EFFECT OF INTERNATIONAL FINANCIAL REPORTING STANDARDS ADOPTION ON EARNINGS QUALITY OF LISTED CONGLOMERATE FIRMS IN NIGERIA

BY

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A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE (M.Sc.) DEGREE IN ACCOUNTING AND FINANCE

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DECLARATION

I declare that the work in this dissertation entitled EFFECT OF IFRS ADOPTION ON EARNINGS QUALITY OF LISTED CONGLOMERATE FIRMS IN NIGERIA has been carried out by me in the Department of Accounting Ahmadu Bello University, Zaria. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this dissertation was previously presented for another degree or diploma at this or any other institution.

__________________            ____________
Abdulwahab Shehu            Signature            Date
CERTIFICATION

This dissertation entitled EFFECT OF IFRS ADOPTION ON EARNINGS QUALITY OF LISTED CONGLOMERATE FIRMS IN NIGERIA by Abdulwahab SHEHU meets the regulations governing the award of Master of Science (M.Sc.) degree in Accounting and Finance of the Ahmadu Bello University, and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

This dissertation is dedicated to the memory of my Father; Alhaji Shehu Ahmad Tijjani R.A who sowed the seed of scholarship in me at a very early age, also my Mother and to My Sister, Hajiya Hadiza ShehuAbdulraheem for their wonderful care and support throughout the period of my study.
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ABSTRACT

As the debate on the impact of global IFRS adoption continues, little is known about the outcome in Nigeria despite mandatory IFRS adoption, creating a gap. This study examined the effect of IFRS adoption on earnings quality of listed conglomerate firms in Nigeria. The study adopted a correlational and ex-post facto research designs and used data collected from annual reports and accounts of all conglomerate firms listed on the Nigerian Stock Exchange (NSE) as at 2006; examining differences in earnings quality between NGAAP and IFRS reporting years (2006-2011 pre IFRS and 2012-2015 IFRS regulation). This research finds that under IFRS, increase in earnings quality due to increase in persistency of earnings. However, it also finds that, decrease in earnings quality due to decrease in predictability of cash flow and increase in earnings management. Overall, the findings were mixed with two out of the three metrics of the quantitative results indicating that quality has marginally decreased while one indicated that quality improved thus, leading to the conclusion that accounting quality has remained almost the same. Based on the findings, the study recommends that to enhance maximum benefits of IFRS adoption in Nigeria, regulators, standard-setters, top management, external auditors and other policy makers being the key players in standards, need to re-evaluate and work together to tighten compliance and enforce consistency in Nigerian firms so that the impact of IFRS could be felt more, also ensure that the actors in the capital market comply fully with all standards and rules that have been set.
CHAPTER ONE
INTRODUCTION

1.1 Background to the Study

Globalization of the world's capital markets has brought to the forefront the increasing need for comparable and reliable financial information to support the varied transactions and operations of these markets. Transparency and relevance are attributes of financial reporting. Accounting information that meets these attributes increases investors’ confidence, leading to enhanced capital flow. The recent financial crisis has been partly blamed on the erosion of investors’ confidence, owing to perceived lack of transparency in financial markets. Devalle, Onali, and Magarini (2010) posit that opaque markets aggravate the problem of information asymmetry between insiders and outsiders, which could impede the efficient allocation of resources. The International Accounting Standards Board’s (IASB) has equally acknowledged the need to improve reporting quality globally. Consequently, the IASB promotes the application of a common set of financial reporting standards as a solution.

Further, extant literature suggests that applying diverse accounting standards around the world often results in the use of different criteria for resources accounting (IASB, 2009; Lorchir, 2015). Analysts view that this creates inconsistencies in the investment information employed by global investors; a gap that is expected to be narrowed by global application of IFRS. In this regard, complying with IFRS is expected to facilitate informed trading and reduce adverse selection in the market. Information asymmetry puts small investors, who are less likely than their sophisticated counterparts to generate financial information from alternative sources at a disadvantage in the market (Ball, 2006). The notion behind the promotion of a common set of high-quality standards globally is that the risk and cost of processing financial information to investors is reduced. Hassan (2015) opined that in Nigeria, the information disclosure
requirements in the financial statements under Nigerian generally accepted accounting principles (NGAAP) were grossly inadequate to effectively bridge the information asymmetry between companies and the users of the financial statements. Shehu (2011) posit that financial information quality in Nigeria remains weak compared too many advanced jurisdictions. This resulted in the hampering of the growth of efficient equity markets. A common complaint among investors in Nigeria is that financial information on company performance is either unavailable or, if provided, lacks reliability. Hence, he conceived that companies will disclose more of their financial information with the transition to IFRS.

