statements to measure investments in subsidiaries which consequently require the companies to present two sets of financial statements to meet the requirement of both IAS 27 and local laws. Recently the IASB has reconsidered this and lately, August 2014, an amendment to IAS 27, "Equity Method in Separate Financial Statements" was issued, allowing the reuse of the equity method on or after 1st January 2016, and even permitting earlier application.

This paper focus on the situation in a European country, Denmark. Here the equity method is now allowed and until 2005 the equity method was mandatory; both in accordance with local GAAP. We will present a short description of the setting, and present some of the derived consequences of the companies' choices. Hereby we will provide relevant input for the understanding and decision as to provide relevant input for the understanding and decision whether to choose using the equity method or not.

The remainder of the paper is structured in the following way. In section 2 we provide the motivation for the hypothesesby examining prior literature. In section 3 we describe the methodology, i.e., the particularities of the Danish dataset and the model development. In section 4 we provide the analyses and results in accordance with the hypotheses. Finally we conclude the paper in section 5.

2. PREVIOUS LITERATURE AND HYPOTHESES DEVELOPMENT

In this section we provide the motivation and literature review as the basis for developing our hypothesis of the relationship between parent company accounting practice and the company's equity volatility.

Previous literature suggests that financial transparency causes several benefits for firms. It is, for example, a means of reducing the cost of capital and increasing the market liquidity (Healy & Palepu, 2001; Lang & Maffett, 2010). Leuz & Verrecchia (2000), analysing the German market, conclude that the information asymmetry declines with the level of disclosure increasing, and it is well documented that information asymmetry influences the market efficiency. Diamond & Verrecchia (1991), Verrecchia (2001) and Zhang (2001) find a negative relationship between the level of information asymmetry and the market efficiency. There is also evidence of a negative relationship between firm disclosure and price volatility, which can be justified by several reasons. First, the information asymmetry decreases with more transparency, allowing stock price volatility smoothing. Second, it firms send regularly information to the market, the impact of new information about its performance will decrease, causing a lower variation of prices. Finally, with more transparency, the firms valuation will be more consensual for the investors, thus the volatility will be reduced. The idea that the quality of disclosure and transparency could diminish the firms' stock price volatility can motivate companies to disclose more information. If firms convey information to the market frequently, the impact of new information about its performance will decrease, causing a lower variation on prices. As disclosure increases, the firm's risk decreases, causing a smooth in the stock price volatility (Coles et al, 1995; Sengupta, 1998; Lee & Chung, 1998; Bushee & Noe, 2000).

According to Kothari (2001) the theoretical literature shows that both mandated and voluntary disclosures reduce information asymmetries among informed and uninformed market participants (see Diamond & Verrecchia, 1991). Reduced information asymmetry lowers (the information asymmetry component of) the cost of capital by shrinking bid-ask spreads, enhancing trading volume, and diminishing stock-return volatility (see Leuz & Verrecchia, 2000). According to Healy & Palepu (2001) on corporate disclosure, reduced information asymmetry has desirable effects on the volatility of security prices.

Past research has associated earnings quality with idiosyncratic return volatility (Rajgopal & Venkatachalam, 2011). This is because uncertainty about future profitability of firms is expected to influence their stock return volatility (Pastor & Veronesi, 2003; Wei & Zhang, 2003), while the quality of earnings has been considered as a proxy for so-called "information risk" or "information uncertainty". This risk refers to the likelihood for firm-specific information important for investor decisions to be of poor quality (Francis et al, 2005), or the degree to which corporate value can be reasonably estimated by the most knowledgeable investors at an acceptable cost (Jiang et al, 2005). In this direction, Rajgopal & Venkatachalam (2011) distinguish between sources of uncertainty about the future profitability of firms i.e. uncertainty about future cash flows from an operating point of view, vs. information about future cash flows stemming from the quality of accounting information, and confirm that lower earnings quality is associated with higher idiosyncratic stock market volatility, even after controlling for volatility in firm operating performance.

Lang & Lundholm (1993) find that, contrary to expectations, disclosure quality is positively associated with stock return volatility. They conjecture that stock return volatility proxies for information asymmetry, which managers are trying to reduce through higher levels of disclosure. Healy et al (1999) report that sustained increases in disclosure quality result in higher levels of institutional ownership, which they cite as a benefit of improving disclosure quality. However, Sias (1999) and Potter (1992) both provide evidence that higher institutional ownership is associated with higher stock return volatility. These latter two findings raise the possibility that the positive association between disclosure quality and stock return volatility found in Lang & Lundholm (1993) is due to an indirect link between disclosure quality and volatility through the attraction of institutional investors.

Bushee & Noe (2000) conclude that in the US market, better disclosure gives good signal to the market, removing the uncertainty caused by the non-liberation of information. Consequently, it results in a reduction of prices volatility. They document a higher volatility in small companies and justify it with a "corporate disclosure". The authors conclude that the smooth behaviour on stock prices decreases the firms' cost of capital. However, they demonstrate that the effect of disclosure on volatility is complex, and may depend on the type investors attracted to the firm. Analysing the financial sector, from 1993 to 2000, Baumann & Nier (2004) found also a negative relationship between disclosure and volatility. Ding et al (2008) analyse the transparency of 63 firms of Baltic States of Estonia, Latvia and Lithuania, and compared them with 58 firms from Nordic countries (Denmark, Finland and Sweden), using two proxies of financial transparency. They further investigate economic consequences (i.e. stock price volatility) of variations in disclosure in the two regions. The main conclusion achieved in the comparison between the two regions is that Baltic countries have a lower level of financial transparency than the Nordic ones. The authors found a negative relationship between transparency and volatility for both measures in the Nordic countries, and for one of the measures in the Baltic sample. Thus, the authors conclude that Baltic investors are only interested in financial information, whereas in Nordic countries, investors give also relevance to information towards governance and ownership.

In 2002 the European Union decided that all listed companies in all member countries should use International Financial Reporting Standards effective from 2005. For groups, IFRS was only mandatory for the companies' consolidated financial statements. For the parent companies in Denmark as well as the other EU member countries, the use of IFRS was optional, leaving it to each member state to decide. When choosing Danish GAAP for the parent company in contrary to choosing IFRS, it was possible to continue using the equity method. In fact, earlier on it was mandatory to use the equity method in Denmark, and consequently some companies felt it was important to keep this accounting practice, presumably due to expectations or demands from their accounting users. However, the majority of the companies decided to switch to IFRS in the parent company as well, making it easier to present financial statements, since only one set of accounting practice would be needed. Further, some presented the argument that the net reported income and value in according to the equity method would almost completely be represented by the differences between parent and consolidated net profit in the income statement and respectively the equity in the balance sheet.

It has been pointed out that the banning of the equity method in the parent company also lead to a reduction of possible recognition and measuring methods from three to two, which everything else being equal would improve the possible comparability of different companies, which is one of the overall framework objectives. And this might contribute to reduction in volatility due to less uncertainty as a result of clearer comparability. However, although this comparability is good for the capital market for seeking and distributing capital and wealth, for the individual share the absence of the equity method introduces some uncertainty in the financial statements. There is simply some disclosure missing which potentially could be of very large importance. This would especially be the case where a relatively big part of the group income in fact is created in the subsidiaries.

The problems are centred where the unrealised part of the earnings insubsidiaries is not separated in notes to the parent company's financial statement showing in detail how income and value is created. Hereby the parent's shareholders lack valuable information telling whether the earning sare real, or "just" an earnings opinion. In Danish GAAP the use of the equity method is accompanied by restrictions on the parent's equity, i.e. partitioning the subsidiary income and equity in *realised* and *non-realised* parts where the *non-realised* part is an equity reserve which among other things cannot be distributed as dividends to parent's shareholders. For a parent company the income from subsidiaries can be paid out to its shareholders only after it has been realised by receiving dividends.

When a company uses the equity method, the difference between the group equity and parent equity will be very small by nature, and the equity reserve note contributes with helpful information. When a company do not use the equity method, the size of the difference between the group equity and parent equity will depend on the size of income in the subsidiaries and it will be larger. Correspondingly as the difference is larger, the greater is also information uncertainty for the parent's shareholders. Therefore the interpretation of the difference is expected to show greater disagreement among market participants and thus greater volatility as a natural consequence.

In accordance with the literature we suggest the two hypotheses below for analyses. The first expresses the usual setting and basic expectation that more disclosure is better, since using the equity method without any doubts lead to additional information when compared with the cost method:

***H_1:** The use of the equity method (and the presence of an equity reserve) is accompanied by smaller volatility.*

Following this basic relation we want to challenge which parts of the accounting practice managed differences between companies using equity method and companies using cost method when recognising income from subsidiaries. We are not sure which parts are the most important, but we assume that the mandatory equity reserve for net revaluation under the equity method resulting from the use of the equity method is recommendable as part of the relation. For our further analyses we suggest the following hypothesis:

> ***H₂:** The equity reserve and the relationships between the two equities, group equity and parent equity, are key variables explaining the size of the volatility.*

3. METHODOLOGY AND RESEARCH DESIGN

In this section we first describe the dataset and the variables applied. Second we present the models used to test the hypotheses developed in section 2. Finally we provide some initial descriptive statistics.

Dataset selection and variables

Since some companies have more than one share group listed on the stock exchange our first task was to select only one of these share groups per company; ideally the most important one, which probably is either the one with the largest number of shares or the one with the largest volume of traded shares during the last year. The selection process can also be followed in Table 1.

Table 1. Sampling the dataset

Explanation	Number of companies
Total number of listed shares on the OMX Copenhagen.	151
Reduction due to companies having shares from more than one share group listed on the stock exchange.	8
Deselection of foreign companies listed on the stock exchange since these companies are not obliged to follow Danish GAAP regulation.	3
Deselection of all financial and insurance companies.	28
Deselection of companies who were not groups and therefore not having the characteristics we are looking for	15
Companies left for analyses	97
The 97 companies can further be grouped:	
Equity Recognition method	**Number of companies**
IFRS GAAP – cost method	80
DK-GAAP – cost method	5
DK-GAAP – equity method	12
Total number of companies	97

Among the rest of the Danish stock market we selected all non-financial and all non-insurance Danish companies. Three foreign companies were deselected, since these companies' parent company was not obliged to follow Danish regulation. We finally deselected all companies not being a group, i.e. the companies not having a parent and one or more subsidiaries and consequently a subsidiary income recognition issue in the parent company; since they do not have the characteristics we were looking for, i.e. consolidated group financial statements and parent financial statements.

Finally, as shown in Table 1 we had 97 companies listed on the Danish stock exchange where use of the equity method is an issue. Concerning the accounting practice for recognition of subsidiaries income the 97 companies are distributed as shown in the last part of Table 1.

Since the use of equity method could be a consequence of being part of a specific business industry, we also selected NACE based industry numbers via ORBIS in order to investigate this in detail. Due to the small total number of companies we divided the industries into nine sectors including familiarly industries. The distribution of the 97 companies into the two groups is shown in Table 2.

For any relevant significance level when using a chi-square test of differences lead to the conclusion of similarity between industry/sector structures for the two groups.

Table 2. Business (industry) differences between Equity Method using and Non-Equity Method using companies

		All companies	**Equity Method using companies**	**Non-Equity Method using companies**
	Business	**Number**	**Number**	**Number**
A	Agriculture, forestry and fishing	1	0	1
B	Manufacturing	47	6	41
C	Electricity, gas, steam and air supply	3	1	2
D	Construction	6	1	5
E	Transportation and storage	4	2	2
F	Information and communication	13	1	12
G	Real estate activities	10	0	10
H	Professional, scientific and technical activi	5	0	5
I	Human, social, arts, recreation and entert	8	1	7
TOTAL	**All Companies**	**97**	**12**	**85**

Assuming same probability distribution and determining the expected frequency in each category by multiplying the category probability by the sample size we test whether $\chi^2 > \chi_p^2$. For chi Square = 9.0702 and 8 degrees of freedom we see no difference for any relevant significance level, i.e. any p below 34 per cent)

In Table 3 below we present our data. For our tests all the accounting data were hand collected. Only the volatility measures and the NACE codes were not since these were provided by the ORBIS database. The basis for the handcollection procedure was the latest parent and group financial statements for each company corresponding to the ORBIS volatility data.

Measuring statistics and Models

From the companies' the financial statements the turnover, net result, total assets, net interest bearing debt and equity were retrieved from the consolidated group financial statements, while the equity, net results and reserve for net revaluation under the equity method were retrieved from the parent's financial statements.

Concerning the financial measures, several "classic" profitability, size and risk oriented measures were calculated. All the following three equity size related key variables are assumed to be important, i.e. the group equity, the parent equity and the equity method related reserve for net revaluation. In accordance with previous literature, all numbers were normalised by the total assets before calculation. They were identified as follows:

Financial ratios calculated and used for our analyses:

a) FLEV, the financial leverage of the company as a relation between net interest bearing debt and equity size (both in the group balance sheet).
b) Size, the inverse of the total assets (in the group balance sheet).
c) EPQ, the relation between the equity and the total assets (both in the group balance sheet).
d) UDEQR, the relation between the reserve for net revaluations under the equity method and the equity size (the first from the parent balance sheet, and the second in the group balance sheet).
e) ParEQPG, the relation between the equity size in the parent company and the equity size in the consolidated group (the first from the parent balance sheet, and the second in the group balance sheet).

In many instances size and risk oriented variables are referred to as independent control variables. However, in our study we consider the following robustness check oriented variable as control variables. They were identified as follows:

Variables for control and robustness checks:

- CIFAR, a transparency level measurement variable, derived similarly as Ding et al (2009).
- Ownership, the distribution of major shareholders.
- Market Value (equity and/or company), the market value of equity respectively the company measures the market valuation of the company observed via the stock market (adjusted for the net interest bearing debt).
- Beta, the beta value measures the actual systematic (market) risk attributed to the company.

Concerning our dependent equity price volatility variables, we rely on the output from ORBIS. According to ORBIS, the equity price volatility is calculated for 10, 30, 50, and 100, and also 360 days. It should be noted that these days are working days. The equity price volatility is calculated as the standard deviation of the logarithm of each individual trading day's equity price movement for last 10, 30, 50, 100 or 360 trading days.

Before we focus on our main and second hypothesis we will challenge our presumption that equity method using companies have smaller volatility than non-equity method using companies. This is the same as referring to the individual volatility for the companies in the two groups and then test whether the average volatility is smaller for the equity method using companies. We challenge the hypothesis by testing the relation for all our different volatility measures.

According to the situation in classic studies, see for example Ding et al (2009), the appropriate way to further analyse the relationship and hereby our second hypothesis is to test by more concrete contribution from financial data and using OLS-regression a number of different combinations of the central key variables and control variables can be modelled and likewise several of the different volatility measures could be chosen. We use the following as our overall "complete" model as background.

$$Vol_i = \beta_0 + \beta_1 EqGroup_i + \beta_2 EqParent_i + \beta_3 EqResv_i + \beta_4 SizeGroup_i + \beta_5 FinLevGroup_i + \beta_6 Controls_i + \zeta_i$$

The controls include robustness check, and transparency and ownership structure variables. But since our focus is the marginal contribution which could be related to the use of the equity method we use as stepwise testing procedure.

In the ***first*** step, we model the classic basic non-nested variables as independent, i.e. size and financial leverage.

In the ***second*** step we introduce our derived and calculated equity method oriented variables, and focus on the extra contribution that these variables introduce.

In the ***third*** step we establish some of our suggested robustness check by use of several control variables. The control variables are seen as robustness check since these could be seen as omitted variables – we compare with other studies in this topic.

Based on classic literature on econometrics and multiple regression analyses we evaluate different models in accordance with Wooldridge (2014), using especially the adjusted R^2 as means to evaluate and compare the different models.

Descriptive statistics

We provide descriptive statistics for the dataset in Table 3. In the table the total means, medians, and standard errors are presented for all the companies as well as for the two relevant groups separately, i.e. the equity method using companies and the non-equity using companies. It is worth noticing that even though only a smaller part of the companies use the equity method, the mean is larger for all the group financials except for the net interest bearing debt. This support the study's relative strength, since the equity using group companies seem to be larger and presumably relatively more influent compared to the non-equity using group companies, as larger companies are often likely to have importance simply by their size. It is also interesting to note the differences in the net interest bearing debt when looking at means, medians and standard errors. It seems fair to conclude that some or a few equity method using companies in practice do not have debts, while some companies in the non-equity method using group companies seem to have relatively much debt. Indeed, this could maybe reflect a conservatism bias.

Table 3. Descriptive Statistics

		All companies			Equity Method using companies			Non-Equity Method using companies		
	Variables	**Mean**	**Standard**	**Median**	**Mean**	**Standard**	**Median**	**Mean**	**Standard**	**Median**
	Volatility measures									
Vol360	Volatility - 360 days	0.4325	0.0278	0.3258	0.3182	0.0382	0.3083	0.4487	0.0309	0.3381
Vol100	Volatility - 100 days	0.4303	0.0269	0.3298	0.3077	0.0456	0.2817	0.4476	0.0297	0.3351
Vol50	Volatility - 50 days	0.4529	0.0286	0.3581	0.3466	0.0646	0.2541	0.4679	0.0311	0.3635
Vol30	Volatility - 30 days	0.4210	0.0338	0.3331	0.3673	0.0515	0.3036	0.4286	0.0379	0.3341
Vol10	Volatility - 10 days	0.3594	0.0306	0.2775	0.2846	0.0302	0.2710	0.3700	0.0346	0.2817
	Group Financial Statements									
TUG	Turnover	8,436	3,476	834	12,796	5,978	4,746	7,821	3,881	550
NIG	Net Result	575	267	9	1,661	1,422	200	422	231	4
TAG	Total Assets	13,086	5,010	1,253	14,402	6,454	6,007	12,900	5,653	1,108
NIBD	Net Interest Bearing Debt	2,346	1,209	169	23	1,355	110	2,673	1,365	176
EQG	Equity	5,202	2,291	450	7,150	3,241	2,194	4,927	2,578	429
	Parent Financial Statements									
EQP	Equity	3,795	1,338	441	7,065	3,214	2,188	3,334	1,457	406
NIP	Net Result	457	220	6	1,637	1,420	193	291	152	3
RevEQ	Reserve for Net Revaluations under the Equity Method	172	108	0	1,388	818	23	n.a.	n.a.	n.a.
	Financial Ratios									
FLEV	Financial Leverage	1.2314	0.4878	0.3867	0.2192	0.1834	0.2499	1.3742	0.5547	0.4255
SIZE	Size	0.0032	0.0007	0.0008	0.0021	0.0015	0.0002	0.0034	0.0007	0.0009
EQP	Equity Part of Total Assets	0.4636	0.0200	0.4594	0.5028	0.0553	0.4236	0.4581	0.0215	0.4645
UDEQR	Undistributable Equity Reserve	0.0159	0.0077	0.0000	0.1284	0.0537	0.0151	0.0000	0.0000	0.0000
ParEQP(	Parent Equity Part of Group Equity	1.3360	0.4062	0.9708	0.9559	0.0201	0.9671	1.3896	0.4636	0.9708

Apart from that is noticeable that no further systematic pattern is observed for the measures.

4. ANALYSES AND RESULTS

In this section we present the results of analyses conforming to our stated hypothesis related to board independence as a corporate governance mechanism driving company performance.

First we want to challenge our first hypothesis that the volatility for equity method using comparison on average is smaller than non-equity using companies. Below in Table 4 we present statistics for our five different volatility measures in three steps:
1: t-test two samples assuming equal variances.
2: F-test two sample for variances.
3: t-test: two samples assuming un equal variance.

In the first step we assume equal variances for the two groups and we perform t-test where the variances are pooled and the P(T<=t) one-tail statistics show no difference, but since the variances in the two groups seem quite different we are not sure the variance are of equal size. In the second step an F-test reveals, P(F<=f) one-tail that the variances are different. Consequently we go back to the t-test now in accordance with step two assuming unequal variances and we are not able to present statistical evidence for the difference in volatility levels: The volatility for equity method users is statistically significantly smaller for all reasonable significance levels. As example, P(T<=t) = 0.00638 is clearly smaller than one per cent.

Table 4. Volatility in Equity Method vs. Non-Equity Method companies

	Volatility measures				
Testvariables and text	**Vol 360**	**Vol 100**	**Vol 50**	**Vol 30**	**Vol 10**
Equity Method using companies					
Mean - Variable 1	0.3182	0.3077	0.3466	0.3673	0.2846
Variance - Variable 1	0.0175	0.0250	0.0500	0.0319	0.0109
Observations - Variable 1	12	12	12	12	12
Non-Equity Method using companies					
Mean - Variable 2	0.4487	0.4476	0.4679	0.4286	0.3700
Variance - Variable 2	0.0813	0.0748	0.0821	0.1221	0.1017
Observations - Variable 2	85	85	85	85	85
t-Test: Two-Sample Assuming Equal Variances					
Pooled Variance	0.0739	0.0690	0.0784	0.1117	0.0912
Hypthesized Mean	0	0	0	0	0
t Stat	-1.5556	-1.7269	-1.4053	-0.5946	-0.9175
P(T<=t) one-tail	0.0616	0.0437	0.0816	0.2767	0.1806
F-Test: Two-Sample for Variances					
Hypthesized Mean	0	0	0	0	0
F Stat	0.2151	0.3339	0.6095	0.2610	0.1075
P(F<=f) one-tail	0.0039	0.0242	0.1841	0.0089	0.0001
t-Test: Two-Sample Assuming Unequal Variances					
Hypthesized Mean	0	0	0	0	0
t Stat	-2.6545	-2.5711	-1.6931	-0.9578	-1.8613
P(T<=t) one-tail	0.0064	0.0087	0.0543	0.1737	0.0344

No matter which volatility measure we use, we get the same result (pattern). Concerning our first hypothesis it is quite clear that "equity" companies do have lower volatility than "cost" companies. The difference is statistical significant and completely as expected.

