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MICHAEL YEBOAH

Assessing the impacts of IFRS Adoption on Capital Structure, Corporate and Macroeconomic Performances in the Republic of South Africa

Supervisor: Dr. Andras Takacs

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ABSTRACT

This dissertation assesses the impacts of accounting information environment on the influence of IFRS adoption on capital structure, corporate and macroeconomic performances in the Republic of South Africa. The study uses a sample of forty- nine listed Agricultural, Construction, Manufacturing, and Mining firms in South Africa that have consistently published annual reports for the 2001- 2014 period. Cost of equity capital, cost of debt capital, market price per share, and equity returns is the capital structure indicators used. In contrast, the firm performance indicators used are returns on investment capital, earnings per share, operations margin, and profitability.

Moreover, interest rates, economic growth, and the exchange rate form the macroeconomic indicators. The estimation techniques employed are the pooled Ordinary Least Square (OLS), the random effects, and the fixed effects regressions depending on which one fits best. Though IFRS adoption had a significant positive and negative impact on the market price per share and equity returns, the interaction of accounting information environment with IFRS had no statistically significant impact on the cost of equity capital and debt capital. Neither only IFRS adoption nor its interaction with the accounting information environment had a statistically significant impact on the profitability of the sampled firms. IFRS adoption significantly increased return on investment capital, earnings per share, and operations margins, but the interaction of IFRS adoption with accounting information environment, except analyst following, did not significantly have an impact on any of the corporate performance indicators. IFRS amid analysts following significantly reduced earnings per share of the sampled firms. IFRS adoption significantly reduced gross domestic product growth and interest rate, but its interaction with accounting information environment had no statistically significant impact on them.

Keywords: IFRS Adoption, Capital Structure, Performance, Macroeconomic variables, Accounting Information Environment, and South Africa.

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1 INTRODUCTION

In a globalizing and strongly competitive market, information is a critical point in the investors' decision-making processes and the evaluation of company performance. The application of IFRSs is mandatory for the EU Member States, and in many other countries all over the world, e.g., in South Africa as well, more precisely, the listed companies must present their financial statements by the International Financial Reporting Standards (IFRS). IFRS has many benefits, such as harmonization, to form a common accounting standard for all companies listed and unlisted around the globe (IASB, 1998). Countries adopt IFRS with reasons including having credible financial statements following internationally acceptable standards (Ludolph, 2006), thereby ensuring improvement in capital structure, corporate performance, and macroeconomic performance as a whole. However, the empirical studies from different countries have reported mixed findings on the effect of IFRS adoption on capital structure indicators (for example, Gatsios, Da Silva, Ambrozini, Neto, & Lima, 2016; Houqe, Monem & Zijl, 2016; Patro & Gupta, 2014). However, with corporate performance and macroeconomic performance, there is no such study with regards to the Republic of South Africa's listed firms.

Moreover, the extent to which IFRS adoption impacts the capital structure, corporate, and economic performances depend mainly on the accounting information environment. The accounting information environment involves information asymmetry, analyst following, managerial opportunism, and third-party assurance. For example, information asymmetry results in three fundamental problems in the capital market, namely, adverse selection, moral hazard, and high monitoring cost, and these affect the capital structure and corporate and economic performance (Merton, 1987; Brown et al., 2004). Williamson (1985) notes that opportunism is "self-interest seeking with guile," and this behavior acts as a disincentive for IFRS compliance within a firm. Assurance is used interchangeably with audit, attestation, verification, validation, and review (IFAC, 2004). Dando and Swift (2003) note that all organizations want to be accountable, and this desire for accountability serves as an incentive for IFRS compliance. Thus, the accounting information environment acts as an incentive or disincentive for IFRS compliance and realization or otherwise of full benefits of IFRS adoption. The lack of research to address this issue in Africa, and in its biggest economy, the Republic of South-Africa, this research aims to fill this gap.

The main question formulated, was "what is the impact of accounting environment information environment on the influence of IFRS adoption on the capital structure, corporate performance, and the economic performance in South Africa? The study progresses as follows; section two focuses on research objectives and hypotheses; section three focuses on literature review; section four, the results and discussion, and section five, the conclusions, recommendations, and limitations of the study.

1.1 RESEARCH DESIGN AND MOTIVATION FOR THE RESEARCH METHODOLOGY TO BE APPLIED

This doctoral study uses the positivistic research paradigm. A positivistic research paradigm is suitable for testing the causal relationship between variables. The dissertation covers South African non-financial firms listed on the JSE. The following considerations motivate this dissertation. First, the previous studies (see Gatsios, Da Silva, Ambrozini, Neto, & Lima, 2016; Houqe, Monem & Zijl, 2016; Castillo Merino, Menéndez-Plans & Orgaz –Guerrero, 2014; Daske, 2014; Patro & Gupta, 2014) on IFRS adoption impact on cost of equity capital have produced mixed findings. Given the current controversy, it becomes imperative to find out the impact of IFRS on the cost of equity capital. Secondly, the capital market consists of the equity market and the debt market, with the latter being the broader market. Given this, several studies (see Moscariello, Skerratt & Pizzo, 2014) conducted a study on the impact of IFRS on the cost of debt capital in other continents. As a result, the impact of mandatory IFRS adoption on the cost of debt capital was still open for research, especially in South Africa, where no evidence was available. Thirdly, the cost of capital and firm value controlled by firm-level, macroeconomic factors, legal, political, and global factors. However, previous studies focused on only two of them, namely, firm-level and macroeconomic factors. For examples, Castillo-Merino et al. (2014) focused on firm-level factors (size, leverage, return on asset and return on equity) and market variables (inflation, GDP, Dow Jones, and beta) while Li, Jahera and Yost (2013) focused on corporate governance and firm-level factors.

