Business Administration and Business Economic

Empirical Investigation into the Determinants of Compliance with IFRS 7 Disclosure Requirements

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Abstract: The purpose of this paper is to assess the quality of disclosures related to financial instruments provided in annual financial statements of Macedonian listed companies and empirically investigate factors that have the potential to influence the quality of these disclosures in accordance with IFRS 7 requirements. Based on the postulates and the results of the empirical investigations of prior IAS compliance studies I have constructed a disclosure index for each listed company and performed regression analysis with independent variables representing some characteristics of listed companies investigated, such as their size, industry, type of auditor engaged, ownership concentration, profitability and leverage. My regression analysis results supported the conclusion that the level of compliance with IFRS 7 requirements is related to the type of auditor engaged and ownership concentration in investigated companies. The results of my research will contribute the large body of empirical studies on IFRS disclosure and compliance, providing evidence from South-East European Transitional Economy that adopted IFRS as national financial reporting framework.

Keywords: company characteristics; disclosure indices; financial instruments; financial risks

JEL Classification: M41

1. Introduction

The purpose of this paper is to study the level of disclosure quality in the financial statements of listed companies in Macedonia in accordance with IFRS 7 disclosure requirements and provide empirical evidence in support of possible determinants of disclosure. Several accounting theories provide postulates that can be used to explain the rationale behind increased disclosure of information related to financial instruments. The information asymmetry and agency theory place the demand for better information disclosure in the hands of outside investors. Information asymmetry, as described by Akerlof (1970), means that the management in all

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cases has better information about the business than outside investors. Disclosing more information about financial instruments results in decrease of the information asymmetry, which from the point of view of investors decreases risks and improves decision making process. Jensen and Meckling (1976) described the agency problem as the difference in the motivation and interest between the management (agent) and the principal (shareholder). In our case could be interpreted as disclosing less information by the management if it is not in its best interest. According to the political cost theory by Watts and Zimmerman (1986) companies will disclose more information in order not to attract unnecessary interest by regulatory bodies, in our case the Securities and Exchange Commission. From the signaling perspective, companies will be motivated to disclose more information in order to distinguish themselves from the others. (Ross, 1977)

The postulates of these theories have been used to identify determinants of disclosures related to financial instruments, however, these theories could not be used to full extent in an environment such as Republic of Macedonia where there is large ownership concentration in listed companies (often family owned) and there is a lack of genuine interest or need among investors for financial statements prepared to full extent in accordance with IFRS requirements.

My main research question is: What are the determinants of superior disclosure of information related to financial instruments in the financial statements of Macedonian listed companies?

The main finding of this study is that Macedonian listed companies provide appropriate level and quality of disclosures in relation to financial instruments in their annual financial statements. I have also identified the ownership structure and the type of engaged auditor as statistically significant determinants of the quality of disclosures provided.

2. Literature Review and Hypotheses Development

In the past 20 years many researchers have examined the mandatory disclosures in the financial statements prepared in accordance with IAS/IFRS. Most of these are archival studies examining the determinants of disclosure quality, in terms of overall compliance or compliance in accordance with specific IFRS (Bischof, 2009; Dumontier & Raffournier, 1998; Glaum & Street, 2003; Lopes & Rodrigues, 2007; Street & Gray, 2002). Most of the studies use self-constructed disclosure indices to quantify the degree of compliance with accounting standard(s) requirements and explore factors that influence this degree of compliance. The characteristics usually considered include the size, industry, listing status, leverage or gearing of the company, ownership structure and concentration, profitability, type of auditor and some corporate governance characteristics such as the existence of an independent audit committee. A lot of studies have provided both supportive and non-supportive evidence in favor of these determinants. Also, a great number of studies are comparative in nature and examine the country level determinants that influence the compliance with accounting standard requirements such as legal systems, culture, securities regulation, capital market supervision and existence or inexistence of rigorous enforcement of accounting standards. For example, Glaum and Street (2003) investigate the compliance level of companies listed on Germany's New Market with both IAS and U.S. GAAP disclosure requirements. Their univariate analysis indicated that the average compliance level is significantly lower for companies that apply IAS than those that apply U.S. GAAP. They also provided evidence that the overall level of compliance with IAS and US GAAP disclosures is positively related to the type of engaged auditor, being part of "Big 5" group. Street & Gray (2002) reported positive association between the level of compliance with IAS disclosures and having US or International listing status, the type of industry the reporting entity belongs to (commerce or transportation) and being audited by "Big 5" audit firm at that time. Dumontier and Raffournier (1998), in their research on swiss data, revealed that firms which comply with IAS are larger in size, with greater international diversification and wider shareholders' structure. They also find the listing status and auditor type also influence the level of compliance with IAS requirements.