Concerning the second hypothesis, the most relevant must intuitively be the 360 days volatility measure in each company since his annual measure presumably is directly comparable with the annual financial reports. The use of some of the other volatility measures lead to same conclusions as here. Our above identified relevant variables for explaining the link between volatility and accounting measures could be introduced in numerous ways. In the following Table 5 only a part of these are introduced, but the pattern shown reflects the overall results.

We followed the three step procedure scheduled earlier. In the first step three traditional control variables for risk and size as these are usually defined in similar empirical studies are introduced. See also table 5. In the table we document how the risk and size proxies interact and relate to the volatility measure in column A in Table 5. It seems that the basic model, size and financial leverage is disqualified when the equity ratio is introduced in column B and C in Table 5, since the financial leverage component becomes non-significant but the model becomes better measured by the adjusted R^2 size. The financial leverage contributes, but the coefficient is insignificant (despite sign is as predicted). For this reason, and because financial risk as such to a large extent seems proxied by the equity ratio, we leave out the financial leverage in the next columns. So our non-nested model, volatility is a function of size and risk, which in the following will form our basis. It is noted that the model explains roughly thirty per cent of the variability in the data set.

Table 5. Results from multiple regression analyses

		Models						
	Variable names	**A**	**B**	**C**	**D**	**E**	**F**	**G**
FLEV	***Financial Leverage***	0.244	0.147			0.111		
	(significance)	(0.006)	(0.118)			(0.194)		
SIZE	***Size***	0.480	0.502	0.504	0.865	0.870	0.880	0.879
	(significance)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
EQP	***Equity Part of Total Assets***		-0.237	-0.298	-0.403	-0.367	-0.414	-0.416
	(significance)		(0.013)	(0.001)	(0.000)	(0.000)	(0.000)	(0.000)
UDEQR	***Undistributable Equity Reserve***					0.088	0.010	0.096
	(significance)					(0.367)	(0.897)	(0.329)
ParEQPG	**Parent Equity Part of Group Equity**						-0.524	
	(significance)						(0.000)	
ParEQPGeq	***Parent Equity Part of Group Equity and Zero if Non-Equity***				0.068	-0.176		-0.186
	(significance)				(0.099)	(0.073)		(0.058)
ParEQPGneq	***Parent Equity Part of Group Equity and Zero if Equity***				0.008	-0.520		-0.531
	(significance)				(0.000)	(0.000)		(0.000)
	F-value	18.356	15.068	21.021	18.577	12.924	18.002	15.049
	(significance F-stat)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
	Adjusted R-squared	0.266	0.305	0.294	0.423	0.427	0.415	0.423
	VIF< (highest number stated)	1.001	1.217	1.013	2.131	2.166	2.140	2.155

Notes:
P-values (reported in parentheses) are two-tailed.
Multicollinearity is for all models at a relatively low level since Variance Inflation Factor in all cases are smaller than 2.166

Now adding columns D through G, we deal with our second hypothesis, where we are challenging the link between volatility and key relevant accounting figures the relevancy of the "equity reserves", i.e. the yet accounting wise not realised income in parent but disclosed in the subsidiaries becomes clear.

From an outsiders perspective this should to a large extend also be the same as looking at the difference between equity for the group compared to the equity for the parent, but apparently this is not as clear as the complete recognition and booking in the equity account for "equity reserves" not allowed to pay out to the shareholders. In this last perspective the shareholders are provided some very relevant additional information: this is the yet not realised income, in subsidiaries, but we have recognised it, and as soon as cash dividends are paid from the subsidiaries, the parents' shareholders can also benefit from it.

What really triggers here is that the restricted reserves are uninfluential. It seems that it is more important that the size of the parent equity and the group equity are at about the same level. And the fact that some of the parent equity is restricted when using the equity method in Denmark does not seem to influence the market's effect on the volatility.

No matter how we combine the details, the results of testing the hypothesis lead to the same conclusion: Volatility is smaller for companies using equity than for non-equity using companies on average, and any revaluation reserve coefficient is insignificant.

Possibly the market does not distinguish as a clear cut between the companies where the subsidiaries' income is realised or unrealised at the parent. Apparently it is enough that they are realised at the subsidiary, but it is more important is that the difference between the two equity sizes is small, i.e. that the companies do not have a lot of income in the subsidiaries not yet realised at the parent.

It seems that the volatility grasps the relations between group equity and parent equity since the adjusted R^2 rises from 29 per cent to about 42 per cent; but the accounting practice question and the equity reserve issues seems not really to be taken into account by the market.

One of the consequences of this partly mismatch in relation to the hypothesis could be to question whether it is really the equity method that causes the smaller volatility? Or just the effect, i.e. a smaller difference between the two equity sizes. Whether the equity method is the direct cause to this relatively higher price stability or not, the relationship is striking.

Ending this section, let us just mention that a pooled dataset covering the last few years gave the same results. And that similarly to the industry distribution, the transparency level measure variable, CIFAR, and the ownership structure variables showed no particular different pattern between the two group, for which reason they have been left out here in this description of the analyses.

5. CONCLUSION

This paper contributes to the recent literature on the information transparency and its impact on stock price volatility, since it in accordance with some authors claim and show that more disclosure might reduce volatility of the stock price. As such the paper shows the realities for one smaller capital market, Denmark, where the equity method has been an allowed option since way back, i.e. also before the present considerations in the IASB and EU as to re-allowing the equity method in parent companies' separate financial statements.

The findings presented in the paper are based on a Danish dataset which includes all non-insurance and non-financial companies listed on the Copenhagen Stock exchange presenting consolidated financial statements, being a group and disclosing detailed accounting treatment of subsidiaries. Our tests showed lower volatility for the equity method using group of companies compared to the non-equity method using group of companies, also after controlling for differences in industries and transparency levels in the two groups' companies.

Regression analyses confirmed the tendency that equity method and lower volatility follows each other. However, we did not find evidence that the specific account "*Reserve for net revaluations under the equity method*" should be a significant part of the relation.

It seems that most important for the size of the volatility is the difference between consolidated group equity and parent equity. However, whether a smaller difference stems from a relatively high part of group income being realised in parent's financial statements, or whether it stems from relatively high part of group income being recognised in subsidiaries by use of the equity method seems not to be important.

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HUMAN CAPITAL REPORTING (HCR) AND ITS LINKAGE WITHFINANCIAL PERFORMANCE OF COMPANIES: EVIDENCE FROM ESTONIAN COMPANIES LISTED ON NASDAQ OMX BALTIC

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Abstract: *Human Capital Reporting (HCR) is becoming a matter of great importance and high concern all over the world. Authors suggest that as HCR reporting is regarded as a step towards successful and sustainable business of each company, it should have a direct impact on the company's financial performance. The aim of this research is to establish whether there is a linkage between HCR and financial performance of Estonian companies listed on the Nasdaq OMX Baltic (Tallinn market). Authors used data obtained from the annual financial reports of the companies for the years 2012 and 2013. The authors believe that listed companies tend to be more advanced in their HCR reporting in comparison with non-listed companies. Fifteen companies listed on Tallinn Stock Exchange as of April 2015 were included into research. Authors calculated accounting and market based ratios as the companies' current financial performance measures as well as HCR scoring carried out by the authors which were used to examine the presence of linkage between HCR reporting and companies' financial performance. The results demonstrate that there is no direct relationship between the level of HCR and the financial performance of selected companies.*

Keywords: *Human Capital Reporting, financial performance, market value added, standalone CSR reports, sustainability*

1. INTRODUCTION AND REVIEW OF LITERATURE

Human Capital Reporting (HCR) is becoming a matter of great importance and high concern all over the world largely due to the emergence of the world of Corporate Social Responsibility (CSR).For many years the information on human capital resources has been "neglected in the formal reporting and accountability structures of organizations" Stittle (2004). According to Andrikopoulos (2010) intellectual capital emerged approximately two decades ago "as an alternative paradigm with the ambition to identify, measure, report and manage knowledge assets" (Andrikopoulos, 2010). Abeysekera and Guthrie (2004) in their studies claim that the recent introduction and development of human capital management and accounting has led to the external demand for HCR, which made many companies to be more involved in the non-financial reporting in order to satisfy the requirements of stakeholders.

Today more and more companies claim that human capital is a vital factor of sustainable and successful financial and non-financial performance of the company. Companies tend to allocate more value to human capital and provide information related to strategy and policy of company in this area either through respective disclosures in standalone CSR reports and/or in the form of disclosures in the annual reports. European Union today also encourages companies to provide more and more social and environmental related information in the company's reports. The Directive 2014/95/EU on disclosure of non-financial and diversity information requires companies concerned to disclose in their management report, information on policies, risks and outcomes as regards environmental matters, social and employee aspects, respect for human rights, anticorruption and bribery issues, and diversity in their board of directors. This will provide investors and other stakeholders with a more comprehensive picture of a company's performance. (European Commission) However, these new rules are applied to the companies with more than 500 employees, including listed companies as well as other public-interest entities, such as banks, insurance companies etc. The scope includes approximately 6 000 large companies and groups across the EU (European Commission). Therefore for most of the companies disclosure of non-financial information remains voluntary as there are only few regulatory requirements for such disclosures, which is also confirmed by studies of Wyatt and Frick (2010) and O'Donnell, Kramar and Dyball (2009), stating that across various industries human capital is not reported in a standardised way.

It should also be noted that most companies find CSR and HC reporting too costly and time-consuming with no immediate benefits to the company. However, the authors of the present article are of the opinion that HCR will bring the long-term benefits to the company by ensuring sustainable business, the studies of Wyatt and Frick (2010) also suggest that the benefits to stakeholders of disclosing information relating to human capital investment are most likely to outweigh the costs associated with this procedure. The results of studies of Cormier, Aerts, Ledoux and Magnan (2009) suggest that that efficient governance leads to more social and human capital related information disclosure. Gamerschlag and Moeller (2011) stated that positive effects of HCR can be regarded as one of the key-drivers of corporate reputation and also as an instrument that may affect financial performance of the company and increase its shareholder value (Gamerschlag and Moeller, 2011).

Howeverstill most companies prefer to provide minimum human capital related information, preferring to report on such matters as "training", creating a good work environment for the staff. Vuontisjärvi (2006) investigated the extent of implementation of social reporting practices in general and HCR in particular by the large Finnish companies. The HCR research was based on the content analyses of the annual reports of the companies. The results of the study revealed that CSR reporting was at the early stage and that the most reported aspects were 'training and staff development', 'participation and staff involvement' and 'employee health and well-being'. Nearly one-third made references to their work atmosphere or job satisfaction survey (Vuontisjärvi, 2006).

Nurul and Mir (2014) examined the extent and nature of HCR practices in the corporate annual reports in Bangladesh, India, and Malaysia. The study used content analyses of the annual reports of 60 leading listed companies of Bangladesh, India, and Malaysia. The study revealed the insignificant differences in the extent of reporting among the selected countries. However, the most reported item turned out to be training and staff development.

Numerous analysts and investors use the CSR related disclosures and especially the ones on the human capital in order to evaluate financial performance and sustainability of the company's business activities. According to the research of Abhayawansa and Guthrie (2014) based on the 64 reports of Australian listed companies information on intellectual capital is quite frequently taken into consideration by the analysts, with information on company management being on the most sought after and employee-related information and working environment being less popular. (Abhayawansa and Guthrie 2014).

The study of Sakakibara, Hansson, Yosano, and Kozumi (2010) was based on the survey of 324 financial analysts in Japan. The purpose of the survey was to reveal the analysts' perceptions of intellectual capital related information and it's linkage to the evaluation of companies. The findings of the study suggested that analysts observed that most non-financial measures were value relevant and that value relevance in general is stronger for small firms than large firms. (Sakakibara, Hansson, Yosano and Kozumi, 2010)

Several researchers found that there is a direct relationship between CSR disclosures and financial performance of the companies. The study of Reverte, C. (2012) provided the evidence the impact of the quality of CSR reporting on the cost of equity capital for a sample of Spanish listed firms. The results revealed a negative relationship between CSR disclosure ratings and the cost of equity capital. The study also confirmed that the CSR reporting is a vital tool for communication with stakeholders, but in order to use CSR reporting as a company valuation tool it should be mandatory.

Review of the scientific literature shows that performance measurement is a difficult and complex phenomenon and evaluators lack widely recognized performance measurement methods. There also seems to be no agreement on preferred method of financial performance measurement. Performance measurement methods used by the authors in the present research have been applied to suit researcher's aim and objectives. By using alternative financial performance measurements (such as return on equity, growth in revenues, employee productivity) in the future authors intend to extend the current research.

2. AIM OF THE REASEARCH AND METHODOLOGY

The stated developments have influenced the present research. The aim of this research is to find out whether there is a linkage between HCR and financial performance of Estonian companies listed on the Nasdaq OMX Baltic (Tallinn market). Authors used data obtained from annual financial reports of the companies for the years 2012 and 2013.The authors believe that listed companies tend to be more advanced in HCR reporting in comparison with non-listed companies. Fifteen companies listed in Tallinn Stock Exchange as of April 2015 were included into the research.

For the present research authors have used HCR scoring based on the human capital related information disclosures either in the annual report or in the standalone CSR report for the years 2012 and 2013. Each company was granted one point for the disclosures on the following aspects:

- good modern work conditions, safe and healthy working environment for the staff;
- employee of the year program;
- various events for employees like summer days, briefing day, Christmas party, reception for graduates, sports activities;
- various training courses for employees, induction program for new employees;
- cooperation with various educational institutions;
- guarantees and motivation scheme, including bonus system for employees;
- evaluation programs for employees;
- priority for employees to apply for the vacancies inside the company;
- mentoring, coaching, job shadowing, graduates recognition and support, employee exchange programs, intra-group knowledge sharing, leadership programs;
- employees participation in sponsorship via volunteering and various engagement;
- healthy lifestyle promotion, payment of sports and health allowance.

Calculating accounting and market based ratios as the companies' current financial performance measures, the authors examine the existence of linkage between HCR reporting and companies' financial performance. Return on assets (ROA) is an accounting based indicator of how profitable a company is relative to its total assets (net profit before income tax/average total assets). Calculated by dividing a company's annual income before tax by its average total assets, ROA is displayed as a percentage. Market value added (MVA) is the most popular market based approach to measure performance. MVA is calculated as the market evaluation of the company minus invested capital. Market evaluation of the company is calculated as the number of shares outstanding multiplied by the share market price at the end of the reporting year. Invested capital equals to the amount of the book value of stockholders' equityat the end of the reporting year. Normalized ΔMVA is a specific type of MVA calculation (Eq 1) displayed as a percentage. The intention to use this ratio in research is that these normalized values allow the comparison of corresponding normalized values for different companies in a way that eliminates the effects of certain gross influences. To calculate the normalized ΔMVA:

$$\text{Normalized } \Delta\text{MVAt} = (\text{MVA}_t - MVA_{t-1}) / I_{t-1} \text{ (Eq1), where}$$

MVA_t is MVA at the end of the period 1 (in our example at the end of the year 2013)

MVA_{t-1} is MVA at the end of the period 0 (in our example at the end of the year 2012)

I_{t-1} is the invested capital at the end of the period 0 (in our example at the end of the year 2012)

HC reporting research results of publicly listed companies are presented in Table 1.

Table 1. HC Reporting by the Estonian companies listed at the Nasdaq OMX Baltic

Type of disclosures	2012	2013
Standalone CSR reports	3	3
Annual report	11	12
Absence of HCR related information according to the authors scoring	4	3

Source: author's construction retrievable from annual reports and standalone CSR reports of the selected companies

Recent research indicates that standalone CSR report preparation is not used extensively by the examined companies. Research noted that only three of 15 listed companies prepare standalone CSR reports.

Table 2 presents the ROA ratios of fifteen listed companies (in order of decreasing ratio value). Authors have calculated ROA ratios using data from 2013 annual reports. Table 2 also shows the HCR score based on the author's criteria of the listed companies for 2013.

Table 2. Accounting based performance measure ROA and HCR score for listed companies for the year 2013

Company's core business	ROA (%)	HCR score
Casino operations and hotel management	27.47	5
Production and sale of women's lingerie	23.07	4
Property development, services, construction	12.59	3
Water supply, wastewater collection and treatment	12.18	5
Electrical engineering and telecommunication	7.90	5
Wholesale and resale of goods	6.90	8
Construction	4.80	8
Construction and engineering	4.41	6
Maritime transportation	2.72	8
Food & Beverage	1.64	2
Media and publishing	1.37	0
Clothing retail	1.26	1
Property development	0.38	0
Real estate development	-2.68	0
Production of fibreboards	-4.65	1

Source: authors' construction retrievable from annual 2013 reports

Results shown in the table 2 clearly indicate that companies with the low HCR score of zero or one have also shown the lowest value of ROA. However, in authors' opinion these results could be explained by the random coincidence and therefore must be tested by using the data for the year 2012. Table 3 presents the ROA ratios of fifteen listed companies (in order of decreasing ratio value) and HCR score of the listed companies for the year 2012.

Table 3. Accounting based performance measure ROA and HCR score for listed companies for he year 2012

Company's core business	ROA (%)	HCR score
Production and sale of women's lingerie	28.57	2
Casino operations and hotel management	27.58	6
Water supply, wastewater collection and treatment	13.78	7
Wholesale and resale of goods	8.95	8
Electrical engineering and telecommunication	7.26	5
Clothing retail	3.62	4
Construction	3.55	8
Media and publishing	3.36	0
Maritime transportation	3.02	8
Construction and engineering	1.86	6
Property development	0.71	0
Production of fibreboards	-0.72	0
Food & Beverage	-1.17	2
Real estate development , services, construction	-5.64	0
Property development, services, construction	-40.21	4

Source: authors' construction retrievable from annual 2012 reports

It should be noted that two companies (Production and sale of women's lingerie; Casino operations and hotel management;) with the highest value of ROA (28.57% and 27.58%) are characterized by the HCR score of 2 and 6 respectively. However, three companies (Wholesale and resale of goods; Construction; Maritime transportation) with a highest level of HCR (8) disclosure have low values of ROA (8.95%, 3.55% and 3.02%). Consequently, the higher level of HCR disclosures does not improve the financial performance (as measured by ROA) of the Tallinn stock exchange listed companies.

Table 4. Market based performance measure normalized ΔMVA and the HCR score for listed companies for 2013

Company's core business	Normalized MVA (%)	HCR score
Water supply and wastewater collection and treatment	60.78	5
Property development	46.62	0
Construction	15.41	8
Real estate development	12.02	0
Production of fibreboards	7.85	1
Food & Beverage	4.17	2
Casino operations and hotel management	3.35	5
Media and publishing	3.00	0
Maritime transportation	0.42	8
Wholesale and resale of goods	-2.24	8
Clothing retail	-7.00	1
Production and sale of women's lingerie	-6.78	4
Electrical engineering and telecommunication	-24.00	5
Construction and engineering	-26.42	6
Property development, services, construction	-129.00	3

Source: authors' construction retrievable from annual reports

Table 4 presents the normalized ΔMVA ratios of fifteen listed companies (in order of decreasing ratio value). Authors using data from 2013 annual reports have calculated normalized ΔMVA. Table 4 also shows HCR score of the listed companies for 2013. Note that the first company in Table 4 (Water supply and wastewater collection and treatment) has produced the highest normalized ΔMVA (60.78%) and has a high HCR score of 5. Other companies with high values ofnormalized ΔMVA ratioare characterized by "zero" HCR score (Table 3). However, companies (Property development, services, construction andconstruction and engineering) with a HCRscoreof 3 and 6 respectively have lowest value of normalized ΔMVA (-129% and -26.42%). Consequently, the higher HCR score does not influence financial performance (as measured by MVA) of companies listed in the Tallinn Stock Exchange.

3. CONCLUSIONS

The results of our research clearly indicate that there is no direct linkage between Human Capital Reporting and financial performance of the company as demonstrated by the selection of companies listed on the Nasdaq OMX Baltic. However, in future, authors consider it necessary to broaden the scope of this research and investigate the existence of such linkage among the leading listed European companies.

It can also be concluded that human capital reporting has neither positive nor negative impact on financial results of the business activity of the company. However, it should be mentioned that most companies do not provide detailed human capital related disclosures, which in authors opinion may be explained by the number of facts: the importance and usefulness of HCR is not fully recognized by the companies, companies find no practical implementation for human capital related disclosures, there is no long-term practice of HCR in Estonia, no unanimous opinion on the form and the context of HCR exist and there is no single opinion of who should implement human capital reporting within the company.