Last but not least, on the impact of IFRS on macroeconomic indicators, to the best of the author's knowledge, all the past studies (see Akpomi and Nnadi (2017); Ifeoluwa, Ojeka & Odianonsen, 2016; Sherman & de Klerk, 2015; Emeni, 2014, Ramanna & Sletten, 2009) focus on the impact of IFRS on FDI. However, this dissertation fills a significant gap in the literature by investigating the impact of IFRS on economic growth (GDPG), interest rate (IR), and exchange rate (EX).

1.2 RESEARCH OBJECTIVES AND HYPOTHESES

Motivated by this argument, the main objective of this dissertation is to assess the moderation effect of the three-accounting environment on capital structure, corporate and economic performances in the Republic of South Africa after the adoption of IFRS in 2005. Specifically, the researcher tests the adoption of IFRS with a lower cost of equity capital, lower cost of debt capital, lower information asymmetry, lower managerial opportunism higher number of analysts following, and to increase corporate and economic performances in the Republic of South Africa. This thesis aims, also, to determine whether the actual impact of IFRS on the cost of capital affects economic indicators, and the optional component, which is driven by the accounting information environment in the Republic of South Africa. In conclusion, the thesis is to explore the impact of financial reporting on the association between corporate and economic performances and both the capital structure and the accounting information environment of firms.

The main objective of this paper was to assess the impact of the accounting environment on the influence of IFRS adoption on capital structure, corporate performance, and economic

performances in the Republic of South Africa. Based on these objectives the study hypothesized as follows;

H1: Combined effect of IFRS-adoption and information asymmetry significantly influences the cost of capital of listed mining and manufacturing firms in South Africa.

H2: IFRS adoption's interaction with analysts following has a significant influence on the cost of capital of listed mining and manufacturing firms of South Africa.

H3: IFRS adoption's interaction with managerial opportunism significantly influences the cost of capital of listed mining and manufacturing firms of South Africa.

H4: Combined effect of IFRS-adoption and information asymmetry significantly influence the corporate performance of listed mining and manufacturing firms in South Africa.

H5: Combined effect of IFRS-adoption and analyst following have a significant influence on the corporate performance of listed mining and manufacturing firms in South Africa.

H6: The interaction effect of IFRS-adoption and managerial opportunism significantly influences the corporate performance of listed mining and manufacturing firms in South Africa.

H7: The macroeconomic performance of South Africa has significantly influenced by the combined effect of IFRS-adoption and information asymmetry.

H8: The macroeconomic performance of South Africa has a significant influence on the combined effect of IFRS-adoption and analyst following.

H9: The macroeconomic performance of South Africa has a significant influence on the combined effect of IFRS-adoption and managerial opportunism.

Figure 1.1: Relationships between IFRS Adoption, Accounting Information Environment, Capital Structure, Corporate and Macroeconomic Performances

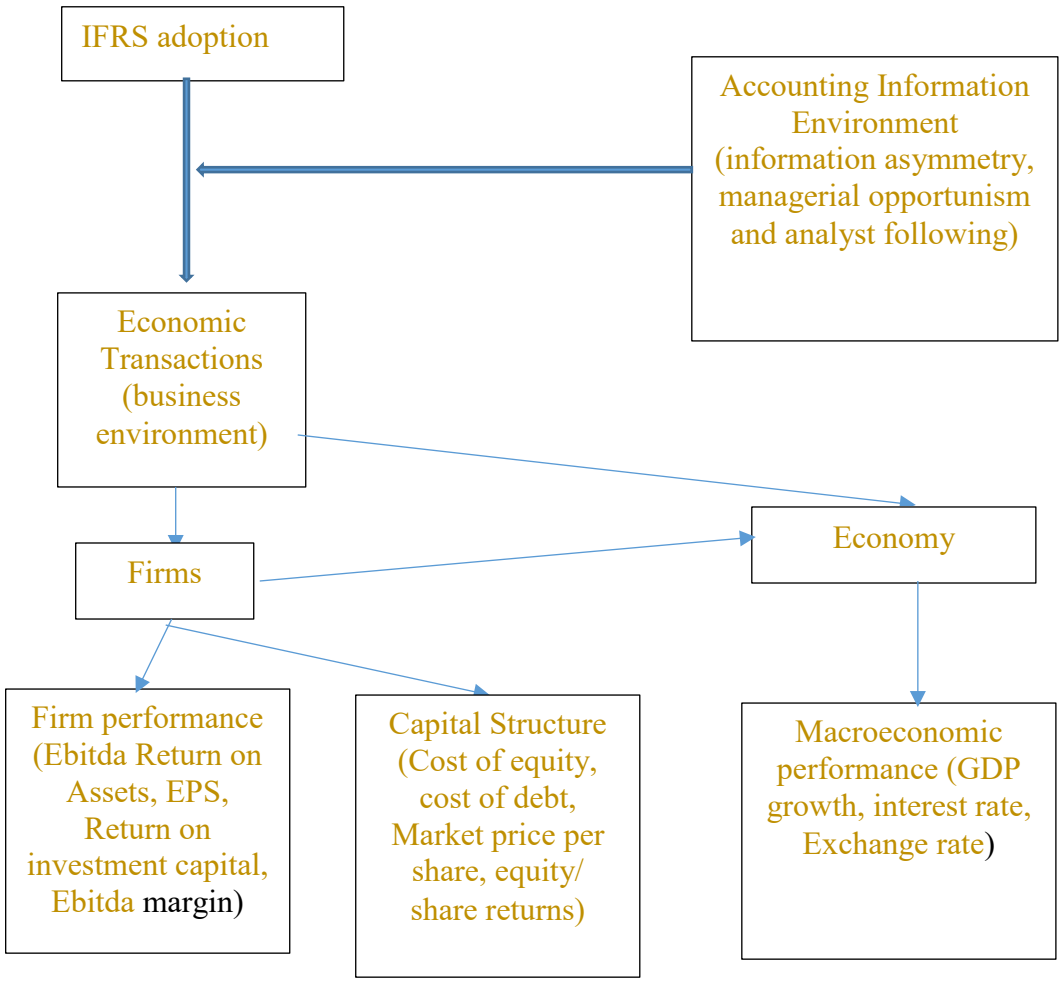

Figure 1. Source: Adapted from La Rocca (2007)

2 - LITERATURE REVIEW

The literature review is sub-divided into three as theoretical review, conceptual review, focusing on accounting information environment, and empirical review.