The adoption of IFRS definitely affects many aspects of accounting. For instance, the introduction of fair value principle, which is regarded as the most important implication of IFRS, motivates more debate on the adoption of the standards. More clearly, IFRS required the use of fair value contrary to the book value as used by Nigerian GAAP. It is believed that fair value provides up-to-date information about assets as it reflects their real value. However, impairment test is carried out on goodwill under IFRS, while it expected to be amortized under NGAAP. Adeyemi (2016) is of the opinion that managers have more flexibility under IFRS and may intend to use their accounting decisions to manipulate impairment test of goodwill which could affect the quality of reported earnings. Likewise, NGAAP allows convertible debt to be recorded as long-term debt, while the IFRS records convertible bonds separately into the equity component and the debt components. IFRS which is a principle-based accounting method give managers significant flexibility and discretion and leave more room for earnings manipulation than rule-based accounting standards NGAAP (Adeyemi, 2016).

Furthermore, Delloite (2013) reported that the inception of IFRS has led to the use of a variety of definitions for elements of financial statements like assets, liabilities, equity, income and
expenses. It has also resulted in the use of different criteria for the recognition and measurement of items in the financial statements. In addition, Galaen and Stenheim (2010) recognised that the shift to IFRS represents substantial change in recognition and measurement of accounting numbers and it is reasonable to believe that adoption of IFRS will affect the quality of accounting numbers. Application of the IFRS is expected to produce higher quality financial information because the International standards are characterised by features that facilitate reporting of quality accounting information (Barth et al, 2008).

Earning quality is defined in SFAC No.1 (2008) as earning of higher quality that provides more information about the feature of a firm’s financial performance that is relevant to a specific decision made by a specific decision maker. The quality of accounting information is often determined by the quality of the reported earnings (Schipper, 2003). Researchers use different methods in determining the quality of reported earnings, and so, there is no universal approach on how to determine quality of the reported earnings. Schipper and Vincent (2003) consider three earnings quality constructs: persistence, predictive ability, and the time-series variance of earnings as measures of earnings quality. These constructs are consistent with the Conceptual Framework which suggests that earnings quality might be assessed by some combination of persistence, predictive ability, and variability of earnings.

Earnings being one of the most significant economic variables in financial statements serve as a decision base for different users of financial information. The IASB’s campaign on the global adoption of IFRS has recorded considerable achievements and over 120 countries have adopted or officially allowed IFRS (PWC, 2014). Other countries are establishing timelines to adopt the IFRS. However, the perception that adoption of IFRS is likely to increase quality in reporting earnings and usefulness of financial statements globally has generated considerable
debate. Studies (Lorchir, 2015; Barth, & Schipper, 2008; Atwood, Drake, Myers, & Myers, 2011; Agostino, Drago, & Silipo, 2011) have analysed the impact of IFRS adoption on earnings quality. Different perspectives are followed, targeting various countries and continents.

There are two conflicting views regarding the influence of IFRS adoption on accounting quality. Some studies show that IFRS implementation improves earnings’ quality. In particular, proponents such as Agostino et al. (2011); Lorchir (2015) argued that firms reporting under IFRS provide more decision-useful accounting numbers, for investment and lending purposes relative to firms reporting under domestic accounting standards. The decision usefulness of IFRS-compliant accounting numbers from a theoretical standpoint has also been established. Furthermore, others such as Carmone and Trombetta (2008) and Barth and Schipper (2008) argued that the principles’ orientation underpinning the conceptual framework of IFRS is likely to discourage fraud.

