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Mandatory IFRS Adoption in Transition Economy with Weak Enforcement Environment and Long-Term Disclosure Quality

Atanasko Atanasovski¹, Marina Trpeska²

Abstract: This paper examines the mandatory compliance with IFRS disclosure requirements for listed companies in Macedonia, developing middle-income country with less developed capital market and weak enforcement environment for financial reporting. This transition economy introduced IFRS in 1998 and the study was conducted on a sample of 90 companies that applied IFRS's in their 2017 financial statements. We constructed both weighted and unweighted disclosure indices to measure the degree of compliance. The level of compliance was significantly greater for companies engaging international audit network firm and companies that were more leveraged. The findings did not support theories explaining compliance in developed capital markets and in countries with strong enforcement environment for financial reporting.

Keywords: disclosure compliance; IFRS; weak enforcement environment; financial reporting quality

JEL Classification: M41

1. Introduction

The paper investigates the compliance of listed companies with mandatory disclosure requirements of IFRS's adopted as national accounting standards in Republic of Macedonia, a developing country with weak enforcement environment for financial reporting. Our study examines firm specific characteristics that determine variability in disclosure quality exercised by different listed companies. We have considered firm factors investigated as determinants of accounting practices in many countries with developed capital markets, but also incorporated in the study some factors that describe the economic setting of the country where financing of companies is predominantly bank-oriented and businesses (even listed companies) are tightly controlled among few dominant shareholders. We find insufficient overall compliance with IFRS requirements with significantly better disclosures in financial statements of companies that are pressured by engaged international audit network firm or to some extent are more leveraged and monitored by banks as capital providers.

Macedonia is an example of a country that adopted IFRSs for mandatory use by all regulated businesses, all medium and large companies and has considerable track of experience in using IFRS's in environment where most regulators have weak mechanisms in place for effective monitoring over compliance with IFRSs requirements. Our study concentrates on listed companies on the national stock market, a less developed market with very limited role in effective financing of companies who are traditionally raising credit from commercial banks.

We contribute the previous literature on compliance with IFRS reporting requirements by providing analysis in respect of most frequent accounting standards relevant for the majority of companies, instead of focusing only on selected few accounting standards. Also, our study considers potential determinants of compliance such as ownership concentration and international audit network firms as

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opposed to Big 4 auditors. These factors or their modalities were not usually tested in previous empirical analysis covering countries with more developed capital markets and are typical for the environment for financial reporting in Republic of Macedonia. The main research questions addressed in our empirical research are:

- Do theories on accounting disclosure relevant in countries with more developed capital markets also apply for explaining disclosure quality in countries with weak enforcement environment?
- What is the extent of compliance with mandatory disclosure requirements of IFRS in transition country such as Macedonia?
- What are the factors that determine the degree of compliance with disclosure requirements by Macedonian listed companies?

The rest of the paper is organised as follows. In part 2 we provide an overview over institutional environment for financial reporting in Macedonia and some background data on adoption of IFRS's in the country. Next, we perform a literature review on studies that address the issue of compliance with mandatory disclosure requirements and factors that determine the degree of compliance. We have covered both studies in developed and less developed markets in order to build our hypothesis on determinants of compliance. In part 4 we present our empirical model and methodology of the research study. In the next part we present and discuss the findings of our empirical and qualitative content analysis. The paper concludes with brief discussion of overall findings, contribution and limitations of the research study.

2. Literature Review and Hypothesis Development

Our research objective was to examine the quality of disclosure practices of Macedonian listed companies in accordance with IFRS requirements. Specifically, we investigate firm-specific factors that determine the quality of disclosure practices. Research literature on disclosure practices is immense and mainly covers firm-specific and market-wide benefits from disclosure, real effects from disclosure practices in terms of investment decision-making and firm-specific and country-specific factors that influence the quality of disclosure. Application of quality financial reporting framework such as IFRS in comparison to local GAAP in European countries should result in increased transparency and international comparability of companies financial statements since IFRS are more capital-market oriented (e.g. EC Regulation No. 1606/2002). Daske and Gebhardt (2006) analysed the disclosure quality in financial statements of Austrian, German and Swiss companies following the adoption of IFRS and US GAAP as quality accounting standards. The authors provided evidence that the quality of disclosures and financial reporting has increased following both mandatory and voluntary adoption of IFRS.