It should also be noted that HCR is quite popular in the form of disclosures to annual financial statements as this option is less time and effort-consuming. This may be explained by the fact that more and more information about CSR initiatives are available in Estonia and more CSR-related events are occurring during the last few years.

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ECONOMIC ENTITIES IDENTIFICATION AND THE ROLE OF IFRS

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Abstract: *The aim of paper is to characterize different ways how economic subjects can be identified. The analysis of different concepts of securities markets transparency. Review of the correct and viable identification methods developed by IFRS. Different aspects and approaches to the question of economic subjects´ identification. The security of financial transactions depends on a possibility of their identification. Nowadays, the approach from the point of view of financial stability probably is the most important one on the list of different methods and approaches. Why the LEI – system was set up, what are its main features and its relation to IFRS.The paper is mainly based on international organizations documents.*

Key words: *economic subjects´ identification, financial transactions security, identification methods, LEI system, transparency and non-transparency*

1. INTRODUCTION

The main aim of paper is to characterize different ways how economic subjects should be identified in a transparent way. Transparency is *a condition sine qua non* for unequivocal economic subjects´ identification.

The role of transparency was recently commented by Hans Hoogervorst who stressed that „Our mission is to develop IFRS that bring **transparency, accountability** and **efficiency** to financial markets around the world. Our work serves the public interest by fostering trust, growth and long-term financial stability in the global economy". (Hoogervorst, April 2015) At the occasion of the Paris IFRS Conference 2015 he referred to the significance of the accountability as well. (Hoogervorst, June 2015)

All the three principles are an important part of the present IFRS mission; the whole process of economic subjects´ identification consist s of three stages which are characterized in this Paper.

2. REMARKS ON TRANSPARENCY OF ECONOMIC SUBJECTS IDENTIFICATION

Since a few years, the word "transparency" is quoted almost everywhere at any occasion; many different definitions can be found in literature. This is the reason why the word "transparency" – very often – for many people is more obscure than clear. For this reason, it is useful to find a "conventional" definition accepted in the world of economics and finance. The verbal definition (transparent is everything what is not opaque) does not fit to scientific needs.

For the purpose of my Paper, I propose the elementary features of transparency (related to "information") to be characterized, as follows: (1) a given information should be „clear" in double sense, i. e. firstly, the content of information has to be „understandable", secondly, it has to be unequivocal; (2) information has to be „correct" (and/or „accurate"), (3) information has to be „complete". (Pavlat, 2013, pp. 24–25, 36–39.) In this sense, the existence of transparent information is a starting point of economic subjects´ activity and behaviour, and a starting point of mutual confidence.

Information transparency is not absolute; it is always relative. The question of relativity can be structured into three (disputable) items: 1.Which information is *allowed to be freely issued and distribute*d (i.e. whether information is transparent according to our above definition); 2. Which information is *obligatory*; 3. Which information *should be* (or should not be) transparent. Before any analysis is started, it is advisable to decide which subjects are „information producers“.

Information on financial markets and financial markets infrastructures is produced by market participants – buyers (investors), financial intermediaries (banks, non-banks etc.) and sellers (financial actives owners). Information is disposable for non-professionals as well.

Material contents of information and forms of presentation are different, according to the expected users. Important is the question of information manipulation from the side of direct and/or indirect producers of market information (prices etc.). Manipulated information (one-sided, incorrect or incomplete information) is a very dangerous form which undermines financial markets function.

The issuers of free information can freely address all sorts of potential addressees. It completely depends on the issuers decision, willingness, marketing needs etc. who are the receivers However, there are certain – conventional or legal – limits: the information content must not contradict to the legal, ethical, and/or business rules, banking rules (such as banking secret) included; the so called state interests (secrets) belong to this information type as well. The bulk free information normally is for free; however, quite often only the initial information is payless; its further use (after registration) no more is free. It cannot be expected that this type of information always will be reliable – many kinds of information do not correspond to the above transparency criteria (features).

The second type – obligatory information (related to financial markets and financial markets infrastructures) is defined by laws and sub-laws. In different countries, the scope of this obligation differs: it can be wide or narrow; it can be valid for legal or physical persons, or for both. The state influence is connected with taxes, with the efforts to reduce the criminality, corruption, shadow economics, etc.

The third type of information (according to our classification) lies between both described information types – the free and the obligatory information types. There are three groups of disputable questions: firstly, the compatibility of the issued information with ethics; secondly, the compatibility with professional codes; thirdly, the compatibility with religious codes and religious rules. This question clearly overpasses the economic and financial dimensions: it is closely connected with the existing social order, form and degree of democracy etc. Any decision about a potential compatibility and/or an incompatibility depends on the character of laws, on prevailing public opinion, on the power of government, on corruption and lobbying etc.

3. IFRS MERITS: SETTING UP PRINCIPLES FOR ECONOMIC SUBJECTS IDENTIFICATION

There is no doubt about the fact that every entrepreneurial legal entity has to keep the evidence of all incurred costs to be able to get to know whether some profit was made. This principle exists from the very beginning of the primitive market economy when the owner had to bear all risks. With the existence of big capitalist enterprise, the *accounting* became more complex. With the separation of management from ownership, the practice of financial *reporting* was necessary for two main reasons: on one side, co-owners had to be regularly informed on financial results, and, on the other side, financial results had to be reported to the tax authorities and capital providers in Anglo-Saxon countries. Next logical step was *auditing*, as a way how the reported data were verified; the state r*egulation* of economy gave birth to *monitoring*, as a way how to control the effects of regulatory activities. This is a brief (and very simplified) description of the historical origin of what is called *evidence*.

In different countries where market economy existed, the development of accounting, and of the other parts of which the *evidence* consists, was relatively independent: *ergo* national differences arose. With the process of internationalisation (and globalisation) the lack of comparability began to hinder the development of international trade and payments. This was the reason why the

standardisation (technical, economic, financial, statistical etc.) was becoming more and more important. To-day, numerous international organisations and institutions take care of different forms of standardisation. In the area of evidence (IFRS), a complex structure was gradually created.
There is no doubt that the IFRS standards´ quality plays a significant role in the process of world economic growth. It can be illustrated on the example of the growth of international conglomerates during the 90ties of 20th century. From the point of view of accounting it is necessary to identify the accounting entity. However, the ownership structure of many entities is not transparent enough, as they are composed of many "entities" which also is not easy to identify. This is the reason why questions of consolidated accountancy had to be solved. It was necessary to define the character of relations between the "centre" of a conglomerate and its parts; it was necessary to distinguish the leading entity (which holds the control over other entities) from the controlled entities to be able to calculate the real financial results of a conglomerate.

It is also useful to remind the results of theoretical research on systemic risk which is connected with the "too-big-to-fail" theory": it was proved that – from the point of view of risk – the criterion of "size" is not as important as the criterion of "interconnectedness." The actual national and international regulation of systemically important banks (and/or other financial entities) is based on this result. In turn, parameters for defining "systemically importance" were partially derived from IFRS standards, helping to distinguish manifold relations between different types of entities which are parts of bigger entities.

According to IFRS, six typical forms of inter-entity relations are distinguished: 1.control, 2. joint arrangements with joint control; 3. subsidiaries, 4. joint arrangements, 5. associates, 6. structured entities (former special purpose entities).

In the year 2011, three modified important IFRS Standards were issued – IFRS 10, 11 and 12 which gave new definitions of several of the above mentioned typical forms of business entities. IFRS 10 *Consolidated Financial Statements* include a new definition of *control*, which is used to determine which entities are consolidated. (IFRS 10, 2011) IFRS 11 *Joint Arrangements* describes the accounting for *joint arrangements with joint control*; proportionate consolidation is not permitted for joint ventures (newly defined). (IFRS 11, 2011) IFRS 12 *Disclosure of Interests in Other Entities* includes all of the disclosure requirements for *subsidiaries, joint arrangements, associates, and structured entities.* (IFRS 12, 2011) These new standards which were effective for annual periods beginning on or after 1 January 2013, substantially contributed to the better understanding of different forms of entities.

According to the IFRS Foundation recent analysis of 138 jurisdictions, 130 jurisdictions represent as much as 96% of global GDP. 114 jurisdictions have adopted IFRS; in 114 jurisdiction IFRS was made compulsory for all or most of their publicly accountable companies. (Danjou, 2015, p. 4.) IFRS standards were criticized and several countries still do not recognize them. However, in spite of these criticism which Danjou in 2013 rejected (Danjou, 2013), number of countries which have accepted them, is growing. The world has evolved from a multiplicity of accounting standards to a situation where we speak the same accounting language in much of the world. IFRS and US GAAP, which are the two main sets of Standards, have been brought closer to a large extent. "They will probably co-exist for some time. Not an ideal outcome, but certainly a big improvement for the investor community." (Danjou, 2015, p. 11)

To resume: the above historical development which lead to more transparency and accountability opened the way to a new, more transparent general form of different legal entities´ identification.

4. BASIC IDENTIFICATION CRITERIA

There are many different aspects/approaches to the question of economic subjects´ identification, for example, the approaches from the point of view of a) accounting, b) reporting, c) auditing, d) financial risks management, e) financial stability regulation and monitoring, f) financial criminality, etc.

In practice, these approaches were – to pursue different goals - developed independently; in the past, they were not interconnected. On national level, the reason was simple: the division of labour and/or specialisation of different institutions and organisations the activities of which were not co-ordinated. Nevertheless, on a certain development level, the co-ordination became very important.

The aims of such activities as accounting, auditing, risk managing etc. are not identical. However, at some points, they mutually penetrate. The more general are these aims, the more common they can be; they can be shared by many international organizations. The aim of accounting is not the same as the aim of risk managing, however, both pursue the common goal to improve the economic and financial results of economic entities.

Nowadays, the approach from the point of view of financial stability probably is the most important one on the list of different methods and approaches.

From methodological point of view, it is necessary to set up identification criteria to be able to correctly distinguish different economic subjects (entities). If the identification – according to the demands declared by IFRS – has to be transparent, accountable and efficient, basic criteria have to correspond to these demands. If the economic system is a system of "market economy", the starting-point for any economic subject´s identification is the identification of ownership.

In real economy many forms of ownership exist. Different classifications of ownership forms are available in the literature; for our paper, a survey of views on ownership forms and typology of ownership published by Mike Wahl is fundamental (see: Wahl, 2006).

I propose three basic identification criteria to be used: 1. Ownership structure of the given economic subject; 2. Activities performed by the given subject, 3. Regulation under which the given economic subject is allowed to perform its activities.

Each of these basic criteria corresponds to one of the IFRS principles, i. e. transparency (first criterion), accountability (second criterion) and efficiency (third criterion).

Let us characterize the above criteria more in detail. Any identification of the ownership begins with the question "who owns", i. e. who is the real (not only nominal!) owner of an economic subject. Every taxpayer is formally bound to reveal and declare its identity (under potential penal sanction). However, from the economic point of view, this is only a "starting point" to be able to disclose more important questions, *inter alia,* who really disposes of the property of an economic subject and what are the consequences of its economic power. To be able to answer these crucial questions it is necessary to analyse the interrelations (interconnectedness) of economic subjects, which are normally based on different – legally defined – forms of such interrelations, and the economic power of a subject which it concentrates as a result of its interconnections with partially owned other economic subjects. Practical difficulties connected with an analysis of economic subjects´ interrelation and their economic power is evident; it is a tremendous task for many official authorities.

The second criterion seems to be not as difficult as the first one, but – in fact – this is an illusion. In a modern economic system, there are tremendous numbers of different activities (materialized in products or services). To be able to buy and sell them, the existence of norms and standards is inevitable. This question has to be permanently solved by means of technical and technological normalization and standardisation, organisational, statistical, juridical norms etc. In this respect, IFRS role is indispensable and undisputed.

The third criterion is very complex (sometimes it resembles the "squaring the circle"), however, regulation is an inherent part of every modern economic system. At present, there are three main topics to be permanently solved: firstly, risk management as a tool for reducing all sorts of risk and systemic risks on the first place; secondly, the task to maintain financial stability (not only price stability); thirdly, the necessity to regulate systemically important economic subjects, the default of which could cause disastrous effects for any economic system. The third criterion involves the economic and financial transactions security as well; this is the question of a permanent fight against corruption, money laundering, frauds, etc. which undermine financial stability.

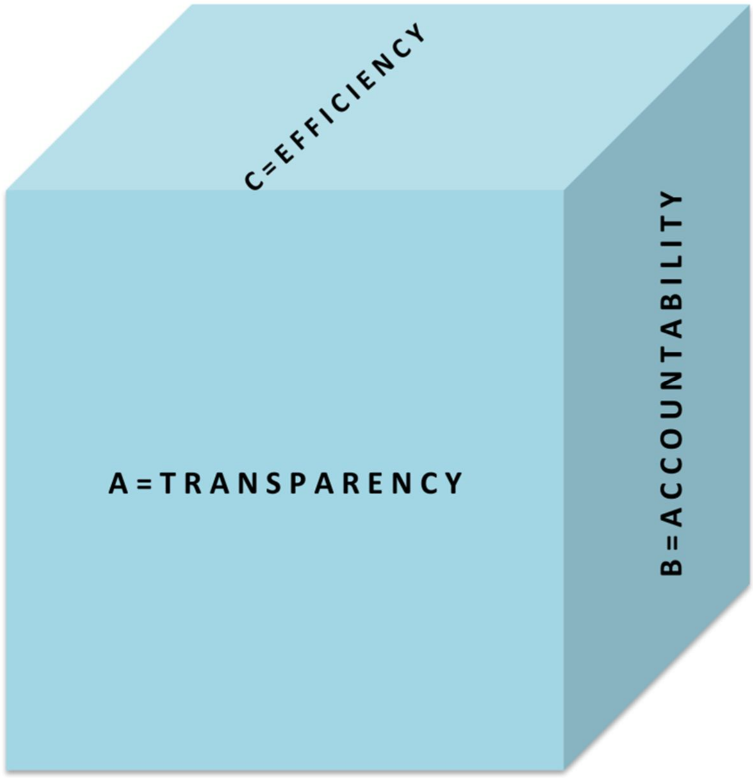

Figure 1. Identification criteria from the ownership optics
Source: Author

Table 1. Common model of identification process

Stage One	Stage Two	Stage Three
identification (according to aim) = transparency	application of regulatory tools/methods/measures = accountability	assessment (results) = efficiency

Source: Author

Applying the above criteria, a common model of economic subjects/entities identification process can be set up. The common model can be applied by all standards setters and regulators with necessary modifications.

5. ON THE ROLE OF THE LEI – SYSTEM

Financial markets are made of a complex and internally richly structured totality of relationships. In addition to common features, the individual market segments have also a variety of specific features by which they differ from each other. These specific features are based on the fact that the individual segments differ with respect to products (investment tools), type and number of participants, different level of transparency, their way of functioning and last but not least also with respect to their meaning. The contemporary financial markets are dynamic; current high volatility of some of their segments (especially of the financial derivatives market) is higher than in the past, which leads to higher risk levels. The financial markets are exposed to various kinds of failures, which may be caused both by different objective reasons and by subjective reasons in the form of undesirable behaviour of market subjects. The globalization process gave birth to global financial markets. Economic subjects´ identification on national levels does not correspond to the global markets transparency any more. Therefore, a universal international identifier is needed; the universal identifier is called "legal entity identifier" (LEI).

Within the system of the global identifier, each “entity” gets its unique identification code, which should contain specific information about this entity. This code is a universal international identification number which replaces the national identification numbers of economic entities.

The identifier is a system for recognizing the contracting parties of financial transactions labelled as "legal entities" and for registration of performed financial transactions. (Beekarry, 2014)

The legal “entity” is a legal person or structure organized in compliance with laws of any legislation. Legal entities also include subjects which are responsible for performing financial transactions or which have the right (according to the given legislature) to independently enter into a legal agreement. The term “legal entity” is defined very broadly: “entity” is understood to be a business, company, owning, partnership or corporation.

From the technical perspective, the LEI identifier is a twenty-digit code issued by local operating units (LOU, see below). By the 31th December 2014, 20 operating LOU issuers (approved by The Regulatory Oversight Committee – ROC) issued these codes for 330.000 “entities” from 189 countries.

The main objective of the LEI identifier implementation is: 1. to ensure greater transparency of legal units; 2. to enable regulators to monitor and reduce systemic risks. (Financial Stability Board Watch, 2014). Along with the decision to construct the *global legal entity identifier*, which was taken at the G-20 summit in 2012 in Los Cabos, Mexico (Cannes Summit Final Declaration, 2011 articles 42 and 44), it was also decided that the implementation of this task will be entrusted to the Financial Stability Board (FSB, June 2012). At present, FSB (which is the follower of the former World Economic Forum) plays a very important role on the field of international financial stability regulation. The LEI system construction is closely related to the regulation of national and international financial stability, particularly to the reduction of systemic risks associated with the existence of large globally systemically significant banks, and to other significant risks especially in the field of trading financial derivatives. (Bottega, Powell, 2011.)

The Financial Stability Board was assigned to construct and put into operation a LEI system in cooperation with other international organizations without the collaboration of which this task would practically not be achievable. In their actions, none of these organizations can work without identification and classification of organizations and institutions operating in the member states, the activity of which it unifies and directs internationally.

Currently, the activity of the Financial Stability Board goes in several main directions, which may be characterized by these brief titles of relevant agendas: 1. Banking regulations; 2. State debt; 3. Derivatives; 4. Administration and management; 5. Taxes; 6. Trade and finances.

Although the LEI agenda is not directly stated in the above mentioned list, it is a *cross-section agenda*, which penetrates (in different degree) practically all above stated sections. The LEI agenda is strongly connected mainly to the topic of systemically significant banks (SIFIs), which is primarily dealt with by the Basel Committee on Banking Supervision (BSBS) which is one of the bodies whose responsibility is to process the necessary principles, rules and standards. Analogically, in the field of financial markets infrastructures (FMIs), the crucial role is played by the International Organization of Securities Commissions (IOSCO) along with the Committee on Payments and Market Infrastructures (CPMI).

The issue of a clear identification of financial and other organizations and institutions is currently one of the keys for the qualitative leap in the international regulation of financial stability as it should ensure – among other things – the comparability of data on financial (and later also other) operating units. At present, bases for more efficient identification of insurance companies and non-bank financial subjects are being created.

The implementation of Global Legal Entity Identifier S\stem (GLEIS) in practice assumes a construction of a relatively complicated organization structure which is necessarily multilevel because it is crucial to connect the “national” level (i.e. national economies of the individual countries) with the “international level” (i.e. terminology of international organizations’ documents labels it as the “global” level in contrast to the “local” level).

The system (GLEIS) is constructed on three levels:
(1) The Regulatory Oversight Committee (ROC) sets global LEI principles and supervises the entire system. This independent committee consists of more than 70 global regulation bodies.
(2) The Central Operating Unit (COU) – is the executive body of ROC; it is a non-profit organization which deals with unifying and implementing of the global standards; it is expected that it will supervise national operating units (LOU).
(3) Local Operating Units (LOU) – register and confirm applications for codes' issuance, they issue LEI codes and store data connected with LEI.

In the Czech Republic, this local level is secured by the Central Securities Depository (Centrální depozitář cenných papírů, a.s.). The ROC Commission approved it as a local operative unit on 6th February 2014.

6. CONCLUSION

The present IFRS Mission aims at transparency, accountability and efficiency of all its efforts on the field of evidence (par.1). This general aim is shared by other national and/or international organizations as well and the aims mutually penetrate. Not only co-operation, but more concentration of separated efforts is needed (par. 2). IFRS activities on the field of standards are very valuable. After the last world economic and financial crisis G-20 governments took a series of important decisions mostly aiming at national and international financial stability. Much already has been achieved, but much more has to be done: national and international financial sectors regulation has to be permanently improved. The leading role – as far as financial stability is concerned – was allotted to the new FSB, the activities of which embrace many questions from the field of IFRS as well.

It is useful to discuss disputable questions concerning the newer terminology such as the meaning of the word “transparency.” By this paper (par.3) the relativity of “transparency” and the importance of finding and defining the best approach to transparency analysis are stressed. Principally three types of transparency are distinguished (a “free” transparency, “obligatory” transparency and a mix of both preceding types); analysis based on this classification should enable to avoid many unnecessary disputes and misunderstandings caused by false understanding and interpretations of the real meaning of the word “transparency”. Proposed transparency criteria correspond to the IFRS aims (par.4). Proposed basic transparency common model shows interconnections between transparency, accountability and efficiency; this approach explains the reasons why IFRS measures should be co-ordinated in the framework of IFRS system and possibly in co-operation with other organizations as well, so that potential overlaps and/or gaps be avoided. The model is followed by a three-stage model of decision process. The necessity to set up a universal model for legal entities identification (the LEI-system) stems from the actual state of globalisation (par.5.). The new system does not replace the other existing identifiers, but – as a universal identifier – it extends the possibilities of partial identifiers.