2.1 THEORETICAL REVIEW

The theories that underpin this study were signaling theory, capital needs theory, positive accounting theory, and economic theory of networks. For example, signaling theory demonstrates that way asymmetry information to be managed by industry players with more signaling information than others. Thus, based on signaling theory, firms adopting IFRS is a signal to the capital market and industry players that companies are willing to disclose the relevant information based on more preventive accounting principles. Based on capital need theory, the primary motivation for companies to increase quality reporting is the need to raise

capital. From the capital needs theory, IFRS adoption with credible disclosure will ease new capital inflow (Craven and Marston, 1999) to adopting countries and firms.

2.2 ACCOUNTING INFORMATION ENVIRONMENT

The accounting information environment influences the impact of IFRS adoption. The accounting information environment comprises of information asymmetry, analyst following, managerial opportunism, and third-party assurance. However, this study ignored third party assurance due to a lack of data. Iatridis (2011) defines information asymmetry as a situation whereby some stakeholders obtain more information than others. Thus, information asymmetry results in three fundamental problems in the capital market, namely, adverse selection, moral hazard, and high monitoring cost. Higher accounting information quality reduces the processing cost of public disclosure, thereby reducing the number of uninformed investors that trade in the firm's stock (Merton, 1987; Brown et al., 2004).

Professional financial analysts serve as an intermediary between investors and firms (Schipper, 1991), and this intermediary role is inevitable in capital market development. Investors rely on professional financial analysts to learn more about a firm and to make investment portfolio decisions. Professional financial analysts follow firms in which the cost of obtaining information is lesser than the benefits of brokerage commission (Bhushan, 1989). Analyst following has generally applied as a proxy for the richness of a firm's information environment (Brown and Higgins 2002; 2005). Williamson (1985) notes that opportunism is "self-interest seeking with guile." Managerial opportunism is an inevitable consequence of costly information. In a world of no transaction cost, including the cost of determining behaviour and actions of stewards (managers), there would be no opportunism. IFRS enhances transparency and timely disclosure of accounting information and increases the accessibility of firms' data by users, including investors, financial analysts, credit rating agencies, regulators, and stakeholders (Kim et al., 2013). Thus, with IFRS, stakeholders can monitor and effectively assess the behaviour of the manager, thereby reducing opportunism (Kim et al., 2013).

2.3 EMPIRICAL REVIEW

Empirically, some studies have considered the impact of IFRS adoption on capital structure, corporate performance, and economic performance. For example, Gatsios, Da Silva, Ambrozini, Neto, and Lima (2016) conduct a study in Brazil on the impact of IFRS on equity cost of open capital companies for the period 2004-2013 using the difference in difference analysis. The study finds that IFRS does not reduce equity costs. Houqe, Monem, and Zijl (2016) use the periods of 1998-2002 and 2009-2013 and 290 firm-year observations of listed companies in New Zealand to study the economic effects of IFRS adoption. The study finds a significant negative impact of IFRS on the cost of equity capital. Total assets and market to book ratio both have a negatively significant statistical impact on the cost of equity capital.

On the cost of debt capital, Florou and Kosi (2015) use an international sample of private loans and public bonds from 2000 to 2007, single equation analysis, and endogenous

switching model to investigate, among other things, the impact of IFRS on the cost of debts. The study finds that mandatory IFRS adoption reduces the cost of public debt, but no significant relationship between the cost of private debt and IFRS. Similarly, Choi and Lee (2015) investigate the relationship between IFRS non-audit consulting services and the cost of debt of listed firms in the Korean Stock Market from 2008 to 2012 using ordered logit and ordinary least squares regression techniques. The study finds that IFRS non-audit consulting services decrease the cost of debt during the post-IFRS period. Specifically, non-audit consulting services are negatively related to the interest rate (cost of debt proxy 2) but positively related to the client's bond credit rating (cost of debt proxy 1). Also, size, leverage, and return on assets, among other findings, are found to have a positive, negative, and positive impact on the cost of debt (credit rating), respectively. Further, size, leverage, and return on assets, among other findings, are found to have a negative, positive, and negative impact on the cost of debt (Interest rate), respectively.

Moscariello, Skerratt, and Pizzo (2014) examine the impact of IFRS on the cost of corporate debt in the UK and Italy by using a sample of 74 Italian and 88 UK firms for the period 2002 to 2008. The study adopts both interactive and shift models. They find that while IFRS has no impact on the cost of debt in the UK, the interaction of IFRS with interest rate has a statistically negative impact on the cost of corporate debt. Further tangibility and the interbank rate has a negative and positive impact on the cost of corporate debt, respectively, in both the UK and Italy. Also, interactions of IFRS with sales and tangibility are all found to be insignificant. Concerning corporate performance, Sanyaolu, Iyoha, and Ojeka (2017) investigate the impact of IFRS on the earnings per share and earnings yield of fifteen banks quoted on the Nigerian stock exchange for the period 2009 to 2014 by adopting the pooled OLS technique. The study, therefore, finds the statistically significant impact of IFRS on both earnings per share and earnings yield. Also, firm size, market price, and board size showing a negative, negative, and positive statistically significant impact on earnings yield, respectively. In contrast, market price and board size have a significant positive impact on earnings per share. Similary, Ironkwe, and Oglekwu (2016) conduct a study by comparing the profitability of listed manufacturing firms in Nigeria during the pre-IFRS period (2009-2011) and the post-IFRS period (2012-2014). Analysis of Variance and descriptive statistics are employed by the study to attain its objectives. They find no statistically significant impact of pre-IFRS and post-IFRS on returns on equity and earnings per share. Adeuja (2015) investigates the impact of IFRS on the performance of banks in Nigeria for the period 2010-2013 using descriptive financial ratio analysis and an independent t-test.