When it comes to compliance with IAS/IFRS disclosure requirements for financial instruments, there are few good quality studies that are investigating specifically compliance with IFRS 7 and effect of its adoption on disclosure quality. Bischof (2009) investigated the effects of IFRS 7 adoption on disclosure practice of 171 European banks in 28 countries. He provided evidence that the level of disclosure significantly increased in the year of standard's first-time adoption, where the focus in disclosures shifted from market risk to credit risk. Before the issuance of IFRS 7, Lopes & Rodrigues (2007) investigated compliance of Portuguese companies with IAS 32 and IAS 39 disclosure requirements and identified some of the characteristics immanent for companies that were demonstrating greater compliance. Despite the difficulties in data availability and consistency among analysed companies, the authors concluded that disclosure degree is significantly related to the size, type of auditor, international listing status and respective industry.

Based on theoretical explanations and review of relevant empirical research, I have placed several hypotheses regarding company-specific characteristics and their relation to IFRS 7 disclosure practices of Macedonian listed entities.

First, the degree of disclosure is expected to be greater for large size listed companies, and the reasons for this expectation can be found in the postulates of the agency theory and political cost theory. Larger firms have higher agency costs than smaller firms, since monitoring is more difficult and costly in larger organizations (Jensen and Meckling, 1976). Accordingly, this paper hypotheses that:

H_1. It is expected that large size listed companies will have greater compliance with IFRS 7 disclosure requirements in comparison to smaller listed companies.

Companies operate in different industries and often share common regulatory compliance attitudes and practices within the same industry. A lot of empirical studies provide empirical evidence in support of positive relationship between the type of industry and level of compliance with IFRS/IAs reporting requirements, but also there are studies supporting opposite claims. Glaum & Street (2003) for listed German companies found that industry has no significant effect on IAS mandatory disclosures. In contrast, Street & Gray (2002) report a positive association between compliance with IAS requirements and being in commerce and transportation industry. Lopes & Rodriges (2007) argued that firms from the same economic sector are interested in providing the same level of disclosures as the competition, in order to avoid negative market reactions and adverse opinion about their business behavior. Therefore, I make the following hypothesis:

H_2. The level of compliance with IFRS 7 requirements is expected to be greater for listed companies operating in the financial sector.

The ownership structure of the company can also motivate the management to comply in greater or lesser extent to financial reporting requirements. According to the principle arguments of the agency theory when there is less concentrated ownership structure (the company is without a dominant shareholder) the management is motivated to disclose more information in order to better dispose its obligations to enable better monitoring by large number of small shareholders (Jensen & Meckling, 1976). Several research studies provide empirical evidence supporting these claims. The research results verify the positive relationship between the level of information disclosure and the level of distribution of ownership structure, non-familiarity in ownership or the independence of the majority represented at board of directors (Chau & Gray, 2002; Prencipe, 2004). Therefore, I formulate H_3 as follows:

H_3. The level of compliance with IFRS 7 requirements is expected to be lower for companies with greater ownership concentration.

Alsaeed (2006) argues that firms which are more in debt are influenced by higher agency costs. Managers are motivated to reduce agency costs and disclose more information to satisfy the needs of debt holders. Consequently, this paper hypothesis that:

H_4. The level of compliance with IFRS 7 disclosure requirements is positively associated with company's financial leverage.