Conversely, opponents of global application of IFRS question the notion that uniformity of standards has significant impact on earnings quality, given that preparers’ incentives remain predominantly divergent and largely out of IASB’s control (Ball et al., 2003). Others (Van der Meulen et al. 2007; Taylor, 2009; Soderstrom & Sun, 2007; JeanJean & Stolowy, 2008) provide empirical evidence to show that IFRS accounting numbers are not of higher quality than Domestic accounting standards in relation to improving earnings quality (Ahmed, Neel, & Wang, 2013). They hold the general view, that propagating an agenda for the adoption of IFRS globally in order to improve earnings quality may be misleading. Additional explanations for the inability of IFRS to improve earnings quality are built on the diversification of country-specific institutional factors which potentially affect enforcement of IFRS even if they were of higher quality. Under this line of argument, relevant research observes that the IASB would be unable
to influence institutional factors that strongly affect operational outcomes of firms within jurisdictions (Hung & Subramanyam, 2007). The World Bank’s (2015) review of government policies and institutions in Africa shows that half of the region’s countries posted relatively weak governance quality. The fact that Nigeria is adopting IFRS under relatively weak governance quality makes Nigerian conglomerate firms a useful setting to test the effect of IFRS on earnings quality in such jurisdictions.

Conglomerate firms in Nigeria are involved in nearly every sector of the economy as well as every chain of production. For the Six listed conglomerates, their interests span the whole spectrum of the economy from manufacturing to automobile, real estate, hotel, general trade and merchandise, power, agriculture and services, among other sectors. Either within a conglomerate or the large sectorial group, an investor will find any sector he wishes to invest in; they all have nothing less than eight business lines that run through the entire sector of the economy (Taofik Salako, 2013).

The general consensus in prior research is that accounting earnings are a premier source of firm-specific information, which shows that investors rely on earnings more than on any other summary measure of performance. Given that conglomerate firms engage in series of unrelated business activities make them to be prone to financial and business risk which continues to erode their earnings. Thus, earnings quality of conglomerate firms becomes paramount because of its continued improved contribution to economic growth. It has also been found that Nigeria has enormous prospects for investment and growth with rich deposits of natural and human resources, which will potentially attract the interest of international investors, particularly at this era of “Change and diversification”, economic recovery and growth plan faced by the country.
Expectedly, financial reporting quality of Nigerian firms has become an issue of interest to the international investing community.

1.2 Statement of the Problem

Earnings could be used to tell the truth and in cheating or misleading. The difference between true earnings and reported earnings impacts on earnings quality, which is described by the capital markets as a summary indicator of financial reporting quality (Francis, Olsson & Schipper 2008). Corporate scandals like Enron, WorldCom, Parmalat and, more specifically, Afribank Nigeria PLC, Cadbury Nigeria PLC and other corporate fraud in Nigeria have continued to raise questions about earnings quality in Nigeria and the world at large.

As the debate on the impact of global IFRS adoption continues, little is known about the outcome in Nigeria despite IFRS adoption, creating a gap. Studies (See Ashbaugh & Pincus, 2001; Ball et al. 2003; Leuz et al. 2003; Tendeloo & Vanstraelen, 2005; Daske, 2006; Bartov, 2005; Ball, 2006; Callao et al. 2007; Hung & Subramanyam, 2007; Van der Meulen et al. 2007; Soderstrom & Sun, 2007; JeanJean & Stolowy, 2008; Barth et al. 2008; Chen et al. 2010; Devalle et al, 2010; Agostino et al, 2011; Christensen et al. 2015;) have continued to submit empirical evidence supporting and refuting the capability of IFRS to enhance earnings quality. However, until date, a consensus is yet to be reached on the efficacy of mandatory IFRS adoption impact on earnings quality in developing countries. This realisation suggests that the debate remains unsettled, and there is a need for further empirical evidence on different jurisdictions to enrich the debate (Bruggemann et al. 2013). Specifically, current studies have not looked at Africa closely in this area of accounting research, even as African countries have adopted the IFRS and set timelines for mandatory adoption (PWC, 2014).
This study is apt given that most of the studies mentioned above were carried out in developed countries and to the best of our knowledge there exist scanty empirical works carried out on IFRS adoption and Quality of accounting information in Nigeria. Very few studies in this area in Africa include the study of Elbannan (2010) from Egypt, Outa (2011) from Kenya, Ames (2013), Yeboah and Yeboah (2015) both from South Africa and Lorchir (2015) from Nigeria. Other Nigerian studies have focused mainly on value relevance attributes of earnings quality and banking sector as domain (See for example, Tanko, 2012; Akindele, 2012; Akpaka, 2014; Sanni et al, 2014; Madawaki, 2014; Adaramola & Oyerinde, 2014; Abdul-Bakki et al., 2014; Adebimpe & Ekwere, 2015; Yahaya et al., 2015; Abata, 2015; Hassan, 2015; Umoren & Enang, 2015; Adereti & Sanni, 2016; Ogenjuwa, 2016; Olugbenga, 2016; Nnadi & Nwobu, 2016; Agir, 2017; Uwuibge et al, 2017;) ignoring other metrics of accounting quality and other sector.