There is a considerable body of international research studies on disclosure practices of companies identifying factors on individual company level that determine the variations in the disclosure quality (size, industry, liquidity, profitability, corporate governance practices, quality of the auditor engaged etc.). Earlier studies in late 90's and beginning of previous decade addressed voluntary disclosures (K. Ahmed & Courtis, 1999; Cooke, 1989; Street & Gray, 2002), however since 2005/06 research studies started to investigate determinants of compliance with certain IFRS disclosure requirements (Glaum et al., 2013; Hodgdon et al., 2009; Lopes & Rodrigues, 2007). Also, there are studies that investigate quality of IFRS reporting in different countries and tend to explain the variations in national practices

with firm-specific and country-specific factors. Glaum et al. (2013) analysed compliance with IFRS 3 and IAS 36 requirements for large sample of European companies mandatorily applying IFRS. The authors provided evidence of significant non-compliance and identified the importance of firm-specific factors such as prior experience with IFRS, type of auditor, presence of audit committees and ownership structure, the respective industry and issuance of shares or bonds in analysed periods. When it comes to country-specific factors Glaum *et al.* (2013) concluded that strong enforcement practices, the size of the national stock market and the strength of national traditions contribute better compliance with IFRS requirements.

Our objective was to investigate the determinants of the quality of financial reporting of listed companies in Macedonia in terms of sound disclosure practices and application of IFRS accounting policies that oppose the tax influence and the dominance of historical cost accounting. Considering explanations provided above for the relevance of regulatory framework itself and firm specific incentives for quality financial reporting, we contemplated that firm specific factors act as determinants of the level of disclosure. We were motivated to examine whether early introduction of IFRS in financial reporting practice in 1998, over the past 20 years of application has resulted in good disclosure quality and financial transparency of companies.

Companies' disclosure decisions are shaped by the influence of various factors and have been explained through the agency problem (Jensen & Meckling, 1976), litigation costs (Skinner, 1994), and proprietary costs (Verrecchia, 1983). Financial reporting can be considered as an element of corporate governance whose purpose is to reduce information asymmetry between the company management and investors (Healy & Palepu, 2001). However, managers may feel reluctant to disclose more information in order not to compromise their competitive position or increase political costs.

Reasoning provided by above mentioned theories is used to explain how different company specific characteristics are related to disclosure levels. Previous research consistently identified companies' size being positively associated with the level of disclosure in their financial statements (Chalmers & Godfrey, 2004; Dumontier & Raffournier, 1998; Lopes & Rodrigues, 2007). Watts and Zimmerman (1986) explained that larger companies are associated with greater political costs and pressure to disclose information. Also, large companies have more resources to comply with complex IFRS reporting requirements and therefore the compliance costs are small burden for large companies. In this study we use total assets as a measure of the size of the companies. The following hypothesis tests the association between size and compliance with IFRS requirements.

H.1 The level of compliance with mandatory IFRS disclosure requirements is positively associated with companies' size.

Prior research on disclosure quality and voluntary adoption of IFRS provided evidence of positive association between the quality of financial information and the type of auditor (Dumontier & Raffournier, 1998; Glaum et al., 2013; Glaum & Street, 2003). We thus expect compliance with IFRS disclosures to be higher for companies audited by Big 4 firms. Considering listed companies in Macedonia, the audit market is dominated by audit firms that are either Big 4 firms or belong to international network of firms. Being part of international network contributes the quality of internal processes and training for employed auditors that result in better audits. The variable AUD is coded 1 if the auditor belongs a) to the Big 4 group b) is international network firm, and coded 0 if the audit firm is a local firm. Therefore for this independent variable we have formulated two alternative hypotheses:

H.2 The level of disclosure of information in financial statements is greater for companies audited by “Big 4” audit firm.

H.2a The level of disclosure of information in financial statements is greater for companies audited by audit firm part of international network.