Previous research studies on determinants of corporate disclosure practices have also investigated the role of profitability of related companies (Ali et al., 2004; Gallery et al., 2008; Wallace and Naser, 1995; Wallace et al., 1994). Most of these researchers claim that managers are motivated to provide better disclosures when the company has better profitability in order to better present their ability to manage the company. The empirical findings of prior research are mixed. For example, Ali et al. (2004) and Gallery et al. (2008) in their investigation found a significant positive relationship between profitability and disclosure. In contrast Street & Gray (2002) and Glaum & Street (2003) provided empirical evidence that there is no significant association between profitability and disclosure. Despite the opposite findings of different researchers, the fifth hypothesis was formulated:

H_5. The level of compliance with IFRS 7 disclosure requirements is positively associated with firm's profitability.

IFRS disclosure studies regularly investigate the relationship between a firm's disclosure level and the type of external audit firm engaged. DeAngelo (1981) argued that larger auditing firms are worried more about their long-term established reputations and, therefore, have more to lose if they fail to report errors or misrepresentations in the financial statements. Thus, larger auditing firms have greater motivation to report non-compliance and maintain audit independence from their clients. Therefore, for this independent variable I have formulated the following hypothesis:

H_6. Listed companies audited by an audit firm member of international network are better complied with IFRS 7 reporting requirements.

3. Research Methodology and Sample Selection

The initial sample considered for the empirical investigation consisted of 116 companies listed on the official market of the Macedonian Stock Exchange as of 31 December 2013. However, the sample was reduced since only 104 companies have made their audited financial statements for 2013 publicly available at the time of the completion of the analysis.

In order to test the determinants of disclosure quality, I've used a model in which the dependent variable is the disclosure index constructed on the basis of relevant requirements of IFRS 7 for disclosure of information related to financial instruments. The index was comprised of 55 different pieces of mandatory information, and was calculated as a dichotomous, unweighted and adjusted for disclosures which are not applicable for respective. Dichotomous means that each disclosure included in the financial statements takes the score 1 in the total sum for the index, and non disclosing the required information is scored 0 in the calculation of the index result. The total of the index for a certain company is calculated as:

$$T = \sum_{i=1}^{m} d_i$$

where d_i is 1, if the information i is disclosed, otherwise 0; m being the maximum number of disclosures (m=55).

The total score is computed as the unweighted sum of the scores of each item. The weighting is not performed for the reason of giving equal importance to all information for all user groups. The majority of disclosure studies use this approach of unweighted indices (Chalmers & Godfrey, 2004; Cooke, 1989; Raffournier, 1997). The weighting becomes insignificant, since different users of financial statements will choose different weighting factors for different disclosures dependent on their different needs.

The disclosure index specifies the maximum number of information pieces to be included in the financial statements, if the company is involved in transactions with all classes of financial instruments and exposed to all possible risks. As a condition, this is not realistic to be the case for all listed companies analysed in the sample, therefore I've applied procedure for adjustment of the index, applied in other relevant disclosure research studies by Cooke (1989) and Raffournier (1997).

As it was summarized in the hypotheses presented above, possible determinants of disclosure practice investigated in this paper are: size of the company, predominant industry, ownership concentration, leverage, profitability and the type of engaged auditor. The size of the company as determinant and independent variable can be measured according to different criteria, usually measured through the total assets (TotAss) or total income (TotInc) in other disclosure studies.

I've defined the independent variable, the industry to which the company belongs, as dummy variable (IND) that can take score 1 if the company belongs to the financial sector or 0 if the company belongs to non-financial sector. In the literature there is no unique way to categorize industries in order to make the best exploration of their effect on the quality of financial reporting. Most of the studies coded the industry variable through several categories representing different industries (Lopes & Rodrigues, 2007; Street & Gray, 2002; Tower et al., 1999), however I believe that classifying all entities in two groups of financial and non-financial companies is best suited for the circumstances and the environment of the financial reporting process in Macedonia. The approach considers the significant role of the Central bank of Republic of Macedonia and the Agency for Insurance Supervison as an effective regulators of the overall financial sector.