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ACCOUNTANTS – GRAVEDIGGERS OF DEMOCRACY? HOW UNETHICAL ACCOUNTING PRACTICES INCREASE INEQUALITY AND THE DOWNFALL OF DEMOCRACY

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Abstract: *Even when the results of their work is against the interest of the majority of people accountants often hide behind statements like: I only did my job. This attitude is currently very well documented in the trial against one of the main accountants in the concentration camp Auschwitz. Accounting is not free of values, no matter how much the representatives of the profession like to claim this. No government, no company, no occupation force, no army – no organization whatever it may be can do without accountants, who make sure that the money not only rolls in but that it also is wisely kept score of and invested. History is full of examples on how accountants helped governments and organizations – good and bad from our today's point of view – to thrive and stay in power. The article looks at some historical examples and takes a critical look at the current German position towards Greece. It also evaluates the role of accountants in increasing inequality especially in Western societies and thus undermining democracy. In conclusion it is time that accountants realize that their work has an impact on how we create the life for future generations and that they also individually are ready to take responsibility.*

Keywords: *Auschwitz, democracy, ethical accounting, Greece, inequality, tax avoidance*

"The trouble with Eichmann was precisely that so many were like him, and that the many were neither perverted nor sadistic, that they were, and still are, terribly and terrifyingly normal. From the viewpoint of our legal institutions and of our moral standards of judgment, this normality was much more terrifying than all the atrocities put together, for it implied — as had been said at Nuremberg over and over again by the defendants and their counsels — that this new type of criminal, who is in actual fact *hostis generis humani,* commits his crimes under circumstances that make it well-nigh impossible for him to know or to feel that he is doing wrong." (Arendt, 2006)

We all know the case of SS-Obersturmbannführer Adolf Eichmann. A not very intelligent mediocre civil servant, who was after having joined the SS charged by Heydrich to facilitate and manage the logistics of the holocaust. Hannah Arendt, philosopher and scholar, when observing the trial in Jerusalem was deeply terrified by what she witnessed. She called it "the banality of evil". The inability of people to develop own points of view and behave within limits we in general consider as human. People, who follow every order, no matter how much damage might be the consequence. They profit in terms of money and position, and they never look back or question the order or the power which gives these orders. The story of Eichmann is an example on how relatively unimportant administrators all of a sudden enable major crimes.

In the last months a number of interesting criminal cases have been made public which have an impact on the discussion about the role of accountants in the global economy.

"At 6.30 on the morning of 28 June 2013 – just three months into the reign of Pope Francis – officials of the Guardia di Finanza, the Italian law enforcement agency for financial crime, pulled up in front of a rectory in Palidoro, a quiet seaside town west of Rome. When they rang the bell, the cleric who came sleepily to the door was informed that he was under arrest. A few hours later, wearing a well-cut grey suit, Monsignor Nunzio Scarano was shown into a cell in the Regina Coeli, Rome's most overcrowded prison. Scarano, a suave, handsome priest known for his extravagant lifestyle (his nickname among other priests was Monsignor Cinquecento, My Lord Five Hundred, because of his habit of carrying only €500 banknotes), was head of accounting at the Amministrazione del Patrimonio della Sede Apostolica (APSA) – the body that then managed the Vatican's property holdings and controlled its purchasing and personnel departments." (Vallely, 2015)

The cleric is allegedly responsible for money laundering for mafia organizations, fraud, corruption and other violations of compliance regulations.

Another case, which made it into international headlines, is the case of Oskar Gröning. Gröning, now 94 years old, was the chief accountant in the Auschwitz concentration camp. "He signed up to the Waffen SS and arrived in Auschwitz in 1942. For about two years, Mr Groening allegedly counted money taken from the luggage of murdered Jews and sent it back to SS headquarters in Berlin. He also supervised luggage of prisoners being transported to the camp." (BBC, 2015) Mr. Gröning admits having witnessed the murder of millions of Jews and other prisoners. He didn't take though active part in the killings, and he considers himself therefore innocent. He was convicted to four year of prison, which in his case amounts to a sentence for life.

Looking back into history we find more examples about the power of accountants and financial advisors and how they contributed to shape our societies until today.

Henry VIII. wanted a divorce and he needed money. He didn't care much how this could be achieved as long as he got what he thought he was entitled to. His story also tells us that the accountants might face dangers when they don't comply. The Cardinal Wolsey, who not only acted for more than a decade as the King's trusted advisor, was also responsible for establishing significant changes in the taxation system. But the more interesting figure is his successor Thomas Cromwell. He was the one who as Chancellor of the Exchequer started to introduce the changes that gave Henry what he wanted. As the chief accountant of the kingdom he shaped the British society until today. The religious reforms he introduced gave the power to the King alone, establishing him as the head of the church. This enabled him to confiscate the church assets. He also introduced new taxes and made sure that the payment of these taxes were enforced. Cromwell in the end was not thanked but also executed like many other loyal followers of the king.

We find more evidence of the power of accountants in history, but I want to come back to more recent issues. A 2014 survey of YouGov reveals that most people think that legal tax avoidance is as damaging and wrong as illegal tax evasion. In 2014 an international group of media, The International Consortium of Investigative Journalists (ICIJ) analyzed about 30.000 leaked tax files which at that time only concerned the tiny country Luxemburg. Comparing the GDPs of some European countries we find that Luxemburg with a GDP 103,858.90 in 2012 outnumbers big countries like Germany (GDP 42,597.70) or the UK (GDP 38,648.90). The papers are mainly PricewaterhouseCoopers (PwC) files, one of the largest tax accounting firm worldwide.

"PricewaterhouseCoopers has helped multinational companies obtain at least 548 tax rulings in Luxembourg from 2002 to 2010. These legal secret deals feature complex financial structures designed to create drastic tax reductions. The rulings provide written assurance that companies' tax-saving plans will be viewed favorably by Luxembourg authorities." (ICIJ, 2014) PwC employs about 3000 accountants in the tiny country Luxemburg which has a population of just about 544 000. And the country is not the only place where accountants advise their corporate and wealthy customers on how to minimize taxes. All the big accounting firms play a major role in this for them lucrative business.

While the cases of Eichmann and Gröning are extreme, they illustrate however a certain behavior of people who obviously are not willing and maybe able to consider personal responsibility for their decisions and actions. Especially Eichmann is interesting in this aspect, as he never saw any Jews or other people he distributed and transferred to concentration camps. For him these human beings were just numbers.

And this job description reminds us of contemporary jobs in banking, consulting and accounting. Between these professionals and the people or societies their jobs affect is quite a distance. Which they ironically share with criminals. Stephen Platt in his recent book "Criminal Capital" (Platt, 2015) explains how the financial industry facilitates crime. One of the major interests of a fraudster is to never be connected with whatever shady deals he initiates. While the "masterminds" like Henry VIII outline what they want, the accountants are the one who make it happen. Service providers like PwC or other accounting and consulting firms and also law firms advise their clients on how best to create complex holding structures with company addresses in some tax havens, in countries which have no compliance interests or clear legislation concerning money laundering or other forms of fraud. The legislation very often is not up-to-date, it doesn't really meet anymore the development in financial markets. And ever so often the will to prosecute for whatever political reasons is not there.

Where do the accountants come in here? They are the ones who create the complex structures on their computer systems, simplified they shift the money from account to account. They do what they are told to do for the more or less honorable clients of their companies. It is doubtful that many of them ever ask themselves what impact their work has on the companies, but also ob society in general. They are also – like the criminals – distant, they see numbers but not really people or even the true nature of the accounts they manage.

The behavioral economists have conducted numerous experiments, and we know today that people have a different perspective when dealing with cash than other payment methods like credit cards. Bankers gamble with the money of their clients, but of course never with cash. They just juggle numbers on a computer screen. Which again makes it easier to take excessive risks.

In the war against terrorism prosecutors always try to get hold of the accountants of terrorist organizations. They want to dry out the cash flow, want to prevent terrorists to be able to buy weapons, materials, whatever they need to pursue their activities. When a chief accountant of ISIS for example is killed in an airstrike, it is international media news.

Unfortunately this engagement against terrorists is not so common when dealing with "normal" damaging accountancy. The financial service industry is still open to all sorts of crime facilitation. Many known crimes go on for decades even though they are well known. Governments argue that prosecution is not in the interest of the country, it would damage the country's competitive advantage as business location.

So what accountants and accountant advisors do has after all an important impact on economies. They help companies to avoid paying taxes, while at the same time not only make use of the country's infrastructure, education systems, public transport, telecommunication systems and more – everything a business needs to be able to exist today. These companies are happy to let their employees – the taxpayer – pay for everything. So basically employees pay some sort of entry fee to their jobs. This is at least most of the time legal.

And – coming back to the enabler of the Nazi-regime at the beginning – also their job was absolutely legal based on the Nazi legislation. The question is if this exempts these people from asking their conscience and take personal responsibility for their job related activities. Is it okay to help companies to avoid paying taxes by creating a network of – legal – oblique structures? Is it okay to contribute to the rising inequality in global societies? And what might happen in the end, when the majority of people finally realizes that they are on the losing end of everything?

The example of the Vatican Bank proves that even organizations, which are expected to be based on morals and ethics, which should have and act on a clear understanding of right and wrong, fail as soon as a lot of money is involved. We could argue that this is consistent with the long history of the Catholic Church concerning corruption and crime. But there still is the nagging question, why even high ranking accountants lose all scruples when doing what increases the bank's profits and serves the customers – no matter if these clients are mafia, drug dealing or terrorist organizations.

What seems evident is that also in the European Union we need more compliance and control structures inside organizations but also in the political area. As long as politicians of all camps still consider the crime enabling practices in the financial service and accounting advisor industry as peccadillo, things will probably not improve.

How does all this contribute to the rising inequality in our societies and in the end destruction of democracy? And why is inequality such a problem?

Joseph Stiglitz, renowned economist tells us why the rising inequality is so dangerous: "First, growing inequality is the flip side of something else: shrinking opportunity. Whenever we diminish equality of opportunity, it means that we are not using some of our most valuable assets—our people—in the most productive way possible. Second, many of the distortions that lead to inequality—such as those associated with monopoly power and preferential tax treatment for special interests—undermine the efficiency of the economy. This new inequality goes on to create new distortions, undermining efficiency even further. To give just one example, far too many of our most talented young people, seeing the astronomical rewards, have gone into finance rather than into fields that would lead to a more productive and healthy economy. Third, and perhaps most important, a modern economy requires "collective action"—it needs government to invest in infrastructure, education, and technology." (Stiglitz, 2015)

Stiglitz argues that inequality is a choice. The 1% who own the majority of wealth want it like that. And the political parties comply. So as long as the voters agree why change anything? Why should plutocrats have an interest in a prosperous middle-class for example? "The rich do not exist in a vacuum. They need a functioning society around them to sustain their position. Widely unequal societies do not function efficiently and their economies are neither stable nor sustainable. The evidence from history and from around the modern world is unequivocal: there comes a point when inequality spirals into economic dysfunction for the whole society, and when it does, even the rich pay a steep price." (Stiglitz, 2015) Inequality causes many problems. People are not able any longer to consume, they are no longer able to afford acceptable accommodation and in the end they will realize the injustice of the system. And we have a lot of experience what happens when people start looking for solutions. Most of these attempts are violent like fundamentalism of all kinds or discrimination of minorities, women or as currently in Germany fugitives. The result is a fundamentally unstable society, in which democratic practices vanish. In many European countries current governments represent only about 50% of the population because people don't take part in elections anymore. The group of non-voters is rising as established parties are usually perceived as only representing the upper classes and the corporations and banks.

The German University of Duisburg-Essen has done a research as part of an ILO (International Labor Organization) project on how the household income has developed. They focused on the years from 1992 to 2013. In these years the number of employees has increased by 4 million, while at the same time the number of households in the low-income range also increased from 30% to 35%. The number of lowest income households also increased, from about 10% to 14%. The amount of social welfare payments to people who have jobs has increased tremendously. The main reason for this development is according to the researchers the rising number of part-time and so-called "mini-jobs". The hope is that the government decision to finally introduce minimum wages will change the situation. The development in the job market has decreased the middle-class and contributed essentially to the rising inequality in the country – in spite of the high employment rates. (Roth, 2015)

In Germany, media started to call the political system "post-democracy". It means that democratic discourse about how people want to live, how they want to create and design the future of the country doesn't take place anymore. Chancellor Merkel uses the term "alternativlos (without alternative)" to justify undemocratic decisions that usually are not even presented to the parliament. Even though Germany is currently still somewhat fortunate because the economy is growing, the underlying problems are ever present. The export surplus, the lack of interest to invest in the country, the rising inequality which drives people with full-time jobs into social welfare because the wages are too low – all this creates a climate, which is getting more and more aggressive. The right-wing aggression against fugitives – the mutual outside enemy – seems for many politicians a smoke screen behind which they can hide their real interests.

Robert Reich in his book "Aftershock" (Reich, 2013) writes about the growing anger in politics, or better against politicians and against governments administration and institutions. "The shrillest part of the backlash could be heard in the increasing bitterness and virulence of the nation's politics. During congressional recesses, senators and representatives have been harassed by voters at town meetings that have turned into shouting matches and occasionally become violent; self-described "Tea Partiers" have derided "establishment" Republicans and threatened them with electoral defeat." (Reich, 2013) People feel the injustice in the system, but they don't see the complexity, they want quick fixes. The current success of a bully like Donald Trump illustrates the danger our current democracies are in.

Accountants in general – tax accountants, consultants – usually don't directly take political decisions. Their professional associations though very often take direct influence on laws, rules and regulations as lobbyists. And as lobbyists they usually promote the needs of their clients. On EU level many lobbyists hide behind law firms. This again proves Stephen Platt right, who claims that the main issue when planning to facilitate crimes or other shady deals is distance. Influencing EU politics by lobbyists is an ongoing problem, and the EU register is still not really transparent.

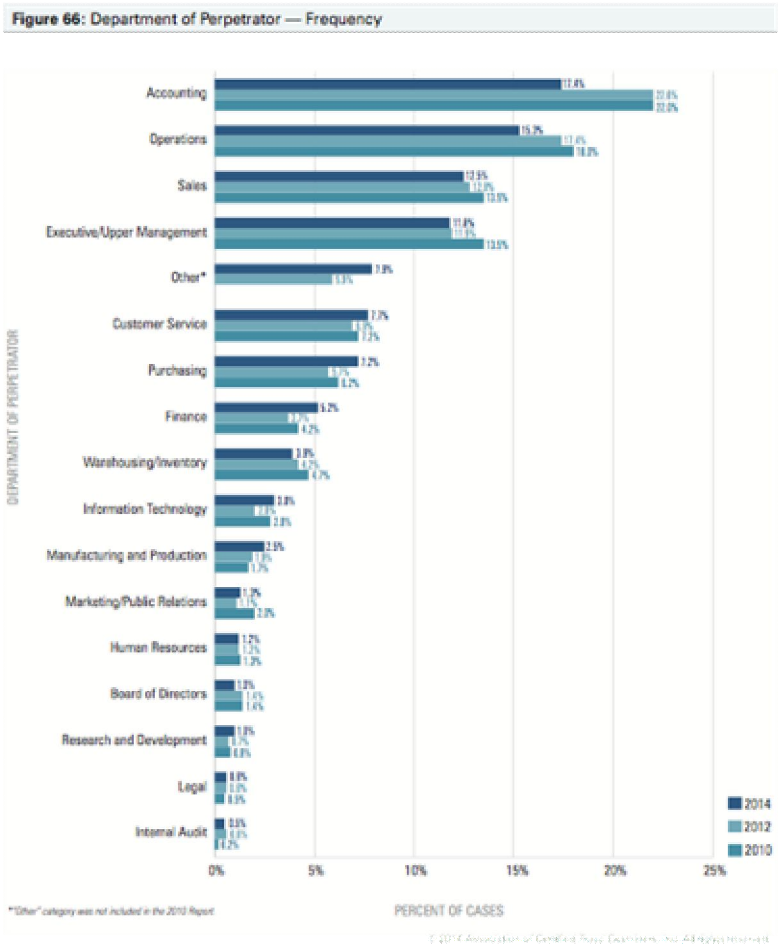
The Institute of Chartered Accountants in England and Wales (ICAEW) has published a "Summary of Bill Lobbying" concerning the Serious Organized Crime Bill: "We were particularly concerned with the lack of a sufficient definition of mens rea within the legislation. As originally drafted, the legislation would have criminalized Chartered Accountants who had no knowledge of the activities of their clients, and who were acting in their minds in good faith. Whilst the legislation was designed broadly as to catch highly trained and knowledgeable professionals, Bill officials were cautious not to amend the Bill to such a level that they would be able to 'play the system'. Our successive representations secured a change in the legislation to include both a subjective and an objective test to establish whether a member knew, or reasonably suspected that a client was engaging in criminal activity. This put the burden of proof in any case on the prosecution to prove that a Chartered Accountant was aware of the conduct of the client, and aware of his actions." (ICAEW, 2015)

Thus in most critical cases the accountants (or lawyers who act as accounting advisors) get a free ticket as they can always claim that they had no knowledge or even suspicion of any criminal activity of their clients.

This brings us back to the issue of taking responsibility for decisions and actions. Currently in most cases the organizations, which get caught in illegal acts pay the fines. The accountants who in the end did the work normally are not bothered as long as they act within the law.

When we ask for taking personal responsibility for our decisions and actions, this of course is not only valid for accountants. But considering the important role they play in setting all these systems that basically operate against the interests of the majority of people, they also need to critical evaluate their jobs and the work they do.

The Association of Certified Fraud Examiners (ACFE, 2014) in their 2014 "Report to the Nations on Occupational Fraud and Abuse" come to the result that Accounting is still the main area for fraud.



All discussions about leadership tend to focus on these terms: integrity, responsibility and accountability. So let's have a brief look at these issues.

The term *accountability* is based on the 14th century term *accounts*, which means just a record of money received and paid as M. David Dealy in his book "Managing by Accountability" points out. "King James II of England was the first to publicly use the term *accountability*. In 1688, he said to his people, "I am accountable for all things that I openly and voluntarily do or say." In short, the word means being answerable for your actions. It does not necessarily mean you will succeed. James lost his throne within a year of making his pledge." (Dealy, 2007 Accountability and responsibility are too often considered the same as guilt and blame. And also this article is not meant to blame accountants for things going wrong. But they, as we all, need to take responsibility and be accountable for their thoughts, decisions and actions. "Accountability is the realization and recognition that I am accountable for the results and outcomes. If accountability becomes my response to a particular situation, then there exists the possibility to right the ship and effectively solve the problem or problems that caused the situation." (Dealy, 2007)

Individual accountability happens on the background of an organization – employer or customer organization. ENRON for example held corporate integrity high in its value statements. Employees traditionally wanted to believe that there is a corporate veil that protects them personally from consequences of their actions. "While the corporation itself may be fined for certain inappropriate actions, individuals would generally not be held accountable for corporate actions. Certainly, an employee may be imprisoned or fined as an individual for actions that were illegal. However, employees and directors often assumed they were protected from personal prosecution for actions that were sanctioned by the corporation." (Kennedy-Glans and Schulz, 2005) Latest since the Nürnberg Trials after WWII we should kn–w that things are not that simple. Defense statements like: "I only followed orders" turned out to be not acceptable anymore. However, employees very often are facing serious conflicts of interest – following the corporate values or giving in to the pressure concerning profitability and stakeholder expectations.

Responsibility means to take action, it does not mean to enter the blame game and run for the victim position. "It's what we do that counts. Not, what we don't do. Taking action and making decisions are an open window into what we are about as people and as leaders. Making decisions defines our value and benchmarks our credibility. Claiming the mantra of accountability means the responsibility to act. ….In order to be an effective, results-oriented leader, accountability and responsibility must be viewed like the wings of an airplane. One without the other is worthless. When working together, great things can happen." (Dealy, 2007) This is important for all members of an organization. Hiding behind corporate practices does not relieve people from being accountable.

So what means integrity, personal and corporate integrity? Yale law professor Stephen Carter defnes integrity as follows: "Integrity requires three steps: (1) *discerning* what is right and what is wrong; (2) *acting* on what you have discerned, even at personal cost; and (3) *saying openly* that you are acting on your understanding of right from wrong." (Carter, 1996) It gets more complex when we think about corporate integrity.

Kennedy-Glans and Schulz note: "Almost every definition of integrity includes reference to characteristics of *probity* and *honesty*, but it is worth noting that while honesty and probity are embodied in integrity, integrity goes beyond honesty to incorporate a wholeness that defines corporate character. Integrity is defined with reference to the state of being *whole*, *complete*, or *undivided*. Some situations are very clear. Specifically, it is illegal for corporations in most economies to pay money under the table to agents who bribe government officials in order to secure advantage in a contract award. However, the consequences of illegal actions in different investment environments around the world are not always black and white. Instead, many situations have interwoven strands of complexity." (Kennedy-Glanz and Schulz, 2005) This on the other hand would require the individual who takes certain decisions to consider his/her moral values and the consequences of these decisions beyond profitability, growth and possible personal gains.

The quest is simple but not easy to achieve. Corporate culture is contagious, as we know from experiments conducted by Behavioral Economists like Dan Ariely. (Gino et al., 2009) So developing not only a corporate culture based on clear values supported by appropriate control systems is essential to encourage employees to play by the book.