Companies with dispersed ownership choose to disclose more information in order to reduce the impact of these problems (Chau & Gray, 2002; Glaum et al., 2013). However, past research studies into the associations between ownership concentration and level of disclosure of information found evidence of inverted U-shaped relationship, meaning that companies with moderate levels of ownership concentration where investors hold large blocks of shares but individually do not fully control companies are most effective in controlling agency problems and exercise greater disclosure quality (Glaum et al., 2013; La Porta et al., 1998). We have measured ownership concentration (OWN) through the percentage of shares held by small number of shareholders as disclosed in audited financial statements. The following hypothesis is used to test for the association between ownership concentration and disclosure quality.

H.3 Companies with moderate level of ownership concentration exercise greater level of disclosure quality.

Many research studies investigated whether the capital structure or leverage of the company provides an incentive for the company to voluntarily adopt IFRS or demonstrate greater compliance with mandatory IFRS disclosure requirements (Chalmers & Godfrey, 2004; Dumontier & Raffournier, 1998; Hassan et al., 2008; Lopes & Rodrigues, 2007; Wallace & Naser, 1995). Increase in leverage highlights the agency problem and potential transfer of wealth from debtholders to shareholders and management (Jensen & Meckling, 1976). Highly leveraged firms will need to manage the agency problem more efficiently and provide more disclosures in their financial statements. We use the debt to equity ratio as a measure of the leverage of the company (LEV). Nevertheless, we hypothesize without prejudice for the direction of the association between leverage and disclosure quality.

H.4 The level of disclosures provided in financial statements depends on the leverage of the company.

Several prior studies investigated the effect of firm profitability on the level of disclosure. Again, the results of the studies were mixed while some provided evidence of positive relationship (Wallace & Naser, 1995) considerable body of research find no evidence of association between profitability and level of IFRS disclosure compliance (Dumontier & Raffournier, 1998; Glaum & Street, 2003; Street & Gray, 2002). In this study we define profitability through return on assets, being net income divided by total assets of the company. We hypothesize for positive association between profitability and disclosure quality.

H.5 The level of compliance with mandatory IFRS disclosure requirements is positively associated with companies' profitability.

3. Research Methodology

Content analysis was performed to listed companies audited financial statements, based on a list of disclosure and presentation requirements contained in several accounting standards considered as relevant and most frequently applied by domestic entities. We constructed a disclosure index based on

the disclosure index developed by Street and Gray (2002) and used by Hodgdon et al. (2008) to measure compliance with select IFRS and their respective disclosure requirements. The table 1.1 illustrates the components of the IFRS disclosure index.

Each disclosure requirement of relevant financial reporting standard was incorporated in disclosure checklist and then the checklist used as a tool to document a disclosure index score for each company. As shown in table 1.1 the disclosure index incorporated in total 180 separate information disclosure requirements. On the checklist the IFRS-required disclosure item was coded with 1 if the information was disclosed by the company, (0) for information not disclosed or (n/a) if the information had no relevance for the company. We have calculated both, unweighted and weighted disclosure compliance score for each company. The unweighted IFRS compliance score is calculated by dividing the number of mandatory disclosures provided in the financial statements of the company with the number of applicable mandatory disclosures, presented as follows:

$$DIUN_j = \frac{\sum_{i=1}^{180} d_{ij} r_{ij}}{\sum_{i=1}^{180} r_{ij}}$$

where DIUN is the unweighted index score for company j ; $d_{i,j}$ indicates the disclosure of item i by company j ; $r_{i,j}$ indicates whether the disclosure item is required for the company.

Table 1.1. IFRS Components of Disclosure Index

Standard	Name of the standard	Number of disclosures
IAS 2	<i>Inventories</i>	9
IAS 16	<i>Property, plant and equipment</i>	16
IAS 17	<i>Leases</i>	5
IAS 23	<i>Borrowing costs</i>	2
IAS 24	<i>Related parties</i>	5
IAS 33	<i>Earnings per share</i>	7
IAS 36	<i>Impairment of assets</i>	18
IAS 37	<i>Provisions, contingent liabilities and contingent assets</i>	17
IAS 38	<i>Intangible assets</i>	24
IFRS 7	<i>Financial instruments: disclosures</i>	77
Maximum number of disclosures		180