Concentration of ownership (OWN) as independent continuous variable can inversely influence the degree of disclosures in financial statements. The ownership concentration is one of the immanent characteristics of the Macedonian capital market, in addition, considerable number of listed entities often act as family owned firms. Other independent continuous variables included in the study were the leverage of the company (LEV), profitability (PROFIT) and type of engaged auditor (AUD). I have measured the leverage variable through the debt to equity ratio. The profitability (PROFIT) is measured through the ROE (return on equity) and the type of engaged audit firm is considered as dummy variable (AUD), in this case scored 1 if the audit firm belongs to international network or 0 if it is another audit firm.
Based on explanations presented above regarding dependent and independent variables, the research model is presented as follows:

$$\mathrm{IndexOb} = \alpha_0 + \alpha_1 \mathrm{SIZE} + \alpha_2 \mathrm{IND} + +\alpha_3 \mathrm{OWN} + \alpha_4 \mathrm{LEV} + \alpha_5 \mathrm{PROFIT} + \alpha_6 \mathrm{AUD}$$

where

IndexOb= is the disclosure index result of the company;

SIZE = log of total assets or log of total income;

IND= dummy variable for the industry; 1 for financial companies, 0 for non-financial companies;

OWN= percentage of ownership concentration for shareholders in possession of more than 5% of common shares;

LEV= ratio total debt/ book value of equity;

PROFIT= ratio of net income/ average shareholders' equity;

AUD= dummy variable for the audit firm; 1 for International network firm, 0 for other audit firms;

4. Descriptive Statistics

The descriptive statistics for the sample is presented in table 1. The analysed data is subtracted from the 2013 audited financial statements of companies listed on Macedonian Stock Exchange.

Table 1. Sample descriptive statistics

	N	Maximum	Minimum	Mean	S.D.
Total assets	104	86,832,539	141,476	7,683,922	18,279,814
Total income	104	25,997,931	25,765	1,848,447	4,088,264
Ownership concentration	104	98.40	7.62	67.40	25.39
Leverage	104	13.01	0.00	1.56	2.90
Profit	104	1,990,378	-150,078	150,366	381,538
	N	%			
Industry					
Financial	13	12.50%			
Non-financial	91	87.50%			
Auditor type					
International network	61	58.65%			
Local firm	43	41.35%			

Listed companies included in the sample were predominantly from the non-financial sector (87.5%) and majority of them were audited by an audit firm which is part of international network (58.65%). On average listed companies were in compliance with 62.75% of the relevant disclosure requirements of IFRS 7. The results were rather disappointing when average disclosure compliance was analysed between companies audited by local audit firm (24.89%), and those audited by an audit firm member of international network (85.95%).

Table 2. Dependent variable means by auditor type, industry and ownership concentration

	Disclosure index	
	Mean	S.D.
	0.6275	0.04
Auditor type		
International network	0.8595	0.1755
Local firm	0.2489	0.0478
Industry		
Financial	0.9304	0.0224

Non-financial	0.5514	0.3310
Ownership concentration		
Dominant	0.5994	0.3414
Non-dominant	0.7272	0.2804

The highest level of compliance disclosure requirements was demonstrated by financial sector companies (93.04%), with significantly lesser standard deviation in comparison to non-financial sector companies. This means that in Macedonia financial regulators are more successful in developing stricter IFRS enforcement environment in comparison to the Securities and Exchange Commission and the Stock Exchange and their actual enforcement power over listed companies.

5. Regression Results

I have performed linear regression analysis in order to examine the relationship between the dependent variable measured as index of disclosure compliance with IFRS 7 reporting requirements and the explanatory independent variables considered in the model. The different measures for size were highly correlated (correlations between independent variables are shown in table 3), therefore I've decided to use the approach applied also by Cooke (1989) and use both measures in separate models. In each regression model White's heteroscedasticity consistent variance and standard errors were used (White, 1980). The results of the regression analysis have statistically validated two of the six hypotheses.