How do we learn? Peter Senge in his book "The 5th Discipline" has introduced the concepts of the Learning Organization. He argues that our actions create our reality, and that it is possible to change. His concept is based on systems thinking. We live in a world of increased complexity and interrelationships. Most people are overwhelmed by the challenges they face, not only in their jobs but also in their private lives. So they look for "quick fixes", which mostly don't solve any problems. Learning starts with the individual. Shared visions and values are necessary but they need to follow certain rules: "Vision becomes a living force only when people truly believe they can shape their future. The simple fact is that most managers do not *experience* that they are contributing to creating their current reality. So they don't see how they can contribute towards changing that reality. … But as people in an organization begin to learn *how* existing policies and actions are creating their current reality, a new, more fertile soil for vision develops." (Senge, 1990)

This could be a blueprint for any organization thriving for integrity. And integrity is also what we would expect especially from accountants. These professionals are those who actually do the work, which unfortunately too often contributes to overall undesirable outcomes – for the society, for the company and for the economy. Examples are the rising inequality, injustice and the decline of democracy in the world. Tax avoidance is one of the major issues here. Corporations and wealthy individuals want to use whatever the country they live in provides but they refuse to pay their share. Tax accountants are the ones who find the legal loopholes and the tax havens, where they can "officially" park their profits and income. Undoubted these tax accountants are well paid, so the conflict of interest they are in is difficult to solve. Many issues play a role, not only "do as told" but also loyalty, to the customer, to their own organization but also to their families and social environment. Most accountants are definitely not ruthless criminals. They just tend to forget the broader consequences of their work.

In Germany chancellor Merkel likes to talk about "marktkonforme Demokratie (market based democracy)". This is quite new, as the founders of the Federal Republic of Germany explicitly wanted to create a democratic system based on "Soziale Marktwirtschaft (Social Market Economy)". The "social" is gone, and only the "market" dominates the current society. Democratic debates about the future of the country are as much as possible suppressed. People have less and less the impression to be able to influence anything concerning their own future. Germany is only one example in Europe in which the democratic culture is vanishing. Political decisions are driven by assumed market demands; the country develops into a democracy by name only. Parliamentary control does mostly not exist anymore. The rising number of non-voters is a vote in itself. Unfortunately this development is supported by the profit greed of global corporations, which on the other hand try to avoid any contribution to the country they make business in. All investments go into export; the country starts to fall apart – streets, schools, culture and more. It's a "winner takes it all" mentality.

We all are accountable for our contribution to the whole. Some have more influence on creating our reality, and accountants are among them.

Joseph Stiglitz and Bruce Greenwald in their book "Creating a Learning Society" (Stiglitz, Greenwald, 2014) state that most of the learning occurs inside firms. The idea of Learning Organizations of Peter Senge in the 1990s (Senge, 1990) could be transferred to society as a whole they argue. Professionals need to have support, and if we want to change the overall situation to the better, everybody is crucial. Still as Stiglitz and Greenwald propose, a bigger consensus about learning in societies is needed. They conclude that politics and business need to get together to enable learning societies: "I want to add one point about why stability is important. There is a large amount of tacit information embedded within organizations and within firms, and when firms get destroyed, the networks and flows of information get destroyed along with them. We are about to have a very significant wave of firm destruction because of the crisis. There has always been a Schumpeterian debate about the role of downturns as cleansing out the inefficient firms and the dynamic benefits of killing off the bottom, versus the other side, wherein you also kill a lot of firms who were not at the bottom." (Stiglitz, Greenwald, 2014). Inequality creates instability.

Our Western societies start to drift towards what Robert Reich calls "The Politics of Anger": "I have chosen instead to base my argument on two tangible threats that such inequality poses to everyone—including even the wealthiest and most influential among us. One is economic: Unless America's middle class receives a fair share, it cannot consume nearly what the nation is capable of producing, at least without going deeply into debt. And debt on this scale is unsustainable, as we have seen. The inevitable result is slower economic growth and an economy increasingly susceptible to great booms and terrible busts. The other threat is political: Widening inequality, coupled with a growing perception that big business and Wall Street are in cahoots with big government for the purpose of making the rich even richer, gives fodder to demagogues on the extreme right and the extreme left. They gain power by turning the public's economic anxieties into resentments against particular people and groups. Isolationist and nativist, often racist, and willing to sacrifice overall prosperity for the sake of achieving their ends, such demagogues and the movements they inspire can cause great harm." (Reich, 2013) We should add that the ongoing environmental exploitation of the globe is not only a problem for future generations but it will inevitably lead to conflicts about allocation of resources like water.

To conclude: personal integrity, responsibility and accountability are more important than ever. Especially such influential and distinguished professionals as accountants need to rethink their values, their decisions and their actions. The young generation needs to create the world they want to live in. They need to decide if they want to be ruled by ruthless dictators and their business cronies or if they want a world in which people have and can pursue opportunities. They need to be able to decide how they want to live without fear, in a world in which they can make contributions to the whole and influence political decisions by argument in a true democratic process. The movie about ENRON "The Smartest Guys in The Room" (2005) ends with a statement of one of the former traders. Referring to the ENRON slogan "Ask Why" he said: "I never asked, I probably didn't want to know". We all need to ask why, and we all need to know. And this includes accountants.

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GLOBAL AND LOCAL PERSPECTIVES ON VALUATION OF DOMAIN NAMES

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Abstract: *The second decade of the 21st century is the era of globalization and virtualization, where a successful business conduct needs to embrace and take a full avantage of modern IS/IT. Businesses all over the world are aware about the critical importance of their e-presence, identifiable via e-address, namely the domain name. Here the consensus ends and a heated discussion begins. What are domain names? How significant they are for business? And most importantly, what is their value and how should it be determined? Should the cost, revaluation or other model be employed? There are many burning questions and few settled answers. Scholars as well as businesses all over the world struggle in their attempt to grasp the intangible domain names and tangible measure them. There is an abundance of secondary sources data, such as academic discourses and IFRS and their comments, and suggested methodologic procedures. At the same time, there is a strong drive for intuitive action across nations and industries and interesting primary data can be collected based on direct forensic field observation and case studies. As a matter of fact, the intangible, not consumable and omnipresent nature of domain name and their potential to serve many functions invite an extremely large spectrum of approaches which can be interactively projected while using Comparative instruments and Meta-Analysis. The resulting conclusions bring a new light, partially reconsolidate prima facia contradictory perspectives and invite a further refined search, which should target more dramatically the fast evolving market with domain names and resist academic paralyzation by forced classification attempts. An educated decision about the selection and valuation of a domain name requires an enhanced awareness about global and local perspectives and the ultimate goal of this paper is to contribute to it.*

Keywords: *domain name, intangible assets, Internet, value*

1. INTRODUCTION

Today, the use of information technology in private life, and also business life, is a must, as is the use of the Internet for business conduct, in the EU as well as the rest of the globe. (MacGregor, 2012). A host of functions are attributed to the Internet, its principal services cover the www system, e-mail correspondence, the DNS, online communications, file sharing, social nets services, etc. (MacGregor, 2014b). The World Wide Web (www), the ‘golden key’ of the Internet, allows accessing of computers or other information technology devices set via the hierarchy of domains (Stecher, 1999). TLDs are large domains, each of them is divided further into sub-domains (second level domains), sub-domains of sub-domains (third level domains), until the lowest level, in short, the device is reached. A numeric code has this ultimate device, a code translated into a verbal form, a domain name, and the name of the entire system is the Domain Name System (DNS) (MacGregor, 2014b). The hierarchically built Domain name space, administrative Name servers, and communicative Resolvers make up, technically, the DNS (Bücking, 2010). There is certainly a kinship, a resembelance between a domain name and a trademark, perhaps evern more so to a business billboard (Telec, 2012) and it is tasked with being an address, reference, and marketing instrument (MacGregor, 2013b).

Businesses have, as a key part of their strategy, the various categories of e-shopping (www presentation, e-commerce, integrated services of e-commerce and e-business conduct) and give them the weight and consideration they so richly deserve (Bílková, 2012). In the building up and maintaining of a competitive advantage, as well as, efficiently and effectively, conducting business, the web-side content, together with its verbal address, the domain name, deserve *ne plus ultra* consideration. Very active users of the Internet, as well as being EU experts on the e-comparing of prices, are Czech consumers, thus they easily recognize the primary importance and significance for business of domain names, though not at as high a level as that in, say, Germany (MacGregor, 2013a).

Recognized and well described is the business significance of domain names at the Czech academic level, and the fact that the DNS multi-stakeholder delegated framework can serve as a positive model has also been delineated. Thus, a goodly portion of Czech academia honors the importance of the domain name, and this in re to its pre-dot part (MacGregor, 2013b) as well as its post-dot part (MacGregor, 2013a). At the same time, the dialogue abroad has already moved on to higher levels, including the best ways to determine the value of domain names. News reports and related analysis regarding completed sales of domain names with prices easily in excess of 1 000 000 USD, such as insurance.com or business.com (Branson, 2000) are also recently added to by cases figuring out the exact value of domain names and requiring their reporting as an intangible asset on balance sheets and even of the resultant taxing of their use (Sottilos, 2013). Nevertheless, despite the general acknowledgment of the massive importance of domain names for economics, the valuation of domain names is not a frequent topic in academic press (Tang, 2014). Occasionally, differing methods of determination of values are offered up, such as the first quality price index in re a benchmark for domain names (Lindenthal, 2014) or a general appraisal model (Tang, 2014). Naturally, proponents of these interesting, enriching, and inventive valuation suggestions stress that further empirical studies as well consideration of other data is needed.

Thus, before tackling and exploring secondary sources, such as IFRS, their comemments and academic literature on valuation of domains, and primary sources, such as real-life recent monitoring of completed sales regarding a rather homogenous group of domain names from the leading business, TLD . com, a fundamental question needs to be answered – what is our subject of valuation, i.e. what exactly is a domain name (2.)? Once this clarified, a closer scrutiny of the global perspective on valuation of domain names by IFRS and IAS (3.) and national perspectives on valuation of domain names can be presented (4.). Naturally, the entire analysis culminates in the consecutive following conclusion inviting further search and suggesting so far underestimated or even overlooked criteria and consideration, which can be critical for domain name valuation.

2. DOMAIN NAMES AS A SUBJECT MATTER OF VALUATION

The Internet is a net of nets, which is composed of various nodes and their connection in a tangible as well as intangible form and of which probably the most important is the World Wide Web ("www"). The communication in the www requires an identification of these nodes and it takes a TCP/IP format using e.g. IPv4 or IPv6, a numeric combination, which is translated in a word format through a letter codex called the Uniform Resource Locater ("URL") (MacGregor, 2014a). The conversion between the URL and TCP/IP is performed by the domain name servers operating within the Domain Name System ("DNS") (Köhler, 2011).

Through the hierarchy of domains are organized all e-devices on the Internet, such as computers or smart phones. (Stecher, 1999). An Internet domain is a real-wise and space-wise limited field under the same name, typically composed of a group of computers attached to the Internet (Eberwein, 2012). These groups are hierarchically organized, namely within the virtual Internet space there are large domains, Top Level Domains ("TLDs") and each of them is further divided into domains (second level domains), domains of domains (third level domains), etc.

(MacGregor, 2014a). Each domain represents a sphere of control on the Internet, is linked to devices, typically two servers, and belongs to a TLD. Each domain, regardless of which level, has a name – the domain name. The part before the last dot is creative and original, the part after the last dot is standardized and refers to the particular TLD, i.e. each TLD is identifiable by an abbreviation. TLDs can be either related to a country, ccTLDs, or to a branch or industry, gTLDs, or be newly created by a subject, new gTLDs. The massive majority of domain names belong to a business gTLD par excellence, TLD .com.

Each and every Internet domain is unique and every domain name must be different from every other one, i.e. there cannot be two identical domain names. This technical exclusivity has a social and economic impact. Namely, domains are unique social and commercial assets, because each domain can be registered only once (Eberwein, 2012). Since domains are platforms to which Websites can be attached and generally domain names are perceived as a billboard or shield for Websites, the increase of e-business importance, especially of e-commerce, generates a potential for domain names to be significant for business and to have a value (Burgstaller, 2013). Naturally, this is just a potential and certainly not each domain is, or ever will become, a value per se. Basically, the domain is nothing more than a virtual organized space on the Internet which offers the place for information on a server computer connected to the Internet and which is identified by a domain name as a converted version of an IP-Number. An identification, recognition, referring, marketing and other functions can generally occur only in the case of a related Website with an appropriate content(Köhler, 2011) or the impossibility for others to have such a Website (MacGregor, 2014a).

Certain Czech arch-conservative academics are reluctant to admit the business reality of the 2nd decade of the 21st century, but abroad it is already established beyond any doubt that domains and domain names are value carriers and thus independent property objects, which are intangible, movable and able to be pledged (Eberwein, 2012). A domain and its domain name has a market value determined by a set of factors, which includes the impression capacity, the shorteness, the remembrance, commercial use, attractiveness, end abbreviation indicating the pertinent TLD, conflict potential, easy pronounciation, easy spelling (not typos) etc. (MacGregor, 2014a). Perhaps the strongest influence on the value of a domain name is its real capacity to effectively and efficiently perform many functions and its connotation on the market of the given goods and/or services. The basic function of a domain name is to serve as a user-friendly verbal form to identify an IP resource convertible via the DNS, i.e. the domain name is the name of a domain, the denomination of a (part of a) host server, and the label of each Website (Spindler, 2005). Nevertheless, it would be remiss to stop here. As a matter of fact, a domain name has a potential to perform each and all of the following functions: name function, identification function, association function, information function, advertising function, marketing function, shopping forum function, product function, investment function, criminal function, etc. (MacGregor, 2014a)

There are strong indications that the business with domains will keep growing and it may be expected to lead to the creation of new professions related to the domain name industry, such as domain lawyers or domain appraisers or domain brokers (Eberwein, 2012). Hence, businesses can incidentally or intentionally create valuable domain names for commercialization of their goods and services. Yet the field is not limited to businesses, and considering how easy and cheap it is to register a domain name, speculators often try to predict what a down-the-road attractive domain name might be, register it for less than USD 100, perhaps even less than EUR 10, in the hope to resell it for a six or even seven digit price. Statements presented by Cyberhostpro like "The domain name registration is the most crucial task amongst other tasks for you to conduct your business online" correctly implies that selecting and registering a domain name is the starting point, but overestimates its future impact (MacGregor, 2013a).

In sum, a domain name is not a mere contractually freely set record in a private database, it is rather a kind of a virtual reference, address and real estate (rights) which are close to business or personal names and trademarks (MacGreogr, 2014a). It is a property, or at least an asset, and its value needs to be determined.

3. DOMAIN NAMES VALUE ACCORDING TO IFRS AND IAS

Domain names are treated much alike by both Statements of Financial Accounting Standards ("SFAS") and International Financial Reporting Standards ("IFRS") in definition, as well as in value methodologies (Anson, 2010). According to the majority, if not all, of national laws and international law, and considering international intellectual property conventions and organization from the last 150 years, as well as Intenational Accounting Standards ("IAS"), namely IAS 38, an intangible asset is an asset without a tangible (physical) substance, which can be identified, controlled, used and generate economic benefits. Opinions that domain names are just a worthless identification or economically insignificant Internet address have never prevailed in the cradle of the Internet and DNS, the USA, and fortunately have evaporated from the EU and other countries in the last three decades. Hence, it can be concluded that in 2015, both Americans and non-Americans agree that domain names are intangible assets which are valuated either by the cost model or by the revaluation model (Anson, 2010). Namely, the owner or beneficiary of a domain name has a choice between these two models to calculate the value of his domain name. The cost model is always available, the revaluation model is available if an active market exists and so far we have witnessed a very active domain name market.

The last three decades of the domain name market have demonstrated that domain names are rather volatile and their value, presented as a fair market value ("FMV"), can swiftly oscillate with a large radius, strongly copies economic trends, and is very sensitive and receptive regarding crises. These features can be easily observed on TLD .com, the TLD *par excellence* for business on the national, as well as international level, where e.g. the average price for a domain name decreased by 50% in 2008 as compared to 2007 (Anson, 2010). Another factor influencing the price for which domain names are sold is the reach of search engine optimalization ("SEO") techniques able to progressively replace some of the domain name functions. Nevertheless, these challenges influence, but do not wipe out, the value of domain names and thus are mere factors to be reflected during the domain name valuation process.

IFRS recognize three key approaches – the cost approach, the market approach and the income approach. Due to the described intangible and volatile nature of domain names, it can be suggested that the selection of one of these three approaches should be done based on particular circumstances of the case. Namely, for a freshly registered domain name, the cost approach seems the most appropriate. If the domain name is parked, i.e. not used and no Website is attached to it, then the market approach should be followed. If the domain name is put "to work" and a Website is attached to it, then an income approach should be used. Recently, a variation of the 3rd approach, the income approach, has been thoroughly examined and this led to the so called "Acointegration analysis", which emphasizes information on price trends, historical returns and the fundamental risk related to the Internet domain name (Lindenthal, 2014). Indeed, domain names, especially newly registered, are investment with the possibility of six digit premium.

Obviously, IFRS as well IAS distinguish carefully "what is to be valuated", i.e. whether it is a domain name itself, or if there is a domain name + domain + Website, or even an overlap between other assets from the IP portfolio, e.g. a domain name copying a trademark. Perhaps this is one of the two biggest challenges related to the market approach. Firstly, a big bulk of domain name sales can go unreported and thus the public-at-large does not know about a signficiant number of prices paid for a domain name transfer. Secondly, often the paid price is a "package" price covering much more than only the domain name.

The trio of IFRS 3 accepted key approaches is used to generate even better valuation methodology batteries for domain names, such as a proprietary statistical analysis tool VALMATRIX dealing with four primary drivers of domain name value – TLD (20%), domain name structure (20%), market awareness/recognition (30%), commercial development potential (30%) (Anson, 2010). Each of these four drivers is further in detail developed. At this point, it can be suggested that alternative valuation approaches for intangible assets, such as VALMATRIX, is globally perceived as appropriate, and this especially for scoring.

4. DOMAIN NAME VALUE ACCORDING TO NATIONAL PERSPECTIVES

IFRS 3 and IAS 38, along with their comments and related literature, provide complex but still reconciliable perspectives on the valuation of domain names. This global "standardization" is far from being followed on national, regional and local levels.

It cannot be stressed enough, that each domain name is absolutely unique. If the desired domain name is already registered, there are only three options – to buy it, to register a similar domain in the same TLD (to have a slightly different part before the last dot) or to register a similar domain name in other TLD (to have the same part before the last dot and to have another abbreviation after the last dot). Hence, e.g., if you want business.com, you can either buy it for six digit amount or you can register still free and available business12345.com or business.cz. That is that, no two subjects can own business.com. Logically, domain names considered to be the most attractive and profitable are becoming reare and investors are strating to see the value in the accumulation of a domain name portfolio (Salvador, 2011).

Interestingly, a large majority of gTLDs, and even a significant part of ccTLDs and new gTLDs, are open to subjects from all over the world, and thus each businessperson can decide whether they want to do their e-business while using a "national" domain name from their own ccTLD, e.g. TLD .cz, a "regional" domain name from such a TLD as TLD .eu, or from the most popular gTLD, TLD .com. The registration and maintenance costs are not similar, but, at the same time, it can be suggested that their impact on the business decision is rather low considering the importance of what is at stake. For a businessperson it is probably not critical whether he/she spends on the domain name EUR or USD 10 or 20 annually. Despite the similarity of registration and maintenance fees and the technical identity (each domain name, regarding TLD, performs the e-address role), there is a dramatic difference in the number of domain names registered in the TLDs. The registration and maintenance fee has an insignificant impact and businesses do not seem to get allured by domain names from one TLD more than another TLD .com, simply because of a registration cost difference. It is logical, because this difference does not exceed USD 40. The only exception to this rule is TLD .tk with an extremely open and liberal policy allowing virtually any registration of any domain names for free.

Table 1. Number of domain names registered within TLDs and registration fee

TLD	Number of domain names in millions	Registration fee in USD
. com	119	9
. tk	26	0
. net	15	7
. de	14	10
. org	11	10
. uk	9	7
. cn	8	40
. info	5	4
. ru	5	13
. nl	5	11
. eu	4	5

Source: prepared based on http://research.domaintools.com/statistics/tld-counts/, http://www.domparison.com/domain-name-price-comparison/index.php?want=register&ext=eu, http://www.internetbs.net/

This perspective, shared by the large majority of subjects all over the world, suggests that an extreme caution should be used when considering the cost approach for valuation domain names. Boldly, businesses disregard the differences in registration fees and go e.g. for TLD .com even if this costs more and they have a smaller choice than e.g. in the case of TLD .eu or ccTLDs. The market approach and the income approach seem to be more suitable and there is no doubts that secondary markets, especially for domain names from TLD .com. However, an extreme caution needs to be used considering national differences, because certain nations, laws and cultures are much more likely to assign a value to domain names than others. Another aspect represents the so called re-registration of domain names and factors making one registrant to completely loose interest in a domain name and drop it, while somebody else gladly re-registers it thereafter (Salvador, 2011). This puzzling pattern just confirms that the domain name valuation is very unsettled, the market is not fully transparent and that prevails an asymmetry of information and expectations.