The implied assumption is that each item is equally important for any user of financial statements and this approach is followed in studies of Cooke (1989), Meek et al.(1995) and Raffournier (1997). The main argument here is that different users of financial statements may give different weights to different types of information depending on their different needs. However, some studies (Street & Gray, 2002) use also weighted indexes where the index score is calculated per standard basis with the final index score derived at by calculating mean results from all individual standard disclosure scores. This procedure allows for equal weight to be given to each financial reporting standard and its requirements, limiting the potential effect of non-compliance or compliance with the requirements of certain IFRS's with larger number of information disclosure requirements. Therefore the calculation of the weighted disclosure index (DI) is presented as follows:

$$DI_j = \frac{\sum_{i=1}^{10} S_{ij}}{R_j}$$

where S_{ij} is the index score for i standard by company j ; R_j is the number of applicable standards for company j .

According to the hypotheses given above, determinants of disclosure quality subject to testing are: the size of the company (SIZE), the type of auditor (AUD), ownership concentration (OWN), leverage (LEV) and profitability (PROFIT).

Based on explanations presented above regarding dependent and independent variables, the research model that describes the actual disclosure index is defined according to the following equations:

$$DIUN = \alpha_0 + \alpha_1 SIZE + \alpha_2 AUD + \alpha_3 OWN + \alpha_4 LEV + \alpha_5 PROFIT;$$

$$DI = \alpha_0 + \alpha_1 SIZE + \alpha_2 AUD + \alpha_3 OWN + \alpha_4 LEV + \alpha_5 PROFIT$$

where

$DIUN$ = is the unweighted disclosure index result of the company;

DI = is the weighted disclosure index result of the company;

$SIZE$ = log of total assets;

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

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

LEV = ratio total debt/ book value of equity;

$PROFIT$ = return on assets calculated as net income divided by total assets of the company.

4. Results

4.1 Sample Selection and Descriptive Statistics

The research started with identification of the listed companies on Macedonian Stock Exchange (MSE) and for the sample both mandatory and voluntary listed companies, where considered. Namely, in order to stimulate corporate transparency and attract more investors for trading at the MSE, in 2013 the government requested considerable number of JSC's to be listed on the national stock exchange and increase their transparency with potential investors. At the end of 2018 in total 105 companies were listed on the stock exchange. Eight banks and two insurance companies representing financial sector companies were omitted from the sample considering the purpose of the empirical research. Audited financial statements of sample companies were obtained from the MSE Seinet system for electronic distribution of information from listed companies. Following the review of 95 audited financial statements, 5 more companies were excluded from further analysis because of omitted important data.

Table 1.2 shows the overall means and standard deviations for dependent and independent variables. The average disclosure index score for listed companies was 62,1% for the unweighted and 63,9% for the weighted disclosure index. Some listed companies provided as little as 22,6% of required

information, but some disclosed as much as 96,7%. Considering standard deviations in disclosure indices, both weighted and unweighted indices approach provided similar results of large discrepancy among different listed entities in respect of the quality of their disclosures in audited financial statements. This means that listed entities in Macedonia still miss considerable amount of information that need to be disclosed if substantial compliance with IFRS requirements is pursued.

Table 1.2. Sample Descriptive Statistics

	N	Min	Max	Mean	S.D
<i>Total assets (mil mkd)</i>	90	73,8	9515,0	1743,0	2386,0
<i>Return on assets (ROA)</i>	90	-0,200	0,298	0,007	0,067
<i>Total debt/ equity</i>	90	0,576	1,382	0,960	0,207
<i>Ownership concentration</i>	90	0,079	1,000	0,698	0,231
<i>Disclosure index - unweighted (DIUN)</i>	90	0,226	0,944	0,621	0,218
<i>Disclosure index weighted (DI)</i>	90	0,321	0,967	0,639	0,163
	N	%			
<i>Audit firm</i>					
„Big 4“	12	13.3%			
Others	78	86.7%			
<i>Audit firm²</i>					
International network	37	41.1%			
Local firms	53	58.9%			