On the IFRS impact of macroeconomic variables, Akpomi and Nnadi (2017) investigate the impact of IFRS on Foreign Direct Investment (FDI) among forty-five African countries for the period 1996 to 2011, using the fixed effect estimation technique. The study finds IFRS to have a significant positive effect on FDI inflows. Similarly, Lungu, Caraiani, and Dascălu (2017) study emerging countries in the EU and find countries adopting IFRS to be more likely to obtain higher FDI flows than non-adopters. Among adopters (firms) of IFRS, listed companies' have a higher impact of IFRS on FDI flows than unlisted companies. Also, among firms who adopted IFRS, listed companies' have a higher impact of IFRS on FDI flows than

unlisted companies. Pricope (2017) investigates the impact of IFRS on FDI flows in 38 developing countries using a sample from 2008 to 2014 by employing the propensity score matching method. The findings show a positive impact of IFRS on FDI in developing countries. Olugbenga, Aanu, and Mary (2016) determine the relationship between IFRS and FDI in Nigeria by administering 165 questionnaires to preparers and users of annual reports and adopting the OLS regression technique. The study, therefore, finds that IFRS has a significant positive relationship with FDI.

2.4 RESEARCH GAPS

Based on the empirical review, this dissertation identifies and fills the following research gaps:

Gap 1: On the impact of IFRS on the cost of debt capital and cost of equity capital, studies carried in either Europe or Asia, with no single study conducted in Africa. This study, therefore, fills a significant gap in the literature by investigating the impact of IFRS on the cost of debt capital and the cost of equity capital in South Africa, which is one of the biggest economies in Africa.

Gap 2: On the impact of IFRS on firm performance, it is a fact that none of the studies above investigates the impact of IFRS on firm performance in South Africa. This thesis is to contribute to knowledge by investigating the impact of IFRS on firm performance. Returns on Investment Capital (ROIC), Earning before Interest and Tax, Depreciation and Amortization to Assets (EBITDA Total Assets), EBITDA, and Earnings per Share (EPS) are proxies applied in South Africa given that all the African studies have entirely focused on Nigeria.

Gap 3: On the impact of IFRS on macroeconomic indicators, the literature reveals that all the studies focused on the impact of IFRS on FDI. However, this study fills a significant gap in the literature by investigating the impact of IFRS on economic growth (GDPG), interest rate (IR), and exchange rate (EX). Thus, to the best of the author's knowledge, this study is the first to study how IFRS affects economic growth, interest rate, government borrowing, and exchange rate.

Gap 4: Also, to the best of the author's knowledge, no single study has investigated the impact of IFRS on the cost of debt capital, cost of equity capital, firm performance, and macroeconomic indicators all put together. This study, therefore, filled a significant gap in the literature by being the first single study to investigate the impact of IFRS on the cost of debt capital, cost of equity capital, firm performance, and macroeconomic indicators altogether.

3 - METHODS AND MATERIAL

3.1 Data Type and Sources

The thesis used annual panel data, covering forty- nine listed mining and manufacturing firms (see Table 1) in South Africa that have consistently published annual reports for the 2001-2014 period from INET BFA/IRESS SA, and Anupedia. Data. The companies considered reported under IFRS and had both common stock and debt in their capital make-up. This study followed Papaioannou (2006) and used a weighted-average exchange rate for revenues and expenses as well as changes to retained earnings within the current reporting period and closing exchange rates for all assets and liabilities. The study translates all sampled companies with a foreign currency other than the South African Ran to the local Ran. The study sourced the macroeconomic data from varied sources. Whiles the interest rates used were from Fred.Stlouisfed.org, exchange rate data from federalreserves.org, and GDP growth data from World Development Indicators. The study screened all data collected for missing and outliers. This thought followed Huang et al. (2009) and Carr and Wu (2009) and adopted the interpolation method to take care of all missing data. This study displayed minimum and maximum observations for the data on each variable to identify outliers and corrected them.

3.2 Study Variables

The variables used in this paper are described in Table 1.

Table 1: Descriptions and Measurements of Study Variables

Type of Variables	Specific Variables	Formula/ description	Source
Dependent variables (Capital structure)	Cost of Equity Capital (COEC)	=Market price per share (MPPS)/ Earnings per share (EPS) where; MPPS=share price (MPS)/ total share outstanding (T.SHS) in natural logarithm EPS=turnover (TUROV)/ total share outstanding (T.SHS) in natural logarithm	Walter A. Morton (1970). hwww.economicsdiscussion.net
	Cost of Debt Capital (COBC)	=[1-tax rate]*[(interest expense/[1-bearing debt)]	Pittmana and Fortin, (2004); Francis et al., (2005); Gul et al., (2013)
	Share Price (MPS)	Handy collection from JSE	The INET BFA /IRESS SA Database
	Equity/Share Returns(EqtR)	The ratio of current share price to previous share price	Murray et al. (2006) Dragomir (2010)
Dependent variables (corporate performance)	EBITDA Return on Assets (PROFITABILITY)	EBITDA Return on Assets = EBITDA / Total Assets	Johnson, and Tatiana Churyk, (2011)