Naturally, the USA as the homeland of the DNS, and a jurisdiction belonging to the common law family, can easily embrace the pragmatic and flexible attitude towards domain names without the need to engage in complex academic discourses whether a domain name is an asset, property, right, or something else. As well, the USA is ready to legislate regarding domain names, see e.g. Anticybersquatting Consumer Protection Act going both for in rem and in personam legislation as well as bills and acts dealing with the Internet governenace. In such an environment, domain names are commercialized items and direct sales as well as auctions are pretty common. The TLD .com Registry, Verisign, Inc., is a successful public corporation traded as NASDAQ, VRSN, S&P 500 Compenent, with headquarters in Reston, Virginia. As a Registry, Verisign allows accredited Registrars to intermediate the registration of new domain names within several TLDs, including TLD .com, and keeps records of any changes. In other words, Verisign sells new domain names from TLD .com and keeps their register and cash annual maintenance fees. Verisign's annual revenue has been around more than USD 800.000 million, since 2012 and annual net income USD 320.000 million. Verisign "sells" to Registrars new domain names for USD 3-6 and Registrars "sell" them to the ultimate Registrants for USD 8 and these ultimate Registrants gladly resell them for six and seven digit number prices in USD. The market is flourishing and the 10 top most expensive reported sales of domain names include exclusively domain names from TLD .com.

Table 2. The list of the world´s top tne most expensive domain names according to the reported sale prices

Domain name	Purchaser	Price in USD	Year
360.com	Qihoo (China)	17 million	2014
Insure.com	QuinStreet	16 million	2009
Sex.com		12–14 million	2006
Fund.com		9.99 million	2008
Porn.com		9.5 million	2007
Fb.com	Facebook (USA)	8.5 million	2010
Business.com		7.5 million	1999
Diamond.com	Ice.com	7.5 million	2006
Beer.com		7 million	2004
Z.com	GM Internet (Japan)	6.8 million	2014
Israel.com		5.88 million	2004
Casino.com		5.55 million	2003
Toys.com	Toys ´R Us (USA)	5.1 million	2009

Source: prepared based on http://most-expensive.com/domain-name and http://www.gotw.com/example-domain-name-prices-2015.htm

Naturally, this is just the tip of the iceberg. First, not all deals are reported and a large public never learns about them. Second, these deals are exceptional and certainly over 99.99% of domain names, even from TLD .com, will never be marketed for six digit numbers. Nevertheless, based on the available information, it appears that the most expensive domain names are from TLD .com, which is managed by a USA corporation, and these domain names were transferred generally between USA companies. A deeper research was done regarding transfer timing and paid prices and no significant patterns were established. Thus, at least the reported "high price" transfer of domain names do not support the hypothesis that domain name prices follow the general economic curve and e.g. go down during crises. However, a closer observation of transfer prices of domain names from TLD .com generates interesting data worthy to be included in the valuation process and generally to be considered for valuation methodology.

The revaluation model and the market approach, perhaps partially overlapping and taking advantage of the income approach, as presented by VALMATRIX, focuses among else on the TLD and domain name structure. The available data regarding transfer prices of domain names from TLD .com, are an excellent source of information regarding the correlation between the price and the length of the domain name. VALMATRIX assigns to the domain name structure a 20% impact on the total price (Anson, 2010). The below USA data regarding sales of domain names in 2014–15, invite considering a higher impact of domain name structure on the price of a domain name, in particular if a very short domain name from TLD .com is to be valuated and the valuation should fit a USA or Chinese perspective. The current data suggests that especially Chinese companies are ready to spend on premium domain names much more than what is their value according to various valuation models and approaches and what would be the maximum price paid by the "rest of the world". At the same time, it needs to be underlined one more time, that allegedly 90% of sales go unreported and so we are truly dealing with the tip of the iceberg. In any case, current important businesses and large corporation, especially from the USA and China, shop on domain names markets and several of these markets have started gaining momentum as a means for investors to make a large profit (Salvador, 2011).

Table 3. The list of the top sales of "short" domain names from TLD .com in 2014–2015

Domain name	Purchaser	Price in USD
360.com	Qihoo (China)	17 million
Z.com	GMO Internet (Japan)	6.8 million
JD.com	B2B (China)	5 million
IG.com	IG Group (UK)	4.7 million
MI.com	Xiaomi (China)	3.6 million
37.com	37.wan.net (China)	2.1 million

Source: prepared based on http://www.gotw.com/example-domain-name-prices-2015.htm

Data in Table 2 and Table 3 invites glossing and comments of not only an academic nature. Manifestly, USD 17 million for a domain name might make one's head go around in circles. So it seems appropriate that the name of the domain that sold for USD 17 million was 360.com. Meanwhile, the State of Michigan, abbreviated MI, came up a winner, with MI.com selling for USD 3.6 million. However, was it College football or the National Football League that inspired the purchaser of FB.com to pay USD 8.5 million for that domain name?

One would expect that MEN.com, which sold for USD 1.3 million would be more valuable than a single letter domain name, but Z.com sold for USD 6.8 million, implying that brevity is preferred. In which case, how much less than MEN.com would WOMEN.com sell for? I suspect the brevity rule would be reversed in this instance, but this opens up a potentially whole new area of research (male vs. female dot com names) beyond the scope of this article. Who is JD? And why did he pay USD 5 million for JD.com? Is it for Juris Doctor, Justice Department, or Joe DiMaggio? And was it some admirer of Richard Nixon, the 37th President, who paid USD 2.1 million for 37.com? These are all, doubtless, questions that we will, each of us, debate over during class lectures. 360.com, by the way, sold in 2015, the others in 2014. Brevity is the soul of wit. As well, in American business, the acronym KISS stands for 'Keep it simple, stupid' as well as 'Keep it short, stupid'. Short and memorable. That seems to support the fact that short domain names rank highly in the list of expensively-sold names. Besides the afore-mentioned MI, FB and 37, there were some other two-digit high-end sales in 2104. KK.com sold for USD 2.4 million, while IG.com nearly doubled that, ringing up a USD 4.7 million sale.

A german perspective on domain names, their use and valuation has been consistently presented in the academic press since 2004. First, it states that for certain industries and branches domain names are more important than for others and the decisive point is how easily and conveniently pertinent products can be commercialized via Internet, i.e. businesses active in communications or financing "need" more domain names (Salomon, 2012) and so are ready to pay more for them. The available primary German and other data confirms this statement. Secondly, it states that more than 50% of domain names are not used and do not lead to a functional www page, at least 90% of domain names do not have the potential to become an asset that can be commercialized and no more than 1% of domain names have the potential to be negotiated for a significant amount of money(Huber 2004, Huber 2010). This rather skeptical attitude towards a value of domain names leads perhaps to a strong inclination to the cost model presented on the pages of the academic press yet does not seem to general patterns observable by German businesses. German inclinations to register domain names and readiness to make appropriate investment is notorious, Germans are the nation No.1 in using their own ccTLD (TLD .de), and the nation No.1 in using regional TLD (TLD .eu). Further, they massively register in TLD .com. However, the biggest challenge to the hypothesis generated by the above mentioned conclusion is what happens after the launching of new gTLDs – the case of TLD .berlin and TLD .wien and their registration fees reaching EUR 40 and being paid by thousands of Germans and Austrians. The available data suggests that German and Austrian domain names are vividly marketed for amounts between EUR 10 000 and 1 000 000. The USA-Asian market, especially the secondary market, with TLD .com domain names is paralled by the German and Austrian market with TLD .de and TLD .at domain names and the only difference is "0", namely TLD .com domain name prices are 10x, perhaps even 100x, higher than TLD .de and TLD .at. The registration cost for TLD .com is lower than for TLD .de or TLD .at, but still there are many "German" domain names sold for much more than the registration fees.

Dutch and British businesses are with their perspective close to German businesses perspectives. However, this is not the case of French businesses which seem to be more frugal and generally reluctant to go for investment in domain names, i.e. they are not ready to pay "a lot for domain names". Czech businesses appear to be even less ready to spend on domain names from TLD .cz. At the same time, according to the Czech Registry of TLD .cz, CZ.Nic, there are 1.2 million domain names registered under TLD .cz. Considering the size of the Czech population, there is at least one domain name per person. And of course, Czechs have in addition domain names from TLD .cz as well domain names from other TLDs, such as TLD .com and TLD .eu. Pursuant to unofficial data available online, the highest reported prices for domain names from TLD .com, were CZK 2 000 000 (EUR 73 000 or EUR 80 000) in 2007 for sperky.cz and in 2008 parfum.cz. Czech auction houses and other platforms offer domain names from TLD .cz for prices up to100x registration fees. Thus, it can be suggested that domain names from TLD .com can be sold for 1 000 000 times their registration costs, from TLD .de or TLD .nl for 10 000 times their registration costs and from TLD .cz for 100 times their registration costs. Perhaps WALMATRIX should assign more weight to TLD criterion. After all, the FMV of a domain name is determined by the market and TLD .com market is pretty exclusive and it seems that business from the entire world, especially from the USA, China, Japan and partially from the EU are ready to pay a "surcharge" to get their desired domain name in TLD .com. It can be argued that they consider other TLDs only if a TLD .com price goes excessively high.

5. CONCLUSION AND FURTHER RESEARCH

The valuation of domain names is a volatile topic and a particular issue per se. Its complexity is due to many factors, such as the intangible, omnipresent and unique nature of each and every domain name plus the capacity of a domain name to perfom many functions. There are various markets, just partially overlapping and the majority of sales, allegedly over 90%, go unreported.

The academic and professional attempt to establish and/or select valuation models and approaches to domain names and globally IFRS 3 and IAS 38 go for the cost model and revaluation model, with three key approaches – the cost approach, the market approach and the income approach. The real life and available data about completed sales demonstrates the deficiencies of IFRS 3 and IAS 38 with respect to domain name valuation and alternative methods and instruments have been suggested WALMATRIX. This appears to be a move in a right direction, but the composition of the 4 criteria and their assigned weight towards the value determination seems to underplay, if not disregard, important regional, national and local perspectives. Boldly, almost all businesses are interested in a domain name from TLD .com, but if the desired domain name is taken they show a dramatically different attitude in how much they are ready to pay a premium and/or go for such a domain name from another TLD. It seems that for businesses in certain branches and industries domain names are more critical than others. It seems that certain nations are ready to spend much more on domain names than other nations, even if their GDP and macro-economic factors are similar. Boldy, banks and IT firms valuate more highly domain names than businesses dealing with more tangible, less generic and more personalized items. Boldly Germans, Dutch and British businesses are ready to spend much more on domain names than the French, Italian, Spanish. In addition, new trends seem to emerge, namely IS/IT Asian firms have recently shown eagerness to pay much more for domain names than what was expected.

Clearly, the valuation of domain names is at the intersection and convential conservative instruments can hardly be sufficient. More research needs to be done while in particular trying to mine and discover semi-reported and unreported data about real prices paid for domain names transferred from certain TLDs, preferably TLD .com. The collection of data should be broader and in addititon to the amount of price and year and domain name, it should be noted the branch/industry of the seller and buyer, their nationality/place of business and nationality/place of business or residence of their customers, the motivation for the purchase of domain names and the planned used of these transferred domain names, etc. Thus, the primary search should entail not only quantitative aspects but as well qualitative. The yield data should be processed comparatively and via Meta-Analysis and the ideal result would be the improvement of WALMATRIX or other aleternative valuation vehicle, while taking advantage of Acointegration analysis and dynamics of domain names primary markets, especially regarding new gTLDs, and secondary markets, especially regarding TLD .com.

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REPORTING OF INVENTORY VALUATION FOR PURPOSES OF THE MANAGEMENT ACCOUNTING

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Abstract: *Objectives of inventory valuation reporting, basic and extended comparison of absorptionand direct costing, different methodology of inventory valuation in a net income statement according to the systems of absorption and direct costing, analysis of sensitivity to change in production and sales during years of economic activity of a company, results of inventory valuation under application of alternative approaches in a net income statement.*

Key words: *inventory valuation, direct costing, absorption costing*

1. INTRODUCTION

A globalisation process in the integrated European Union provides companies with numerous opportunities to extend an existing methodology of evaluations of their economic activities with an implantation of new ways and approaches.

The following **entry presented pays an attention to goals**:
- **To inform economic experts** (practically and theoretically oriented) about a possibility to use different approach by costing methodology according to the different purpose of inventory valuation.
- **To explain detailed steps of an alternative way** of inventory valuation according to the direct costing in comparison with absorption costing according to the accounting system.
- **To refer to different target groups for usage** of reporting under alternative way of inventory valuation.
- **To accent different results of inventory valuation** by applying of different approach of inventory valuation
- **To identify monetary and nonmonetary details** for quality implementation of information system to generate net income statements under both approach parallelly.
- **To emphasize a large usage for applying** of contribution approach of inventory valuation in each company.

2. SUBSTANTIAL DIFFERENCESBETWEEN ABORTION AND DIRECT COSTING

For better understanding of the presented problematic and detailed explanation I am using the following example of income statements prepared under **the absorption and the direct costing approaches (Figure 2. Comparison of Absorption and Direct Costing)** according to the input data of ABC Company (Morse and Hartgraves, 2015; Garrison, 2014; Vanderbeckand Mitchell, 2015; Tóth, 2010):

[1] The contribution is processed as one of outputs of the research projects VEGA No. 1/0784/15 (50%) and VEGA No. 1/0294/13 (50%).

INPUT DATA OF ABC COMPANY (in EUR)		
Beginning inventory in units		0
Units produced		6,000
Units sold		5,000
Final inventory in units		1,000
Selling price per units		20
Selling and administrative expenses:		
Variable costs per unit		3
Fixed per year		10,000
Cost of a product unit	**Absorption costing**	**Direct costing**
Direct materials	2	2
Direct labour	4	4
Variable overhead	1	1
Fixed overhead (30,000 EUR/6,000 units)	5	/
Total cost per unit	**12**	**7**

Figure 1. Input Data of ABC Company

Several **basic points of detections** can be deducted from following income statements:

COMPARISON OF ABSORPTION AND DIRECT COSTING (in EUR)		
ABSORPTION COSTING		
Sales (5,000 units x 20 EUR)		100,000
Cost of goods sold:		
Beginning inventory	0	
Cost of goods manufactured (6,000 units x 12 EUR)	72,000	
Goods available for sale	72,000	
Less endinginventory (1,000 units x 12 EUR)	12,000	60,000
Gross margin		***40,000***
Less selling and administrative expenses (15,000 EUR total variable + 10,000 EUR fixed)		25,000
Net income		**15,000**
DIRECT COSTING		
Sales (5,000 units x 20 EUR)		100,000
Less variable expenses:		
Variable cost of goods sold:		
Starting inventory	0	
Variable manufacturing cost (6,000 units x 7 EUR)	42,000	
Goods available for sale	42,000	
Less endinginventory (1,000 units x 7 EUR)	7,000	
Variable cost of goods sold:	35,000	
Variable selling and administrative expenses (5,000 units x 3 EUR)	15,000	50,000
Contribution margin		***50,000***
Less fixed costs:		
Fixed overhead costs	30,000	
Fixed selling and administrative expenses	10,000	40,000
Net income		**10,000**
Legend: *Note the difference in final inventories. Fixed overhead costs at 5 EUR per unit is included under the absorption approach. This explains the difference in final inventory and the net income (1,000 units x 5 EUR = 5,000 EUR)*		

Figure 2. Comparison of Absorption and Direct Costing

a. **Under the absorption costing method**, it is possible to defer a portion of the fixed overhead costs of the current period to future periods trough the inventory account – known as **fixed overhead costs deferred in inventory.** This difference can be explained as follows: Within the current period ABC Company which produced 6,000 units but sold only 5,000 units, thus leaving 1,000 units in the final inventory. Under the absorption costing method each produced unit was assigned 5 EUR in fixed overhead cost attached to it or a total of 5,000 for the 1,000 units involved. **This amount of fixed overhead costs of the current period has thereby been deferred in inventory to the next period when (in a positive case) these units will be taken out of inventory and sold**. The deferral of fixed overhead cost which is being discussed can be seen clearly by analysing the 12,000 EUR of final inventory figure under the absorption costing method:

Variable manufacturing cost:	1,000 units x 7 EUR	7,000 EUR
Fixed overhead costs:	1,000 units x 5 EUR	5,000 EUR
Total inventory value		**12,000 EUR**

In summary of the 30,000 in fixed overhead costs incurred during the period, only 25,000 EUR (5,000 units sold x 5 EUR) have been included in costs of goods sold. The remaining 5,000 (1,000 units not sold x 5 EUR) have been deferred in inventory until the next period.

b. **Under the direct costing method** the entire 30,000 EUR in fixed overhead costs have been treated as an expense of current period.

c. **The final inventory figure** under the direct costing method is 5,000 EUR **lower than under the absorption costing method**. The reason is that under direct costing only the variable manufacturing costs have been added to units of product and therefore included in inventory:

variable manufacturing costs: 1,000 units x 7 EUR = 7,000 EUR

The 5,000 EUR difference in final inventories explains the difference in net income reported between two costing methods. Net income is 5,000 EUR **higher** under absorption costing as explained above. 5,000 of fixed overhead costs have been deferred in inventory until the next period under that costing method.

d. **The absorption costing method makes no distinction between fixed and variable costs** – it is not well suited for Cost-Volume-Profit (CVP) computations and analysis which we have emphasized as being important to good planning and control. In order to generate data for CVP analysis, it would be necessary to spend considerable time reworking and reclassifying the absorption statement.

e. **The direct costing approach** to costing units of products blends properly **with the contribution approach to the income statement** since both concepts are based on the idea of classifying cost by behaviour. The direct costing data in **Figure 2. Comparison of Abortion and Direct Costing** could be used immediately in CVP computation.

3. DETAILEDCOMPARISON IN STRUCTURE OFSELECTED INCOME DATA

In the next step I am focusing on the detailed impacts of inventory valuation on the extended comparison of income data **(Figure 3. Absorption versus Direct Costing – Extended Income Data)**:

ABSORPTION VERSUS DIRECT COSTING – EXTENDED INCOME DATA (in EUR)				
Basic data				
Sales price per unit				**20**
Variable manufacturing costs per unit (direct material, direct labour, variable overhead)				**10**
Fixed manufacturing overhead costs				**150,000**
Costs of producing one product unit				
Under direct costing				
Variable manufacturing costs				**11**
Under absorption costing				
Variable manufacturing costs				**11**
Fixed overhead costs (bases on a normal production volume of 25,000 units per year – 150,000 EUR/25,000)				**6**
Total absorption costs				**17**
	Year 1	**Year 2**	**Year 3**	**∑ Years**
Opening inventory in units	0	0	5,000	0
Units produced during the year	25,000	25,000	25,000	75,000
Units sold during the year	25,000	20,000	30,000	75,000
Final inventory in units	0	5,000	0	0
Selling and administrative expenses – all fixed and each year				30,000
DIRECT COSTING				
Sales	500,000	400,000	600,000	1,500,000
Less variable expenses*	275,000	220,000	330,000	825,000
Contribution margin	***225,000***	***180,000***	***270,000***	***675,000***
Less fixed expenses:				
Manufacturing overhead	150,000	150,000	150,000	450,000
Selling and administrative expenses	30,000	30,000	30,000	90,000
Total fixed expenses	180,000	180,000	180,000	450,000
Net income	**45,000**	**0**	**90,000**	**135,000**
ABSORPTION COSTING				
Sales	500,000	400,000	600,000	1,500,000
Opening inventory	0	0	85,000	0
Add cost of goods manufactured**	425,000	425,000	425,000	1,275,000
Goods available for sale	425,000	425,000	510,000	1,275,000
Less ending inventory***	0	0	85,000	0
Cost of goods sold	425,000	340,000	510,000	1,275,000
Gross margin	***500,000***	***400,000***	***600,000***	***1,500,000***
Less selling and administrative expenses	30,000	30,000	30,000	90,000
Net income	**45,000**	**30,000**	**60,000**	**135,000**
*Year 1: 25,000 units sold x 11 EUR =275,000 EUR Year 2: 20,000 units sold x 11 EUR =220,000 EUR Year 3: 30,000 units sold x 11 EUR =330,000 EUR **25,000 unit produced x 17 EUR = 425,000 EUR ***5,000 unit in inventory x 17 EUR = 85,000 EUR				

Figure 3. Absorption versus Direct Costing – Extended Income Data

The generalization of basic impacts of inventory valuation under absorption and direct costing (Morse and Hartgraves, 2015; Horngren, Datar and Rajan, 2014; Teplická, 2011; Matušovič, 2013; Tóth, 2010):

a. **When production and sales are equal** – **the same net income** will be realized regardless of whether absorption or direct costing is being used (see year 1 **Figure 3**). The reason is that when production and sales are equal there is **no change for fixed overhead costs to be deferred in inventory or released from inventory under absorption costin**g.

b. **When production exceeds sales – the net income reported under absorption costing will generally by greater** than the net income reported under direct costing (see year 2 **Figure 3**). The reason is that **when more isproduced than is sold, part of the fixed overhead costs of current period are deferred in inventory until the next period under absorption costing**, as discussed earlier. In year 2 for example 30,000 EUR of fixed overhead costs of year 2 under absorption costing that is associated with **unit sold** is charged against income for that year. Under direct costing all of fixed overhead costs of year 2 have been charged immediately against income as a period costs. As a result the net income for year 2 under direct costing is 30,000 EUR **lower** than it is under absorption costing. **Figure 4. Reconciliation of Direct Costing and Absorption Costing – Net Income Data** contains a reconciliation of direct costing and absorption costing net income figure.

c. **When sales exceed production – the net income reported under absorption costing approach will generally be less** than under direct costing approach (see year 3 **Figure 3**). The reason is that when more is sold than is produced inventories are drawn down and fixed overhead costs that were previously deferred in inventory under absorption costing are released and charged against income (known as **fixed overhead costs released from inventory**) – overhead fixed cost released from inventory). In year 3 for example the 30,000 EUR in fixed overhead cost deferred in inventory under the absorption approach from year 2 to year 3 is released from inventory through the sales process and charged against income. As a result the costs of goods sold for year 3 contains not only of the fixed overhead costs for year 3 (since all that was produced in year 3 was sold in year 3) but 30,000 EUR of fixed overhead cost from year 2 as well. By contract under direct costing only the fixed overhead costs of year 3 have been charged against year 3. The result is that net income under direct costing is 30,000 EUR **higher** than it is under absorption costing. **Figure 4. Reconciliation of Direct Costing and Absorption Costing – Net Income Data** contains a reconciliation of direct costing and absorption costing net income figure.

d. **Over an extended period of time – the net income figures reported under absorption method and direct costing are the same.** The reason is that the long run sales can't exceed production nor can production much exceed sales. The shorter the time period is the more the net income figures will tend to vary.