The descriptive statistics for the independent variables provide some insight into the domestic capital market and characteristics of listed companies. The average ownership concentration measured as percentage of stock owned by large shareholders (more than 5% of qualified interest in common stock) amounts to as high as 70%. This provides solid evidence for the tight ownership of companies with limited public interest and unfavourable environment for corporate transparency. In respect of the audit market, only 13,3% of listed companies are being audited by “Big 4” audit firm. This characteristic of the local market for audit services is uncommon in international setting, since many research papers report market share above 70% for “Big 4” audit firms (Dumontier & Raffournier, 1998; Lopes & Rodrigues, 2007). However, considering all audit firms that are part of any international network of firms, the listed companies market share is bigger rising to 41,1% in 2015.

Table 1.3 provides an overview of the disclosure index per each financial reporting standard. As it can be analysed companies comply substantially with the requirements of IAS 2 *Inventories* (92%), IAS 16 *Property, plant and equipment* (87%) and IAS 38 *Intangible assets* (92%). Companies provided very poor information in respect of IAS 23 *Borrowing costs* requirements (2% of required information disclosed), IAS 24 *Related parties* (43%) and IAS 16 *Leases* (36%).

Table 1.3. Disclosure Index Statistics According to the Applicable IFRS

Disclosure index		No. of companies	Mean	max	min
IAS 2	Inventories	90	0,92	1,00	0,75
IAS 16	Property, plant and equipment	90	0,87	1,00	0,54
IAS 17	Leases	18	0,36	1,00	0,00
IAS 23	Borrowing costs	69	0,02	0,50	0,00
IAS 24	Related parties	82	0,43	1,00	0,00
IAS 33	Earnings per share	90	0,62	1,00	0,00
IAS 36	Impairment of assets	4	0,70	1,00	0,43
IAS 37	Provisions, Contingent Liabilities and Contingent Assets	67	0,88	1,00	0,38
IAS 38	Intangible assets	41	0,92	1,00	0,62
IFRS 7	Financial instruments: disclosures	90	0,57	1,00	0,12

4.2. Multiple Regression Analysis

In order to check for multivariate relationship between disclosure indices and independent variables we performed OLS regression analysis. The results obtained are presented in table 1.4, where we provided an appropriate regression coefficients and t-statistic data for each explanatory variable. In each regression we analysed for the possible presence of heteroscedasticity by applying the White general test (White, 1980), in which case consistent variances and standard errors were used. Two hypotheses were statistically validated for the unweighted index and only one for the weighted disclosure index as dependent variables. We identified significant association between the level of disclosure measured by both indices and the independent variable being audited by international audit network firm (H2a hypothesis). This finding is consistent with Glaum and Street (2003), Street and Gray (2002), Lopes and Rodrigues (2007), Glaum et al. (2013). Also, hypothesis H.4 was validated with a positive coefficient for the unweighted index as dependent variable, meaning significant positive relationship between the leverage of listed companies and quality of disclosures in financial statements. This is inconsistent with the evidence provided by Lopes and Rodrigues (2007) who find no statistical significant relationship and Abd-Elsalam and Weetman (2003) who provided evidence for significant negative relationship between the leverage and of the company and quality of disclosures.

Table 1.4. Multiple Regression Analysis for Determinants of Compliance with IFRS Requirements

		Unweighted Index			Weighted Index	
Hypothesis	Variable	Coefficient	t-statistic		Coefficient	t-statistic
H1	Size	LogAss	,098	,828	,094	,547
H2	Auditor Big 4	AUD4	,086	,727	,117	,678
	Own	OWN	-,098	-,909	-,130	-,826
H3	concentration	OWN				
H4	Leverage	LEV	,649	5,690	*,121	,731
H5	Profitability	ROA	-,010	-,097	-,022	-,143
		Rsquare	,573		,094	
		F stat	11,551		,890	
		Unweighted Index		Weighted Index		
Hypothesis	Variable	Coefficient	t-	Coefficient	t-	

				statistic		statistic	
H1	Size	LogAss	,022	,222	-,001	-,010	
H2a	International Auditor	AUDint	,510	3,915	* ,657	3,344	*
H3	Own concentration	OWN	-,068	-,752	-,090	-,658	
H4	Leverage	LEV	,349	2,778	* ,264	1,393	
H5	Profitability	ROA	,002	,027	-,007	-,053	
			Rsquare	,681		,273	
			F stat	18,401		3,231	

*Significant at 1% level; ** 5% level;

H1 which stated that the level of compliance with IFRS disclosure requirements is positively associated with the size of the company is not supported by the regression results. This is consistent with the findings of Glaum and Street (2003), Street and Gray (2002) but inconsistent with Chalmers and Godfrey (2004) and Lopes and Rodrigues (2007) who find a statistically positive relationship between the size and disclosures for financial instruments.