	Earnings Per Share Ln(EPS)	EPS=Turnover (TUROV)/ total share outstanding (T.SHS) in natural logarithm	Economicsdiscussion.net
	Return on investment capital (ROIC)	EBIT/investment capital Where investment capital=total debt + total equity	Damodaran (2007)
	EBITDA margin	EBITDA/Net sales	Rahman (2016)
Dependent Variables (macroeconomic performance)	GDP growth (GDPG)	Yearly growth of GDP	Not computed
	Exchange rate (EX)	RAN to Dollar rate on 31st December	Not computed
	Interest rate (IR)	Central bank rate to commercial banks (base rate).	Not computed
Moderating variables	Managerial Opportunism (MO)	Earnings management measured as discretionary accrual (i.e. residuals from total accrual) in natural logarithm formula: $DA = TA - (\beta_0 + \beta_{1t}\frac{1}{A_{i,t-1}} + \beta_{2t}\frac{\Delta Rev_{i,t} - \Delta Rec_{i,t}}{A_{i,t-1}} + \beta_{3t}\frac{PPE_{i,t}}{A_{i,t-1}})$ Where; DA=discretionary accruals TA= total accrual PPE= plant, property and equipment $A_{i,t-1}$=total assets in the beginning of the year Rev=sales Rec= receivable accounts	Modified Jones Model
	Information Asymmetry (IA)	Bid-Ask spread using high and Low share prices	Corwin and Schultz (2012)
	Analyst Following (AF)	Numbers (1- 100)	The INET BFA Database
Main Independent Variable	IFRS	Dummy: Pre-adoption coded as 0 and post-adoption coded as 1	-
Control Variables	Leverage (LEV)	Total debt/total asset	Averkamp (2004) Dragomir (2010)
	Liquidity (LQ)	A current asset to current liability	Breuer et al. (2012)/ Baker and Martin (2011)
	Tangibility (TANG)	The ratio of Plant, properties, and equipment to total asset	Badertscher et al. (2015, 2018)
	The integrity of the legal system (INTG)	Qualitative judgment by South African risk rating agency; ranging from 0 (lowest) to 10 (highest)	Not computed

3.3 Estimation Techniques

IFRS adoption represents a dummy variable (pre-adoption period and the post-adoption period). The study used random effects (RE) or fixed effects (FE) or pooled OLS estimation

techniques depending on Breusch and Pagan Lagrangian multiplier test. All estimations were done with robust standard errors to correct for any inherent heteroscedasticity problem.

4 - RESULTS AND DISCUSSIONS

The estimated results on each dependent variable are reported and discussed in this section. The estimated results on the impact of accounting information environment on the influence of IFRS adoption on the capital structure shown in Table 3.

Table 2: The Impact of IFRS on Capital Structure of Listed Firms in South Africa (2001-2014 excluding 2005)

	(FE) COEC	(FE) LNCODC	(FE) MPPS	(POLS) EQRS
TANG	-0.522	0.597*	-0.0110	0.0742
	(0.339)	(0.338)	(0.0118)	(0.0745)
LNLQ	-0.103*	0.117	-0.00443	-0.0308
	(0.0607)	(0.102)	(0.00483)	(0.0428)
LEV	-0.433	-2.218***	-0.0418	-0.275*
	(0.343)	(0.550)	(0.0272)	(0.149)
LNINTG	-0.0576	0.495***	-0.000505	-0.319**
	(0.0711)	(0.176)	(0.00454)	(0.149)
IA	0.156	-0.0338	0.0268	-0.171
	(0.105)	(0.253)	(0.0215)	(0.175)
LNAF	-0.0266	0.0734	-0.00490	0.0351
	(0.0312)	(0.0553)	(0.00615)	(0.0548)
MO	-0.0147	0.268	0.0126	0.00347
	(0.0533)	(0.176)	(0.00993)	(0.116)
IFRSIA	-0.139	0.0262	-0.0248	0.173
	(0.109)	(0.252)	(0.0238)	(0.179)
IFRSAF	0.0105	-0.0176	0.000501	-0.00326
	(0.00814)	(0.0177)	(0.00104)	(0.0122)
IFRSMO	0.00784	-0.300	-0.0108	0.0754
	(0.0541)	(0.183)	(0.00818)	(0.112)
LNIR	0.0769*	0.255**	0.00862	-0.0343
	(0.0386)	(0.118)	(0.00669)	(0.105)
GDPG	0.00972**	-0.0434**	-0.0000631	0.0795***
	(0.00403)	(0.0173)	(0.00107)	(0.0119)
IFRS	-0.0345	0.0240	0.0202*	-0.191*
	(0.0860)	(0.142)	(0.0118)	(0.0990)
Constant	0.444*	-3.493***	0.00247	0.595**
	(0.256)	(0.414)	(0.0127)	(0.272)
N	635	636	635	636
No. of firms	49	49	49	49
Overall R^2	0.000147	0.123	0.00448	
R^2				0.133
F	2.063**	5.595***	1.865*	12.54***

Cluster robust standard errors in parentheses $^{*}\ p < 0.1$, $^{**}\ p < 0.05$, $^{***}\ p < 0.01$

Results in Table 2 show that IFRS, as well as its interaction with other variables (information asymmetry, analyst following, and managerial opportunism), had no statistically significant impact on the cost of equity capital and cost of debt capital. The study is similar to the findings of Gatsios et al. (2016), who found that IFRS did not reduce the cost of equity capital of open capital companies in Brazil. However, the above findings are contrary to the findings of Houqe et al. (2015), who found a significant negative impact of IFRS on the cost of equity capital.