RECONCILIATION OF DIRECT COSTING AND ABSORPTION COSTING – NET INCOME DATA (in EUR)			
	Year 1	**Year 2**	**Year 3**
Direct costing net income	45,000	0	90,000
Add fixed overhead costs deferred in inventory under absorption costing (5,000 units x 6 EUR per unit)	/	30,000	/
Deduct fixed overhead costs released from inventory under absorption costing (5,000 units x 6 EUR per unit)	/	/	-30,000
Absorption costing net income	45,000	30,000	60,000

Figure 4. Reconciliation of Direct Costing and Absorption Costing – Net Income Data

4. DISPOSITION OF PERMANENT CHANGESIN PRODUCTION AND SALES

This part explains an impact of inventory valuation in reverse situation from that previous presented in **Figure 3. Absorption versus Direct Costing – Extended Income Data** by stable level of a production and fluctuating amount of sales during 3 years. An impact of inventory valuation by fluctuating level of production and stable amount of sales during 3 years is visible in **Figure 5. Sensitivity to Change in Production and** Sales (Morse and Hartgraves, 2015; Horngren, Datar and Rajan, 2014; Potkány and Hajduková, 2010; Rybárová, 2013; Teplická, 2011):

a. **Direct costing – net income is not affected by changes in production under direct costing.** Notice (see **Figure 5.**) that net income is the same for all three years under the direct costing approach although production exceeds sales in one year and is less than sales in another year => **the only thing that can affect net income under direct costing is a change in sales – a change in production has no impact when direct costing is in use.**

b. **Absorption costing – net income is affected by changes in production when production costing is in use**:
   - Net income (see Figure 5.) under the absorption approach goes up in year 2 in response to the increase in production for that year and then goes down in year 3 in response to the drop in production for that year. Note particularly that net income goes up and down between these two years **even though the same number of units is sold each year**. The reason for this effect can be traced to the shifting of fixed overhead cost between periods under the absorption.
   - Next it is a question **how a shifting of fixed overhead cost affects the net income development** (see Figure 5.). A production exceeds sales in year 2 thereby causing 10,000 units to be carried forward as inventory to year 3. Each unit produced during year 2 has 6 EUR in fixed overhead costs attached to it. Therefore 60,000 EUR (10,000 units x 6 EUR) of the fixed overhead costs of year 2 are not charged against that year but rather are added to the inventory account (along with the variable costs). As a result the net income of year 2 rises sharply even though the same number of units is sold in year 2 as in the other years.
   - **The reverse effect occurs in year 3.** Since sales exceed production in year 3 that year is forced to cover all of its own fixed overhead costs as well as the fixed overhead costs carried forward in inventory from year 2. The result is a substantial drop in net income during year 3 although as we have noted the same number of units in sold in that year as in the other years.

c. **As a prevention solution of imbalance between production and sales** (by under – or overpplied overhead) there exists a way to avoid the problems entirely – **to use normalized overhead rates and to place any under – or overppliedoverhead in a balance sheet clearing account of some type.**

SENSITIVITY TO CHANGES IN PRODUCTION AND SALES				
Basic data (in EUR)				
Sales price per unit				**20**
Variable manufacturing costs per unit				**10**
Fixed manufacturing overhead costs				**300,000**
Selling and administrative expenses (all assumed for simplicity to be fixed)				**210,000**
		Year 1	**Year 2**	**Year 3**
Number of unit produced		40,000	50,000	30,000
Number of unit sold		40,000	40,000	40,000
Cost of producing one unit:				
Under direct costing (variable manufacturing costs only)		10,000	10,000	10,000
Under absorption costing:				
Variable manufacturing costs		10,000	10,000	10,000
Fixed overhead costs (300,000 EUR total spread in each year over the number of units produced)		7.50	6.00	10.00
Total costs per unit		**17.5**	**16.00**	**20.00**
DIRECT COSTING				
Sales (40,000 units)		1,000,000	1,000,000	1,000,000
Less variable expenses (40,000 units)		400,000	400,000	400,000
Contribution margin	600,000	600,000		600,000
Less fixed expenses:				
Manufacturing overhead	300,000	300,000		300,000
Selling and administrative expenses	210,000	210,000		210,000
Total fixed expenses	510,000	510,000		510,000
Net income	**90,00090,000**			**90,000**
ABSORPTION COSTING				
Sales (40,000 units)		1,000,000	1,000,000	1,000,000
Opening inventory		0	0	160,000
Add costs of good manufactured*		700,000	800,000	600,000
Goods available for sale700,000	800,000			760,000
Less ending inventory:	0	160,000**		0
Cost of goods sold (40,000 units)700,000640,000				760,000
Gross margin	300,000	360,000		240,000
Less selling and administrative expenses210,000210,000				210,000
Net income	**90,00090,000**			**90,000**

*Year 1: 40,000 units x 17.50 EUR = 700,000 EUR
Year 2: 50,000 units sold x 16.00 EUR = 800,000 EUR
Year 3: 30,000 units sold x 20.00 EUR = 600,000 EUR
**Observe that 50,000 units are produced in year 2 but only 40,000 units are sold. The 10,000 units going into the ending inventory have the following costs attached to them:

Variable manufacturing costs: 10,000 units x 10 EUR	100,000
Fixed manufacturing overhead costs	60,000
Total inventory cost	**160,000**

Figure 5. Sensitivity to Change in Production and Sales

5. CONCLUSION

On thebasis of the textinthe presented entry the following can be defined:

- **Manufacturing costs of inventory in income** statement in the direct costs form follow management thinking more closely than the absorption costsform for these statements. For this reason management finds it easier to understand and to use direct cost report.
- Quality implemented information system in company provides large **options to generate from identical account dates either absorption costing or direct costing** structure of the net income statement by related adequate objective methodology of inventory valuation.
- The profit for a period is **not affected by changesin absorption of fixed expenses resulting from building or reducing inventory**. Other things remaining equal (for example, selling, prices costs, costs, sales mix), profits move in the same direction as sales when direct costing is in use.
- **Direct cost constitutes**of a concept of inventory costs that corresponds closely with the current out-of-pocket expenditure necessary to manufacture the goods.
- For this reason it ties in direct costing by precise inventory valuation with such effective plans for **cost control as standard costs and flexible budgets and other managerial accounting tools.**
- Although the contributory approach cannot be used externally either for financial reporting or for the tax purposes for the reason of its more objective content it can be used **internally by managerial accounting experts for management purposes.**

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APPLYING SEGMENTED REPORTING FOR CONTROLLING PURPOSES

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Abstract: *Segmented reporting – fundamental instrument of enterprise controlling.Substance and definition of the segmented reporting. Responsibility accounting and organizational centralization and decentralization of an enterprise: cost centers, profit centers and investment centers. Performance measurement principles in relation to the segmented reporting. Work of management in permanent process of decision-making. Segmentation of the report on the basis of marketing/ market structures. Differing levels of segmentation in the Income statement: Sales revenue, variable costs, contribution margin, relevant/traceable fix cost, division margin, irrelevant /common fix cost, net operating income. Responsibility of centres and controllability of items in the segmented reporting. Measuring segment performance. Segmental profitability analysis and evaluation.*

Key words: *segmented reporting, controlling, income statement, responsibility accounting, performance measurement*

1. INTRODUCTION

Managers need detailed information not only aggregated summary form in profit and loss report or balance sheet. These managers do not need just one but several income statements and they must be designed to focus on the segments of the company according to the requested market structure. **Main aims** of the presented contribution are focused on the following topics:

- To declare the importance of the segmented reporting system for marketing decision-making and enterprise management as a whole.
- To explain segmentation methodology of the report on the basis of marketing/ market structures.
- To analyse the most critical part of a structure of the segmented income statementfor decision-makingfor purposes of marketingand enterprise management as a whole.
- To present the most applicabletools of the managerial accounting in segmental decision-making.

2. CORE PRINCIPLES OF THE SEGMENTED REPORTING

Costs assignment is necessary to provide useful and relevant data to adopt for three purposes**:**

- For product costing and for pricing.
- For appraisal of managerial performance.
- For making special decision.

Segmented reporting represents a preparation of structured income statement according to few parameters and on this basis **a segment** is defined as any part or activity of an organization about which a manager seeks cost or revenues. **Examples of segment types:** sales territories, individual stores or other retail outlets, service centers, manufacturing divisions or plants, sales departments, individual product lines… (Štetka, 2013)

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For purposes of segmented reporting for the qualitymarketingmanagement and global enterprise managementit is important to implement **segmentation according to the principles of the responsibility accounting**:(based on this idea):
- An organization is a group of individuals working toward common goals;
- It recognizes each person in organization who has any control over costs or revenues to be separate responsibility center whose stewardship must be defined, measured and reported upward in organization.

Segmentation according to the principles of the responsibility accounting brings benefits of decentralization (Garrison, 2014):
- According to the manager opinion, responsibility accounting system functions most effectively in a decentralized organization;
- In a decentralized organization, managers make decisions on the lowest level and on each level;
- Top management is relieved of much day-to-day problem solving and is left free to concentrate on long-range planning and on coordination of efforts;
- Allowing managers greater decision-making control over their segments provides excellent training as these managers rise in organization;
- Added responsibility and decision-making authority often result in increased job satisfaction and provide greater incentive for the manager to put fort his best effort;
- Decisions are best made at the level in an organization where a problem arises;
- Decentralization provides a more effective basis for measuring and manager's performance, since it typically leads to the creation of profit and investment centers.

For decentralisation it is typical to classify centres in accordance with **the economical organizational structure** (Tóth, 2012) – that means the adapted official organizational structure for managerial accounting purposes with a system of the costcenters, profit centers and investment centers (Example in the Figure 2. The System of Segmentation in the Reporting According to the Responsibility Accounting). **Responsibility center** – is any point within an organization where control over the incurrence of cost, the generating of revenue or the use of investment foundexist:

ENTERPRISE ECONOMICAL ORGANIZATION STRUCTURE		
Type of the Center	**Core Characteristic**	**Measuring Management Performance**
Cost center	◦ any responsibility center that has control over the incurrence of cost	◦ by means of performance reports, in terms of meeting cost standards that have been set
Profit center	◦ control over the both: cost and revenue	◦ by means of contribution income statement in terms of meeting sales and cost objectives
Investment center	◦ any responsibility center within an organization that has control over cost, revenues and investment fund	◦ by means of contribution income statement, but normally in terms of the rate of return that they are able to generate on invested funds

Figure 1. Enterprise Economical Organization Structure

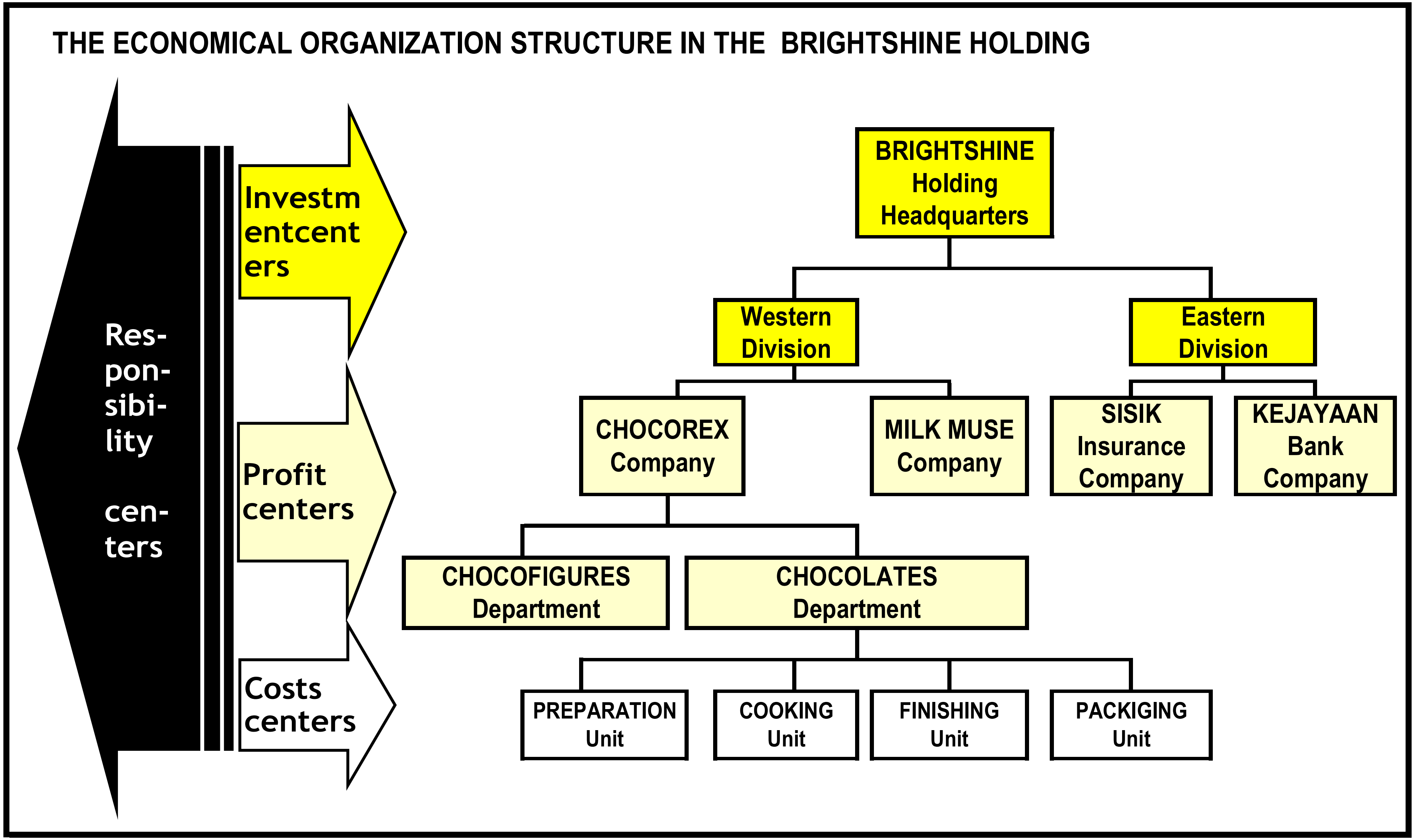

Figure 2. The System of a Segmentation in the Reporting According to the Responsibility Accounting

Centres in the economic organization structure are categorized and integrated into adequate segments of the enterprise with **dominant marketing purposes**. On this basis an elaborated segmented statement can be prepared for enterprise activities: at many different levels in an organization, for internal purposes, in differing formats, in IT system as files (in SAP, Oracle, Access, Excel…..), in interactive form (with an option to click step by step down to the lowest level). Our example for segmented statement has the following levels:

- Total company (e.g. CHOCOREX) => Departments (e.g. CHOCOLATES) => Product lines sold (e.g. CHOCOBONBONS) => Territories (Home Sales, Foreign Sales)
- Step by step, we are looking at smaller and smaller parts of pieces of company:

THE SEGMENTED INCOME STATEMENT (in EUR)

Segments defined as departments

		SEGMENTS	
	∑CHOCOREX	CHOCOFIGURES	CHOCOLATES
Sales	500,000	300,000	200,000
Less variable expenses:			
Variable costs of goods sold	180,000	120,000	60,000
Other variable expenses	50,000	30,000	20,000
Total variable expenses	230,000	150,000	80,000
Contribution margin	**270,000**	**150,000**	**120,000**
Less traceable fixed expenses	170,000	90,000	80,000
Departmental segment margin	*100,000*	*60,000*	*40,000*
Less common fixed expenses	25,000		
Net income	**75,000**		

Segments defined as product lines of Department 2

		SEGMENTS	
	∑CHOCOLATES	CHOCOSLABS	CHOCOBONBONS
Sales	200,000	75,000	125,000
Less variable expenses:			
Variable costs of goods sold	60,000	20,000	40,000
Other variable expenses	20,000	5,000	15,000
Total variable expenses	*80,000*	*25,000*	*55,000*
Contribution margin	**120,000**	**50,000**	**70,000**
Less traceable fixed expenses	70,000	30,000	40,000
Product line segment margin	*50,000*	*20,000*	*30,000*
Less common fixed expenses	10,000		
Net income	**40,000**		

Segments defined as sales territories for one product line of Department 2

		SEGMENTS	
	∑CHOCOBONBONS	Home Sales	Foreign Sales
Sales	125,000	100,000	25,000
Less variable expenses:			
Variable costs of goods sold	40,000	32,000	8,000
Other variable expenses	15,000	5,000	10,000
Total variable expenses	*55,000*	*37,000*	*18,000*
Contribution margin	**70,000**	**63,000**	**7,000**
Less traceable fixed expenses	25,000	15,000	10,000
Territorial segment margin	*45,000*	48,000	- 3,000
Less common fixed expenses	15,000		
Net income	**30,000**		

Figure 3. Example of theSegmented Income Statement

3. MAIN INDICATORS IN THE SEGMENTED REPORTING

Segmented statements for internal use are typically prepared in **the contribution format.** Two guidelines are followed in assigning costs to the various segments:

- According to the cost behaviour patterns (that is variable and fixed).
- According to whether the costs are directly traceable to the segments involved.

The contribution margin is an extremely useful part of data for each manager – particularly for determining the effect on net income of increases and decreases in sales volume. Segmented statement gives the manager the ability to make such computations on a department-by-department, product-by-product or territory-by-territory – thereby providing the information needed to shore up areas of weakness or to capitalize on areas of strength. The contribution margin is basically a short-run planning tool. As such it is especially valuable indecisions relating to temporary uses of capacity to special orders and to short-run product line promotion by adequate variable costs and revenues (Weygandt2015).

The next very important part of the quality segmentation in reporting are **classification and categorisation of fixed costs** as traceable and common fixed costs. The contribution approach does imply that different costs are needed for different purposes. The costs are controlled differently and that these differences must be kept clearly for short-run and log-run planning. **Traceable fixed costs** can be defined as those fixed costs that can be identified with a particular segment and that arise because of the existence of segment (e.g. the salary of segment managers, depreciation of building and equipment for usage in a particular segment). **Common fixed costs**(indirect costs) – can be defined as those fixed costs that cannot be identified with any particular segment but rather arise because of the overall operating activities (e.g. corporate image advertising, salaries of top administrative officers...). **Traceable fixed costs are charged to the segments but common fixed costs are not.** One widely used rule of thumb is to treat them as traceable costs because any arbitrary allocation of common costs would simply destroy the value of the segment margin as a guide to long-run segment profitability: only those costs that would disappear over time if the segment itself disappeared andonly those costs that are added as a result of the creation of a segment.

Fixed costs that are traceable on one segmented statement may become common if the company is divided into smaller segments. There are limits to how finely costs can be separated without resorting to arbitrary allocation:

- Less traceable fixed cost (70,000 EUR) – directly for product line (e.g. costs for product line promotion).
- Less common fixed cost (10,000 EUR) – departmental character of costs (e.g. costs for building depreciation).

Segments defined as departments

		SEGMENTS	
	∑ CHOCOREX	CHOCOFIGURES	CHOCOLATES
Contribution margin	**270,000**	**150,000**	**120,000**
Less traceable fixed expenses	170,000	90,000	80,000

Segments defined as product lines of Department 2

		SEGMENTS	
	∑ CHOCOLATES	CHOCOSLABS	CHOCOBONBONS
Contribution margin	**120,000**	**50,000**	**70,000**
Less traceable fixed expenses	70,000	30,000	40,000
Product line segment margin	*50,000*	*20,000*	*30,000*
Less common fixed expenses	10,000		
Net income	**40,000**		

Figure 4. Example of the Part of the Segmented Income Statement

A segment margin is obtained by deducting the traceable fixed cost of segment from segment's contribution margin. Segment margin is viewed as being the best gauge of **the long-run criterionprofitabilityof a segment** (e.g. the product B with 30% and **short-run criterion of profitabilityof a segment** – the highest C/M ratio (e.g. the product A with 70%).