The only study that covered several earnings quality measures is the study by Lorchir (2015) focusing exclusively on eight countries in Africa. The study also incorporate 53 firms in Nigeria to test the impact of mandatory IFRS adoption on earnings quality. However, the findings could not be relied upon in this domain, given that Nigeria adopted IFRS in 2012 and the study only covers 2000-2012, unlike South Africa, Kenya and Egypt that adopted IFRS between 1997 and 2005.

Accounting studies worldwide in line with signaling and prospect theories preposition, have found the variable earnings management towards small positive target (SPEAR) very important measure of earnings quality, because managers intend to signal higher quality accounting and investor react negatively to small losses therefore managers act to avoid negative reaction from investors by manipulating earnings upwards to avoid small losses and maintain
investors’ confidence. However, to the best of our knowledge; no empirical studies on earnings quality and IFRS in Nigeria used this earnings management measure.

Therefore, from the foregoing, it can be acknowledged that while studies have focused on examining IFRS adoption and the implications on earnings quality in other countries, little is known in Nigeria. This research gap exists even though Nigeria has already mandatorily adopted the IFRS.

1.3 Research Questions

The study is guided by the following questions:

i. How does IFRS adoption affect earnings persistence in the listed conglomerate firms in Nigeria?

ii. What is the effect of IFRS adoption on earnings predictability of listed conglomerate firms in Nigeria?

iii. To what extent does IFRS adoption affect earnings management towards small profits of listed conglomerate firms in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to determine whether IFRS adoption leads to higher quality accounting numbers following the switch from NGAAP to IFRS regulation in Nigeria conglomerates firms. The specific objectives are to:

i. Examine the effect of IFRS adoption on earnings persistence in the listed conglomerate firms in Nigeria.
ii. Investigate the effect of IFRS adoption on earnings predictability of listed conglomerate firms in Nigeria.

iii. Assess the effect of IFRS adoption on earnings management towards small profits of listed conglomerate firms in Nigeria.

1.5 Statement of Research Hypotheses

In line with the objectives, the following null hypotheses were formulated and tested:

**H0₁:** IFRS adoption has no significant effect on earnings persistence of listed conglomerate firms in Nigeria.

**H0₂:** IFRS adoption has no significant effect on earnings predictability of listed conglomerates firms in Nigeria.

**H0₃:** IFRS adoption has no significant effect on earnings managements towards small profits of listed conglomerate firms in Nigeria.

1.6 Scope of the Study

The study focused on all conglomerate firms listed on the Nigerian Stock Exchange (NSE) as at 31st December, 2015. The research seeks to determine whether adoption of IFRS has a significant effect on the quality of earnings of Conglomerates firms in Nigerian by examining differences in earnings quality between mandatory IFRS and NGAAP reporting years. The research covered Ten (10) years period from 2006-2015 (2006-2011 pre IFRS and 2011-2015 IFRS regulation). This has been a period where several economic policies and regulations were made in Nigeria. It is also within this period that the world experienced another fold of global economic crisis and recession which exact significant pressure on the earnings of many
conglomerate firms in Nigeria. The independent variable for the study is IFRS Adoption while the dependent variable is Earnings Quality represented by Earnings Persistence, Earnings Predictability (Cash flows Predictability) and Earnings Management toward small profits (SPEAR).

1.7 Significance of the Study

The result of this study would be of immense benefits. Investors will find this study of particular interest to discover whether IFRS regulation grants a better performance measurement quality than local GAAP, they are also interested in present and expected future earnings as well as stability of these earnings. Investors can rely on the information drawn from this research to assess the possibility of how earnings quality variables herein studied may have marred the reliability of reported earnings.

Additionally, it provides policy makers with empirical answers which may support future decisions regarding financial statement reforms. More specifically, this empirical evidence would be of interest to the standard setters in complying fully with IFRS requirements.