The result on debt capital is similar to those of Moscariello et al. (2014) who found IFRS to have no impact on the cost of debt in the UK as well as Pizzo et al. (2009) who found that mandatory IFRS adoption did not have any impact on the cost of debt of either Italy or the UK. However, the result is contrary to that of Florou and Kosi (2015), who found mandatory IFRS adoption to decrease the cost of public debt as well as Choi and Lee (2015), who revealed IFRS non-audit consulting services to reduce the cost of debt (interest rate). IFRS had a significant positive and negative impact of market price per share and equity return, respectively. However, the interaction of IFRS with any accounting information environment did not significantly impact on the market price per share and equity returns. This study reported the estimated results on the impact of accounting information environment on the influence of IFRS adoption on corporate performance in Table 3.

These findings are consistent with agency theory, signaling theory, and stakeholder theory. For example, agency theory posits that as firms adopt IFRS, agency problem is dealt with and the interests of shareholders are determined. It suggests that the value for shareholders will increase, thus increase in market price per share. From signaling theory, adopting IFRS is a signal to the capital market and industry players that companies are willing to disclose the relevant information based on more preventive accounting principles. The study suggests an increase in investors for firms due to the posit image created by IFRS adoption. As the number of investors increases, demand for a share of the company increase, thereby increasing the market price per share while the return on equity decreases. From agency and signaling theories cost of debt capital and cost of equity capital are expected to decrease. However, these were not the case in this study. The result may be as a result of the similarities between the SA GAAP and IFRS. IFRS is similar to SA GAAP, such that the introduction of IFRS in SA was smooth with little or no problem, unlike other countries. This similarity possibly explains why SA is the first African country to adopt IFRS.

The accounting information environment in SA is good with high analyst following, low managerial opportunism, and information asymmetry due to stakeholders' protection. However, this environment could not complement IFRS adoption to influence the capital structure of the sampled firms.

Table 3: The Impact of IFRS on Performance of Listed Firms in South Africa (2001-2014 excluding 2005)

	(FE) Profitability	(FE) ROIC	(RE) LNEPS	(FE) EBITDA
TANG	0.158*	0.295	1.179*	3.178
	(0.0883)	(0.178)	(0.707)	(5.080)
LNLQ	0.0394	0.0344	0.307	-0.0942
	(0.0257)	(0.0453)	(0.263)	(1.006)
LEV	-0.158*	-0.485***	0.240	-9.094
	(0.0809)	(0.152)	(0.740)	(7.034)
LNINTG	0.0656	0.219**	0.117	-1.865
	(0.0479)	(0.0993)	(0.170)	(1.470)
IA	0.0364	0.132	-0.168	1.921
	(0.0562)	(0.175)	(0.378)	(3.331)
LNAF	-0.00413	-0.00409	0.227**	0.701
	(0.0161)	(0.0271)	(0.0890)	(1.203)
MO	0.00943	-0.0212	0.198	0.369
	(0.0292)	(0.0720)	(0.163)	(2.018)
IFRSIA	-0.0380	-0.119	0.0474	-2.455
	(0.0556)	(0.171)	(0.401)	(3.313)
IFRSAF	-0.000434	-0.00105	-0.0705***	-0.306
	(0.00340)	(0.00705)	(0.0254)	(0.304)
IFRSMO	-0.0134	0.0517	-0.218	-0.548
	(0.0288)	(0.0808)	(0.160)	(2.069)
LNIR	0.0858***	0.138***	0.107	-0.542
	(0.0216)	(0.0302)	(0.224)	(1.323)
GDPG	0.00713***	0.0149**	-0.0494***	-0.326**
	(0.00248)	(0.00584)	(0.0190)	(0.144)
IFRS	0.0389	0.0791*	1.231***	6.136**
	(0.0287)	(0.0435)	(0.318)	(2.659)
Constant	-0.197**	-0.546***	-4.579***	5.491
	(0.0895)	(0.189)	(0.863)	(4.657)
N	636	636	635	636
No. of firms	49	49	49	49
Overall R^2	0.0660	0.0703	0.00126	0.00842
F	5.968***	5.848***		1.974**
Chi2			55.19***	

Cluster robust standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

In Table 3, regarding the profitability model, IFRS, as well as its interactions with other variables, were found not to have any significant effects on profitability. Concerning return on investment capital, while the interactions of IFRS with other variables were insignificant, IFRS was found to have a significant positive effect on return on investment capital. Thus,

the coefficient of IFRS being 0.0791 and significant at 10% implies that the return on investment capital increased by 0.0791 units as a result of IFRS adoption.

Concerning the earnings per share model, the interaction of IFRS with analyst following (IFRS*AF) had a significant negative impact on earnings per share. However, IFRS had a significant positive impact on earnings per share. Thus, while the interaction of IFRS with analyst following shows a negative effect on earnings per share, IFRS on its own had a positive impact. The finding on IFRS echoes that of Sanyaolu et al. (2017), who found a statistically significant effect of IFRS on earnings per share. However, this contradicts with Ironkwe and Oglekwu (2016), who found no statistically significant impact of the post-IFRS period on returns on equity and earnings per share. Adeuja (2015) found no statistically significant difference in the performance of banks in Nigeria during the pre and post-adoption of IFRS.

From Table 3, IFRS had a significant positive impact on operations margin with a coefficient of 6.136. Thus, IFRS adoption significantly increased operations margin by 6.136, but its interaction with accounting information environment did not have any significant impact.

Table 3 shows the impact of accounting information environment on the influence of IFRS adoption on economic performance in South Africa. The increase in return on investment capital, earnings per share, and operations margin due to IFRS are consistent with agency theory, signaling theory, and positive accounting theory. From agency theory, IFRS adoption reduces self-seeking interest and leads to pursuing a corporate interest, thereby increasing corporate performance. Similarly, from signaling theory, IFRS adoption creates a positive signal for the adopting firms due to higher transparency, the accuracy of accounting information, and accountability ensured under IFRS. This positive signal acts as an attraction for investors, leading to higher investment and, subsequently, higher performance in the IFRS-adopting firms. However, earnings per share decreased when IFRS adoption interacted with analysts following. This finding pertains to South Africa. The coefficient on IFRS is negative and marginally significant (0.2382; p, 0.10), consistent with a lower occurrence of small positive earnings in the post-adoption period relative to the pre-adoption period.