Table 3. Correlation Matrix for Independent Variables

	TotalAss	*Total Inc*	*Industry*	*Ownercon*	*Leverage*	*Profit*	*Auditor*	*Index*
TotalAss	1							
Total Inc	0.88413	1						
Industry	0.59224	-0.04882	1					
Ownercon	-0.06014	0.11172	0.02079	1				
Leverage	0.65918	-0.03363	0.79403	-0.02073	1			
Profit	0.40331	0.30225	0.09218	0.15189	0.07253	1		
Auditor	0.31687	0.25869	0.42548	-0.21674	0.34115	0.30242	1	
Index	0.33204	0.28248	0.4302	-0.13591	0.37117	0.32614	0.97174	1

The H_3 hypothesis which states that compliance with IFRS 7 is in inverse relationship with the ownership concentration is supported by the regression results at the 5% significance level. Although statistically significant the regression coefficient is very small and positive which is not consistent with the findings in the literature, namely Glaum *et al* (2013) who provided evidence that increase in ownership concentration decreases the quality of IAS compliance in financial statements. H_5 which states that the degree of compliance with IFRS 7 requirements is dependent on the audit firm engaged is also confirmed by the regression results at 1% significance level. This is consistent with Glaum & Street (2003) and Lopes & Rodriques (2007) who find positive relationship between compliance with IFRS requirements and the type of audit firm engaged.

My analysis did not show any significant relationship between the size of the companies and the degree of compliance with IFRS 7 requirements, which is consistent with the findings of the work of Street and Gray (2002), Glaum & Street (2003) and Tower et al (1999). Also, the regression analysis did not support the usual claim of disclosure studies that the companies operating in the same industry show similar levels of compliance with IAS/IFRS requirements (Lopes & Rodriques 2007).

Table 5. Regression results

	Model 1		Model 2		
Independent variable	Coefficient	(*t*-statistic)	Coefficient	(*t*-statistic)	
Auditor	0.555677	24.13038	0.552449	23.26123	*
Industry	-0.03574	-0.877	-0.03332	-0.8247	
Leverage	0.007927	1.345307	0.00766	1.441322	
Ownerconcent	0.000842	2.096764	0.000816	2.04892	**
Profit	1.46E-08	0.476769	1.05E-08	0.38602	
Totalass	-6.9E-11	-0.08641			
Totalinc			1.32E-09	0.523241	
Observations	104		104		
Adj R2	0.946225		0.946556		

Note: * significant at 1%; ** significant at 5%

6. Discussion and Conclusions

The Macedonian financial reporting environment has been aligned to the requirements of IFRS, since these are translated and adopted as published by IASB. Separate national accounting standards have not been developed and are not applicable for any reporting entity that needs to prepare general purpose financial statements. Currently, IFRS as effective from 1 January 2009 and IFRS for SME are applicable for all preparers depending on their size classification.

Regardless of the aspects related to the regulatory environment and enforcement of application of IFRS, the central focus of this study was the actual compliance with IFRS 7 requirements by Macedonian preparers such as listed companies. In order to analyze the level of compliance achieved, I've constructed a disclosure index consisted of 55 pieces of information related to financial instruments. I've performed qualitative content analysis based on audited financial statements of Macedonian listed entities and concluded that on average companies were providing 62.75% of mandatory information for financial instruments as required by relevant IFRS 7 requirements.

My empirical investigation into IFRS compliance determinants for the disclosure practices of Macedonian listed companies revealed that ownership concentration and type of engaged auditors are statistically significant. Opposite to the common findings of disclosure studies (Alsaeed, 2006; Glaum et al., 2013; Lopes & Rodrigues, 2007; Street & Gray, 2002; Tower et al., 1999), size, profitability, financing structure and companies' industry have no significant relationship with the degree of their compliance with IFRS 7 requirements. My investigation has provided some interesting clues about the state of corporate governance and transparency practices in Macedonian listed companies. However, the study has its limitations, mainly related to the construction of the index of disclosure as dependent variable.

As in other disclosure studies that are using self-constructed indices the coding of the disclosed and non-disclosed information can be problematic, even for experience researchers familiar with financial reporting requirements. I've used only data from single year financial statements (financial 2013), but additional research of longitudinal nature covering several financial years could provide interesting facts about the trends in the relative quality of financial reporting practices of Macedonian listed companies. Despite these limitations, I believe that the research revealed interesting relations between the quality of disclosure practices and several characteristics of Macedonian listed companies.

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