This study would contribute to a better understanding of the role of accounting standards in financial reporting quality, which enable managers of listed conglomerates and other firms, knows how IFRS norms affect earnings and aid them in their financial control, planning and decision making. Lastly, this study contributes to the growing literature by providing another framework that analyzes the impact of IFRS adoption on earnings quality in Nigeria.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter focuses on conceptual issues and undertakes review of empirical studies related to the research. The chapter further reviewed the concept of earnings quality, IFRS, Nigeria and IFRS Adoption, and the Measurements of earnings quality. Also, the chapter discusses the theoretical framework that underpins the study.

2.2 The Concept of Earnings Quality

Earnings are the amount of profit that a company produces during a specific period, usually a year. Earnings are studied because they represent a direct link to company performance. There are various views for the term earnings by many scholars. Dechow (2004) define earnings as the summary measure of a firm’s performance over a particular period which a range of users rely on to make economic decisions. Some uses of earnings are in: executive compensation contracts, debt covenants; initial public offerings; stock market investment and many other investment decisions (Schipper & Vincent, 2003). The theoretical underpinning that profits (earnings) facilitate accumulation of wealth and fortify the entrepreneur’s commercial empire could be linked to the theory of firm growth, which closely associates profits to firm growth (Penrose, 1995). In general, the importance of profits to the volume of wealth of the entrepreneur lends credence to expectations of profitable business operations. This insight also justifies the various contract arrangements that the owners explore, to align management’s interest with theirs, given that the payoff is the owner’s ultimate interest (Scott, 2009). In addition to manager compensation, contracts could relate among others, to debt agreements, and accounting is an integral part of these contracts (Watts & Zimmerman, 1986). The Positive
accounting theory explains the importance of earnings quality and factors that determine manager choices.

Because earnings are generated from the financial reporting process and are based on applicable standards, standard setters view earnings quality as an indirect indicator of the quality of financial reporting and financial reporting standards (Elias, 2002). The conceptual framework for IFRS is developed to enhance credible financial statements that produce useful information for economic decisions. The framework promotes the general notion that this singular financial statements metric is the most popular information item among users (IASB, 2009). Schipper and Vincent (2003) discuss the need for high quality earnings for effective decision-making, concluding that contractual decisions, based on substandard earnings quality, induce inappropriate wealth transfers. Managers who overstate earnings present unreliable performance information to owners and other market users, who unknowingly overcompensate them and/or overprice the firm’s shares.

Sloan (1996), as cited in Lorchir (2015) document that managers manipulate earnings figures and succeed in misleading the capital market; with the latter overestimating the persistence of accrual components of earnings and overpricing the prospects of the firm (Collins and Hribar, 2000). The idea is that if capital markets are building pricing decisions on misleading earnings figures, it is unlikely that investors would formulate optimal forecast models. The consequence of using unreliable information would include the misapplication of investment resources between investment projects (Schipper & Vincent, 2003).

In the word of Schipper and Vincent, (2003) earnings quality is the degree to which reported earnings of entity truly reflect the Hicksian income. The quality of earnings is therefore determined by how close it is to the Hicksian income. Although, there is no single definition of
earnings quality from a broader perspective, it is a multidimensional concept. However, a consensus largely exists on the characteristics of high-quality earnings, under the decision usefulness hypothesis (Schipper & Vincent, 2003). In this regard, accountants identify investors as major users of accounting information. The underlying notion is that while users generally view fraudulent reporting as low quality, conclusions on high earnings quality must be linked to the relevant decision (Dechow et al. 2010).

Dechow and Schrand’s (2004) define earnings to be of high quality when the earnings number accurately annuitizes the intrinsic value of the firm. Their definition of earnings quality, adopts the financial analysts’ perspective, and views higher earnings quality as that which is more predictable, easier to forecast and maps better into intrinsic value. This definition is built on the objectives of financial analysts, which is to forecast earnings and make stock recommendations. Similarly, Penman and Zhang (2002) define high-quality earnings as “reported earnings before extraordinary items that are a good indicator of future earnings” (p.237). They argue that high-quality earnings must be sustainable rather than predictable, such that they should be highly persistent, less transitory and less volatile. Persistent earnings are observed through the positive association between current and future earnings. Also, Penman (2001) defines persistent earnings as earnings that are indicative of a firm’s long-run earnings ability.

Earnings persistence as an attribute of high earnings quality is explained by the Clean Surplus Theory (CST). CST shows that market value is a function of fundamental financial statements components, assuming ideal conditions in the capital market (Scott, 2009). Under the predictions of the CST, the more persistent current earnings are, the greater the impact of accounting earnings on firm value. The justification of CST is anchored on the understanding that persistent earnings increase the earnings response coefficient (Scott, 2009). Persistence of
earnings is a useful concept in analysing earnings quality from the perspective of firm valuation and may be largely influenced by accounting policies built on accounting standards.