Table 4: The Impact of IFRS on Macroeconomic Indicators in South Africa (2001-2014 excluding 2005)

	(POLS) GDPG	(POLS) LNEX	(POLS) LNIR
TANG	0.0714	-0.0149	-0.0390
	(0.204)	(0.0135)	(0.0286)
LNLQ	-0.277*	0.0142	-0.0424*
	(0.160)	(0.0139)	(0.0252)
LEV	-0.841**	0.0247	0.0284
	(0.414)	(0.0361)	(0.0558)
LNINTG	-4.017***	-1.018***	0.840***
	(0.467)	(0.0220)	(0.0864)
IA	-0.319	-0.0229	-0.0148
	(0.278)	(0.0462)	(0.0523)
LNAF	0.00780	-0.0264*	0.0578***
	(0.0851)	(0.0146)	(0.0191)
MO	-0.0198	-0.00898	-0.0266
	(0.133)	(0.0213)	(0.0330)
IFRSIA	0.302	0.0344	-0.00195
	(0.294)	(0.0473)	(0.0528)
IFRSAF	0.0392	0.00302	-0.00258
	(0.0287)	(0.00342)	(0.00538)
IFRSMO	0.337**	0.0105	0.0312
	(0.163)	(0.0232)	(0.0351)
LNIR	1.316***	0.143***	
	(0.128)	(0.0134)	
LNEX	-5.234***		0.516***
	(0.513)		(0.0734)
IFRS	-0.454**	0.0245	-0.333***
	(0.198)	(0.0233)	(0.0334)
GDPG		-0.0311***	0.0282***
		(0.00216)	(0.00333)
Constant	17.14***	3.293***	-0.0989
	(1.563)	(0.0616)	(0.260)
N	636	636	636
No. of firms	49	49	49
R^2	0.256	0.612	0.415
F	151.0***	532.4***	586.9***

Cluster robust standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The results in Table 4 show that the interaction of IFRS with managerial opportunism and IFRS had coefficients of 0.337 and -0.454, respectively, and both were significant at 5%. Thus, the interaction of IFRS with managerial opportunism and IFRS shows an increase and decrease gross domestic product growth by 0.337 and 0.454 units, respectively.

IFRS has a significant adverse effect on the interest rate. Thus, the interest rate wi decrease by 0.333 units as a result of IFRS adoption. However, the interaction of IFRS with accounting information environment did not have a significant impact on the interest rate. The finding on the impact of IFRS on Gross Domestic Product Growth and interest rate conflicts with that of Akpomi and Nnadi (2017), Lungu et al. (2017), Pricope (2017), Olugbenga, et al. (2016), and Uchenna and Matthias (2015) who found IFRS to have a positive influence on FDI. IFRS adoption decreases interest rate, and this is consistent with agency theory, signaling theory, and capital need theory. From agency theory and signaling theory, IFRS adoption reduces agency costs such as monitoring cost and transaction cost, thereby lowering the opportunity cost of borrowing (interest rate). Moreover, capital needs theory posits that firms yearn to raise cheaper capital. One of the ways to raise cheaper capital is through credible and adequate accounting information disclosure, and these were better under IFRS. Thus, IFRS adopting countries expect a lower interest rate, and this is consistent with the data from South Africa.

However, IFRS adoption decreased gross domestic product growth. From the economic theory of network, IFRS is beneficial to the adoption country only when its autarky and synchronization values exceeds that of the local GAAP value. Ramanna and Sletten (2009) note that "the autarky value of IFRS is immediate value to the adopting country by using the IASB-developed standards." It brings both political and economic benefits to a country. The political value of domestic GAAP signifies the ability and the legality to regulate the accounting policies. The economic net value represents the capability of an economy to stimulate efficient resource allocation strategies in its nation positioned to adopt new standards. Thus, from the theory, a fall in GDP growth, presupposes that the economic benefit of IFRS adoption is lower relative to the local GAAP in South Africa.

5 - CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

5.1 CONCLUSION

IFRS Adoption nor its interaction with the accounting information environment had a statistically significant impact on the cost of equity capital and debt capital. However, IFRS adoption was found to increase the market price per share but decreased equity returns in South Africa. Neither IFRS adoption nor its interaction with the accounting information environment had a statistically significant impact on the profitability of manufacturing companies in South Africa. However, IFRS adoption significantly increased return on investment capital, earnings per share, and operations margins. Interaction of IFRS adoption with analysts following significantly reduced earnings per share of the selected listed companies. Whiles IFRS adoption significantly reduced gross domestic product growth, and interest rate, the interaction of IFRS with accounting information environment had no statistically significant impact on them.

This research has numerous policy implications: Firstly, it helps the investment community to better understand the impact of international financial reporting standards on the cost of capital in leading investment decisions. Secondly, it motivates the standard-setting bodies in countries where IFRS adoption is not compulsory to think through bypassing laws and regulations. On mandatory IFRS adoption, which will lead to more convergence of global accounting standards that would benefit all debt capital providers and other participants. Thirdly it boosts financial statement analysis of companies after IFRS adoption and enabling them to assess and evaluate their performance against industry players.

5.2 RECOMMENDATIONS

Based on the findings, the study, therefore, made the following recommendations:

1. Other developing countries in Africa that are yet to adopt the IFRS standards must be encouraged to do so since it increases the market price per share, return on investment capital, earnings per share, and operations margin.
2. Moreover, firms should institute measures that would reduce the number of analysts following forecast error since it has a decreasing effect on earnings per share.
3. In addition to adopting IFRS, the credibility of financial reports must avoid managerial opportunism since the interaction of IFRS with managerial opportunism enhances economic growth.