The results do not show significant influence of ownership structure (concentration) on the quality of disclosures provided in financial statements, meaning H3 is not supported. We have also checked for possible u-shape relationship (La Porta et al., 1998) since companies with widely dispersed ownership provide less information because small investors have little power to monitor management. Also, when there is a single dominant shareholder the level of disclosure can significantly decrease especially in countries with poor minority shareholders protection since the dominant shareholder has no interest in greater disclosure. Our results did not support for such u-shape relationship and this is inconsistent with the findings of Glaum et al. (2013) and La Porta et al. (1998).

Also, our results have shown that profitability of reporting companies played no role for the quality of financial reporting, being the H5 hypothesis. This is consistent with the findings of Glaum and Street (2003) that also provided evidence that profitability does not influence significantly the degree of compliance with disclosure requirements.

5. Conclusions

The aim of the paper was to evaluate compliance with mandatory IFRS requirements by listed companies in South Eastern European country that adopted IFRS as national accounting standards. Macedonia is a country that adopted full IFRS for mandatory use by all regulated companies including all medium and large companies since 1998. However, we have argued that mandating IFRS application through national legislation is not sufficient to achieve compliance with IFRS disclosure requirements and quality financial reporting, when there is lack of enforcement institutions and mechanisms in place. In such case, company specific factors can act as powerful determinants of disclosure quality and compliance with IFRS disclosure requirements.

Based on prior literature on determinants of disclosure practices and compliance with IFRS requirements we have formulated set of hypotheses and tested on 90 listed companies in Macedonia. Considering the requirements of selected IFRS's, both unweighted and weighted disclosure indices were constructed to serve as dependent variables in order to investigate companies' specific factors that influence the quality of disclosure. The multivariate analysis covering the investigated factors revealed that companies that engage international audit network firms and are more leveraged exercise

greater compliance with IFRS disclosure requirements. Inversely, no significant relationship was found for profitability, ownership concentration and size of companies. The scores for the constructed disclosure indices have shown that on average Macedonian listed companies comply with 62-64% of the disclosure requirements of relevant IFRS's with individual company scores ranging from 23% to 94%. Although our results have shown that a quality auditor supports better disclosure practices, the lack of institutional enforcement practices over financial reporting limits overall disclosure quality.

The results of the study should be interpreted with caution, considering the applied methodology and the sample data. Results should not be considered as representative for financial reporting of all companies in the country, since companies which are not listed and have not provided financial information available to the general public were not considered in the study. Secondly, the study concentrates on the level of compliance with disclosure requirements of selected IFRS's, not all of IFRS's applicable to certain type of companies or transactions. Third, in order to appropriately argue for the quality of financial reporting practices it would be also relevant to examine compliance with IFRS presentation and measurement rules.

Published financial statements and other financial reporting information publicly available does not allow for complete and unbiased analysis whether measurement principles and rules of accounting standards are applied consistently and appropriately. Fourth, the compliance of companies with IFRS reporting requirements may be influenced by factors that were not included in the core model or considered in the literature review of the study.

The study contributes to the literature that addresses the issues of compliance with accounting standards disclosure requirements and adoption of IFRS in code-law countries with weak enforcement mechanisms in place. Our study has implication for investors and other capital providers by providing evidence of significant differences in the overall quality of disclosed financial information. This limits comparability and poses a threat for investing decisions of capital providers. Secondly, our research results should inspire supervisory authorities and policy makers in the country to increase their efforts to consistently enforce application of accounting standards adopted in order to benefit investors and other users of financial statements.

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