PRODUCT SEGMENTATION IN THEINCOME STATEMENT								
	∑Company in		Products					
			A in		B in		C in	
	EUR	%	EUR	%	EUR	%	EUR	%
Sales	100,000	100	30,000	100	50,000	100	20,000	100
Less variable expenses	46,000	46	9,000	30	25,000	50	12,000	60
Contribution margin	**54,000**	**54**	**21,000**	**70**	**25,000**	**50**	**8,000**	**40**
Less traceable fixed expenses	30,000	30	15,000	50	10,000	20	5,000	25
Product line segment margin	**24,000**	**24**	**6,000**	**20**	**15,000**	**30**	**3,000**	**15**
Less common fixed expenses	15,000	15						
Departmental segment margin	**9,000**	**9**						

Figure 5. Product Segmentation in the Income Statement

Breakdown of traceable fixed costs into thesetwo categories allows a company to make a distinction between the performance of segment manager and the performance of the segment as a long-term investment. Common fixed costsin segmented statement report present**last step of cost reduction** (e.g. less common fixed expenses of the department in the table above).

In order to obtain more detailed information, a company may show a classification, categorization and integration of total sales into several different segment arrangements. There are many different directions – **profitability data can be generated according to the segments in the economic organizational structure**: by company, by department, by store or other retail outlet, by product or product line, by salesperson, by sales territory, by region of the country, by domestic and foreign operation (e.g. Figure 6. The System of a Segmented Reporting Systemin the CHOCOREX Company).

4. USAGE OF CONTROLLING INSTRUMENTS FOR PURPOSES OF SEGMEN-TAL DECISION-MAKING

The management of a segment requires careful attention to many kinds of decisions and an array of different kinds of expenses. **Periodic evaluation of each segment is required.** The management accountant with his or her knowledge of various decision-making and performance evaluation tools should be involved continually (according to the model of the planning and control cycle, e. g. Figure 7. The Model of the Enterprise Controlling)in the evaluation process and should be a valuable resource to management, mainly forpurposes of **control of items in the segmentedreporting, measuring segment performanceand segmental profitability analysis and evaluation** and with a fundamental aim – segmented reporting must be efficient instrument of an enterprise management (Šagátová, 2012).

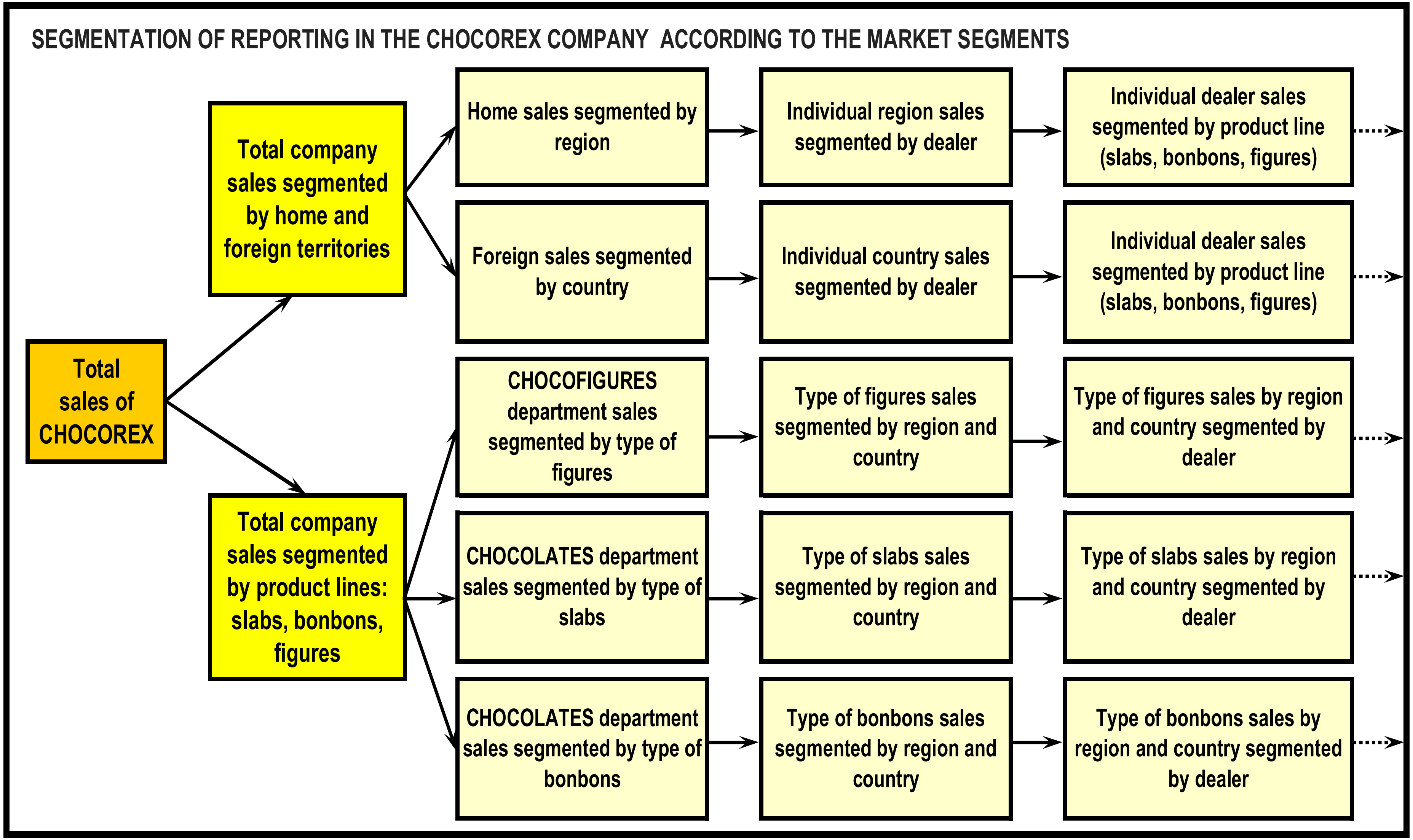

Figure 6. The System of Segmented Reporting in the CHOCOREX Company

The following tools, ifused properly, should be valuable in finding ways to **improve segmental contribution**:

1. Business budgeting
2. Incremental analysis
3. Segmental contribution reporting
4. Cost-volume-profit analysis
5. Cost behaviour analysis
6. ROI analysis
7. Flexible budgeting and variance analysis
8. Economic order quantity models (Atrill and McLaney 2015).

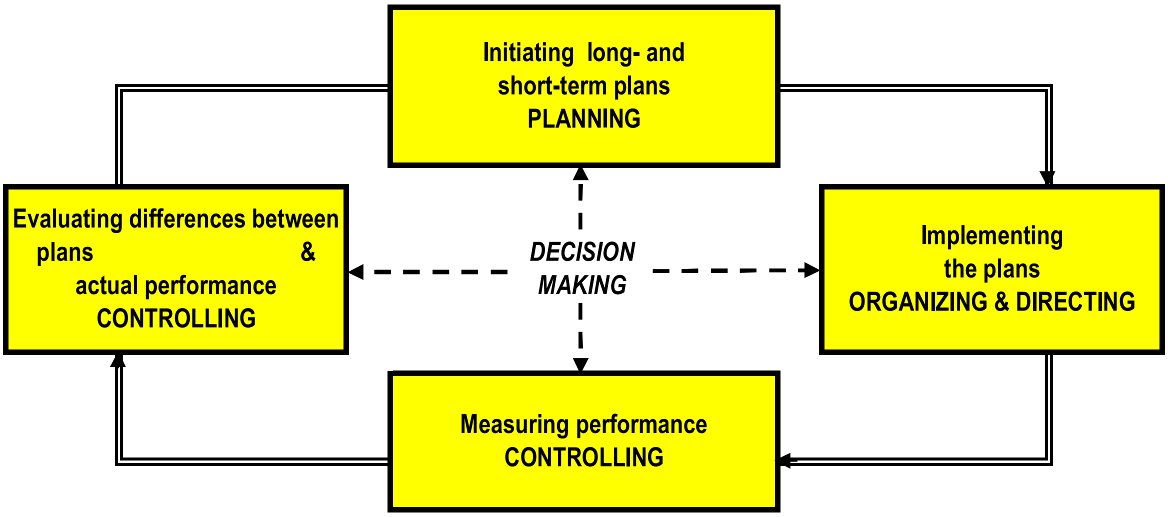

Figure 7. The Model of the Enterprise Controlling

5. CONCLUSION

Analysis and evaluation of the segmented reporting system in the presented contribution bring the following results:

- Segmentation methodology of the report dynamically reacts on permanently changed market structures
- The most critical part of a structure of the segmented income statement for decision-makingfor purposes of marketingand enterprise management as a whole are: internal structure of margin and categorisation fixed cost according to the segment system
- The most applicable tools of the managerial accounting in segmental decision-makingare created by a combination of tools and methods of operative and strategic management accounting, applied in the model of the planning and control cycle
- The segmented reporting system is very flexible, efficient and on this basis irrecoverable instrument for marketing decision-making and enterprise management as whole.

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IMPACT OF ACCOUNTING STANDARDS ON THE RESULTS OF FINANCIAL ANALYSIS

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Abstract
The current globalization trends in investment and financing mean that requirements for accounting and reporting are continuously rising, particularly in terms of comparability of financial information. The basis for the calculation of indicators of financial analysis are information from accounting, respectively from the financial statements. Their reliability and relevance largely influence the results of various financial models. The aim of this paper is to illustrate how changes in accounting rules affect the results of the financial analysis. Paper highlights the distortion, if changes in accounting rules are not taken into account in the calculation of indicators of financial analysis.

Key words: *financial statements, financial analysis, Altman Z-score, IFRS*

1. INTRODUCTION

Accounting entities in Slovakia prepare financial statements according Slovak legislation or IFRS. These accounting frameworks have their pluses and minuses. Regarding financial analysis models the results of financial analysis for the same year and the same period are radically different. The main differences in accounting frameworks are already harmonized but the transfer from Slovak legislation to IFRS can significantly influence financial ratios. Šlosárová A., Silná R. (2008). Both frameworks have their pluses and minuses. Itis not possible to consider one of these two frameworks as a universal efficient solution. This paper will attempt to describe how changes in accounting rules affect the results of financial analysis models and what constraints to consider before applying it in a company.

The changing of accounting framework can influence information presented in financial statements. Changing to IFRS allows companies to use advantages resulting from using of IFRS – for example acceptation of financial statements by investors at stock exchange. Some companies can voluntarily change accounting framework to IFRS, for others it is compulsory. It is done voluntarily in companies that are parts of international consolidated groups of companies. IFRS ensure, that financial statements are comparable within the group of companies and with competitors. Surový, V. (2010) Shareholders and other stakeholders can compare financial statements of various companies. Companies that do not provide comparable data are discriminated when acquisition of new resources and increasing of company value is limited. **Ondrušová, L.** (2011) Financial statements prepared according IFRS can be considerably different from financial statements prepared according Slovak legislation. The biggest differences are legislation dealing with financial instruments, business combinations, leasing and others. Parajka, B. (2011).

Tumpach, M. (2006) presented how the choice of the accounting method is directly related to the provision of a true and fair view of the entity, which provides the accounting and it is also indicated in the financial result. Changing of accounting framework can be also way of misstatement, misclassification as well as misrepresentation of financial analysis ratios. In essence, description or disclosure of accounting data in order to distort the true financial picture of the organization in question. (Tumpach, M. - Užík, J. - Juhászová, Z., 2014).

Study on impact of IFRS Adoption on Key Financial Ratios published by Jindřichovská I., Kubíčková D. (2012) showed that the transition to the IFRS system impacts on the value of key financial ratios and thus influences the assessment of the financial situation and firms however it was not proved that these differences are statistically significant.

The another study performed by Kubíčková D., Jindřichovská I. (2013) confirmed that the compilation of the financial statements according the IFRS brings changes to the assessment and prediction of financial situation of firms in comparison with the Czech accounting standards. The difference can be seen in different concept and way of reporting of retained earnings and by a scope of the different reporting procedures that were reflected in both sales and assets.

2. METHODOLOGY

The purpose of financial analysis is to examine financial situation and explain processes that affect it. There are many financial analysis ratios and models that can be used. Almost all computer-assisted financial analysis have a command for Altman Z-score.

$$\mathbf{Z_0 = 0{,}717 \cdot x_1 + 0{,}847 \cdot x_2 + 3{,}107 \cdot x_3 + 0{,}420 \cdot x_4 + 0{,}998 \cdot x_5}$$

Where x_1 = Net Working Capital / Total Assets
x_2 = Retained Earnings / Total Assets
x_3 = EBIT / Total Assets
x_4 = Equity / Total Liabilities
x_5 = Sales / Total Assets

Interpretation of the value of Z-score is divided into three levels according to value Z-score:
1) Values higher than 2.7 – the firm is in good condition, there is not a threat of bankruptcy in the next years („safe zone“),
2) Values between 2.7–1.2 – further development cannot be specified more precisely („grey zone“),
3) Values lower than 1.2 – the firm is threatened by the serious financial problems in the next years (“distress zone”).

This paper demonstrates that results of Altman Z-score are influenced by accounting framework. Tests was conducted in company which prepared financial statements for the same year according two different accounting frameworks. Financials statements are available at www.registeruz.sk. Analyzed company decided to change accounting framework to IFRS. Before changing accounting framework this company prepared financial statements according Slovak legislation, but also IFRS.A purpose was also to find the specific items that have caused differences in financial statements.

3. DATA AND RESULTS

Transfer to IFRS is not only formal calculation of numbers, but it means also changing of accounting principles and itis necessary to implement new way of measuring the profitability of company what can influence almost all market transactions and can influence also other financial ratios of company.

Following tables show information from balance sheet and profit and loss statement prepared according Slovak legislation and also according IFRS and there are shown also differences between them.

Table 1. Balance sheet prepared according Slovak legislation and IFRS

	SR	**IFRS**	**Difference**
Non-current assets	1581	2507	926
Bank accounts and cash on hand	215	215	0
Receivable	186	186	0
Accruals	541	71	-470
	2523	**2979**	**456**
Equity	200	200	0
Funds created from profit	20	20	0
Not distributed profit	1397	1277	-120
Liabilities related to social fund	57	57	0
Short term liabilities	690	1266	576
Tax liabilities	75	75	0
Deferred tax liability	19	19	0
Provisions	65	65	0
	2523	**2979**	**456**

Source: Financial statements available at www.registeruz.sk

Table 2. Profit and loss statement prepared according Slovak legislation and IFRS

	SR	**IFRS**	**Difference**
Consumed raw materials	1471	1471	0
Services	560	430	-130
Wages and salaries	889	889	0
Amortization / depreciation	592	824	232
Financial expenses	3	21	18
Taxes and fees	69	69	0
Profit/loss	367	247	-120
	3951	**3951**	**0**
Revenues from the sale of own products and services	3785	3785	0
Other revenues	165	165	0
Financial income	1	1	0
	3951	**3951**	**0**

Source: Financial statements available at www.registeruz.sk

Differences in financial statements prepared according Slovak legislation and IFRS are caused by costs for products advertising in total amount 200 ths. EUR. According Slovak legislation these costs shall be accrued/deferred (in this case for 4 years), and according IFRS are these costs considered as costs of accounting period in total amount.

Other difference was caused by different reporting of financial lease. Accounting entity rented machinery for 5 years. In financial statements prepared according Slovak legislation this machinery is booked at the lessor´s accounting book. Lessee shall book only accrued/deferred increased payments. Other regular payments are preserved.

Period of leasing	5 years
Lifetime	5 years
Increased payment	400 ths.

Regular payments at the date 31.12.   200 ths.

In the financial leasing contract must be agreed that all substantial risks are transferred to lessee and estimated residual value is 0.
Slovak legislation: accrual/deferral of increased payment 400 / 5 = 80 and regular annual payment 200 ths. EUR.
IFRS: Depreciation from present value of machinery
Present value = $400+200 \times (1 / 1{,}1)+200 \times (1 / 1{,}1^2)+200 \times (1 / 1{,}1^3)+200 \times (1 / 1{,}1^4)+200 \times (1 / 1{,}1^5)$
Present value = 1158,15
Depreciation = 1 158,15 / 5 = 231,63 (rounded 232,–)
Interest costs = 18 ths. EUR

Table 3. Altman Z-score using data from financial statements

	SR	IFRS
net working capital / total assets x 0,717	[(215 + 186 + 541 – 690 -75) / 2523] x **0,717**	[(215 + 186 + 71 – 1 266 -75) / 2979] x **0,717**
retained earnings / total assets x 0,847	[(1397 + 20) / 2523] x **0,847**	[(1277 + 20) / 2979] x **0,847**
EBIT / total assets x 3,107	[(367 + 69 + 3) / 2523] x **3,107**	[(247 + 69 + 21) / 2979] x **3,107**
equity[1] / total liabilities x 0,420	[(200 + 20 + 1397) / (57 + 690 + 75 + 19 + 65)] x **0,42**	[(200 + 20 + 1277) / (57 + 1266 + 75 + 19 + 65)] x **0,42**
sales / total assets x 0,998	(3785 / 2523) x **0,998**	(3785 / 2979) x **0,998**
Total	**3,313**	**2,203**

Source: Own processing

When comparing the results of Altman Z-score we have found out that however we compare financial statements of one company for the same accounting period, the data are significantly different. When we interpret result of Altman Z-score including data from financial statements prepared according IFRS – the company belongs to “grey zone” but when we interpret result of Altman Z-score including data from financial statements prepared according Slovak legislation – the company Z-score is 2,9 and according this result company belongs to “safe zone”. It is necessary to mention, that the results of Altman Z-score are also influenced by percentage of differences from total assets.

4. CONCLUSION

Financial analysis and comparison of actual values with historical values can show differences in values and by their correct interpretation we can contribute to better informing of stakeholders. It should help to early detection of possible problems, identification of causes and finding efficient ways of their elimination. Source of data for calculating these models are mainly financial statements or annual report. The aim of this paper is to analyze if changes in accounting rules affect the results of the financial analysis. We have found out that choosing the right model for financial analysis is not satisfactory; the most important is the quality of data used for calculation of models.

Quality of financial statements depends on reliability and economic content of financial statements. Financial statements for accounting period is important source of information for financial analysis. If we use these data correctly, we can analyze history, predict the future and plan activities of company. However financial statement is trustable source of information for financial

[1] Instead of market price of equity we used accounting value of equity from balance sheet.

analysis it has various short comings and limits. There are some pluses and also minuses of using financial statements. The most significant pluses of using financial statements are following:

- It is public source of information,
- It contains data for minimum two accounting periods,
- it is prepared in regular intervals,
- Is prepared with balance sheet continuity principle and it is consistently presented,
- Advantage is also an interconnectedness of financial statements,
- Data from financial statements are comparable.

The most significant minuses of using financial statements are following:

- Changes in accounting legislation,
- Changing of accounting framework,
- Inaccuracies in valuation,
- Failure to take into account an inflation,
- Failure to take into account a deflation,
- Estimations,
- Relativity of data,
- Errors and frauds,
- Window dressing,
- Cumulating of data.

It is obvious that there are more pluses than minuses. This paper illustrated the consequences of changes in accounting framework. This can be eliminated by changing data from financial statements before financial analysis is done and risk of distortion of results can be eliminated. We follow principle of economy – detection of other information, calculation and it makes sense to carry out modifications only if they have important influence on results of financial analysis of company.

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Summary and Final Comments

The third year of the **“IFRS - Global Rules and Local Use”** follows two successful conferences organized at the Anglo American University in Prague. The third year of the conference reflected the true intent behind the seminal idea of the event. The aspiration to bring together experts in accounting theory and practice and share a creative environment with both academic and student communities enables participants to exchange ideas regarding application of international financial reporting standards (IFRS) in the context of specific national conditions.

Special consideration was given to diverse aspects of IFRS implementation. Ten years of use of IFRS as an obligatory form of financial reporting in financial markets has revealed new dimensions to financial reporting harmonization thus triggering a series of new questions about the real effects of the IFRS adoption, the views of the entrepreneurs, and the costs and benefits implementation brings to enterprises. New trends in the economic environment and new information needs of business managers have exposed new topics in reporting, e.g. human capital reporting or environmental reporting. All these processes turn attention to the role of auditing, ethical norms, shadow economies and/or professional education. These issues were subjects of accepted contributions presented at the conference sections.

To sum up, the presented research articles have provided a dynamic overview of the current state of financial reporting, the current state of IFRS adoption and its effects in the real economy, and reactions of various subjects in real practice such as use of integrated reporting and accounting harmonization. We believe that the collection of conference contributions will promote dissemination of knowledge and will bring inspiration for further research and for solutions to actual practical problems.

The editors

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IFRS: GLOBAL RULES & LOCAL USE

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