5.3 SUMMARY OF RESEARCH

Starting with the literature review, the design of the research followed guidance from predecessors that indicated significant findings of the study by grouping them into findings on the 2001-2014 period excluding 2005. Capital Structure, Firm Performance, and Macroeconomic Factors in South Africa form the bases of the study. Moreover, for the 2001-2014 period excluding 2005, a summary of findings on the impact of IFRS on of Cost of Equity Capital, Market Price per Share, Equity Returns, Cost of Debt Capital, Firm Performance and Macroeconomic Factors in South Africa moderated by Analysts following, Information Asymmetry and Managerial Opportunism were presented. The findings on the research hypotheses are in Table 5.

TABLE 5.

Hypothesis	Assumed relationship	Actual relationship	Hypotheses therefore...
H1o	IFRS does not reduce the cost of equity capital of listed firms in South Africa	Negative, but not statistically significant	Confirmed
H1a	IFRS reduces the cost of equity capital of listed firms in South Africa		
H2o	IFRS has no effect on the cost of debt capital of listed firms in South Africa	Positive but not statistically significant	Confirmed
H2a	IFRS has an effect on the cost of debt capital of listed firms in South Africa		
H3o	IFRS does not affect the performance (EQR) of listed firms in South Africa.	Negative and statistically significant	Rejected

H3a	IFRS affects the performance (EQR) of listed firm s in South Africa		
H4o	IFRS does not affect the performance (MPPS) of listed firms in South Africa	Positive and statistically significant	Rejected
H4a	IFRS affects the performance (MPPS) of listed firms in South Africa		
H5o	IFRS does not affect the performance (ROIC) of listed firms in South Africa	Positive and statistical significant	Rejected
H5a	IFRS affects the performance (ROIC) of listed firms in South Africa		
H6o	IFRS does not affect the performance (EBITDA margin) of listed firms in South Africa	Positive and statistically significant	Rejected
H6a	IFRS affects the performance (EBITDA margin) of listed firms in South Africa		
H7o	IFRS does not affect the performance (EPS) of listed firms in South Africa	Positive and statistically significant	Rejected
H7a	IFRS affects the performance (EPS) of listed firms in South Africa		
H8o	IFRS does not affect the performance (EBITDA ROTA) of listed firms in South Africa	Positive but not statistically significant	Confirmed
H8a	IFRS affects the performance (EBITDA ROTA) of listed firms in South Africa		
H9o	IFRS does not affect macroeconomic indicators (IR) in South Africa	Negative and statistically significant	Rejected
H9a	IFRS affects macroeconomic indicators (IR) in South Africa		
H10o	IFRS does not affect macroeconomic indicators (EXR) in South Africa	Positive but not statistically significant	Confirmed
H10a	IFRS affects macroeconomic indicators (EXR) in South Africa		
H11o	IFRS does not affect macroeconomic indicators (GDPG) in South Africa	Negative and statistically significant	Rejected
H11a	IFRS affects macroeconomic indicators (GDPG) in South Africa		

Table 5: Summary of Outcomes and Findings (Source: Own Work)

5.4 LIMITATIONS AND SUGGESTIONS FOR FUTURE STUDIES

Every study has some limitations, and this paper is no exception. First and foremost, the sample selection was limited to only mining, agricultural, construction, and manufacturing firms (non-financial institutions) with a consistently published financial statement data. Thus, the results must be interpreted with caution and not generalized to the entire population of JSE listed companies. Second, results may also be different if interest variables were

measured differently in our model specifications. Thirdly, although several essential control variables are considered in the current study, some additional control variables, that prior research has shown can impact the IFRS adoption decision, were not included. In this regard, the researcher believes a continuous interaction between large- sample and cross- country would enhance the literature on firm reaction to IFRS adoption that ensures credible and quality accounting information disclosure. The researcher believes that this dissertation provides scope for further studies by exploring the comparison of capital structure, cost of capital, equity returns, firm performance, and macroeconomic indicators of firms in African countries that have adopted IFRS. Also, firms in African countries who are yet to adopt IFRS provided data would be available.

A future study could compare the result by excluding the global financial crisis period, which may be volatile and unusual in the global economy. The inclusion of data beyond 2007 may have led to results that are not representative of the impact of IFRS adoption on the cost of equity capital and cost of debt capital, equity returns, and share/ stock price in a stable economy. Finally, the researcher believes that the study area of a cross-country study remains rich and requires future research.

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8 - APPENDIX 1: SELECTED COMPANIES FOR THE STUDY

Listed Agricultural/Manufacturing/ Construction Companies		**Listed Mining companies**	
AECI	Datatec	African Rainbow Ltd	Netcare
African Oxygen Ltd	Distell	Anglo American Plc	Oceana
Allied Electronics	Grindrod	AngloGold Ashanti	Omnia
Argent	Illovo Sugar Ltd	Arcelor Mittal	Reunert
Aspen Pharmacare Holdings	Impala Platinum Holdings Ltd	Basil	Sasol Ltd
Assore	Metair	BHP Billiton Plc	urcingSentula
Astral Food	Murray & Roberts Holdings Ltd	Drdgold	Tongaat
Astrapak	Mustek	Group Five	York timbers
Aveng	NAMPAK	Growth Point	
AVI	PPC Limited	Harmony Gold Mining	
Barlo World	SABMiller	Hosken	
Beige	Sappi Ltd	Iliad	
Bidvest	Sasol Ltd	Jasco	
Crookes	Sovereign	Merafe	

Table 1: Selected listed Companies **Source: JSE Website**