Lipe (1990) describe earnings persistence as the larger association of current earnings with future earnings. He further documents that persistence describes ‘the time-series relation between the current period earnings shocks and future earnings’. In essence, earnings persistence measures the extent, to which, current earnings recur in the future, and investors’ desire earnings that have higher persistence indication. One reason is that such earnings signal a stable, sustainable, and ‘low-risk’ earnings process. Dechow et al, (2010) corroborate this notion when they define earning persistence as the ability of earnings to predict future earnings and that more persistent earnings, are a better input in equity valuation models. This further implies that shocks in earnings that are non-recurring or non-persistent are likely to be negatively correlated with future period earnings (Dechow & Schrand, 2004). Studies (Collins & Kothari, 1989) find that persistent earnings have a stronger stock price-earnings association, yielding higher equity market valuation.

Farther definition of earnings quality is based on its value relevance, defined as “the ability of financial statement information to capture or summarise information that affects share values” (Hellstrom, 2005, p.325). In other words, value relevance is the explanatory power of accounting variables (earnings and or book value of equity) for securities’ returns (Devalle et al, 2010); or the association of these variables with the market variable. Earnings predictability is a function of earnings’ ability to predict future earnings or future operating cash flows. While both properties of earning depict earnings persistence, studies (See Lorchir, 2015; Sloan, 1999 and Atwood et al. 2011) also separates earnings ability to predict future earnings (earnings persistence) from earnings ability to predict future operating cash flows. This separation is useful
because the capacity of earnings to provide decision-useful information to users to predict the cash flow generation prospects of the firm is a qualitative objective of financial reporting (IASB, 2009).

Moreover, earnings quality is alternatively defined by low prevalence of earnings management characterising the preparation of the earnings information (Ewert & Wagenhofer, 2005). Earnings management is effected in a number of ways including: low quality accruals and earnings smoothing with accruals to control earnings volatility and possibly mislead information users (Ewert & Wagenhofer, 2005; Barth et al., 2008; Scott, 2009). The positive accounting theory explains the nature of firm-level contracts and presents an insight into the reasons managers may prefer a smooth stream of earnings. Managers are likely to smooth earnings, to maintain a less volatile bonus stream, and “smooth the covenant” ratios over time, to conceal potential covenant violations (Watts & Zimmerman, 1990; Scott, 2009).

Lang et al. (2003) argued that firms with less earning smoothing (Persistence) exhibit more earnings variability. In 1985, earnings management was researched to see if managers would manage net income so as to maximize their bonuses under their firm’s compensation plans. Healy (1985) examined firms whose compensation plans are based on current reported net income only, also known as bonus schemes. With a typical bonus scheme, reported net income will have a lower bound called bogey and upper bound called cap. A manager’s bonus will increase as reported net income increases, unless there is a cap at which point the bonus will remain the same as net income continues to increase beyond the cap. A manager will not receive any bonus when income is below the bogey.

Healy (1985) predicted that when net income is between the bogey and cap the manager is motivated to adopt accounting policies to increase reported net income. Net income that is
below the bogey or above the cap would motivate managers to “**take a bath**” whereby they will try to reduce or minimize net income. By taking a bath below the bogey, managers will then increase the probability of receiving a bonus the following year since current write-offs will reduce future amortization charges. Likewise, managers would take a bath (to a lesser extent) to decrease net income since a bonus would be permanently lost on reported net income greater than the cap.

Healy and Wahlen (1999) define earnings management as the altering of financial statements through the use of judgement in structuring transactions to either mislead the firms’ stakeholders about the true economic picture of the enterprise or to achieve some contractual benefits contingent on accounting numbers. Therefore, earnings management is any deliberate attempt to influence or manipulate reported earnings. Schipper (1989) opines that earnings management could cover ‘disclosure management’ and ‘real’ earnings management, by documenting the incentives for managers’ choice. A synthesis of these descriptions of earnings management is that managers conceal actual economic performance of the company, and these actions, motivated by different incentives, may take any form. This study shall observe Earnings management using earnings management towards small profits targets approach drawn from the study of Lorchir (2015).

From the above definitions of earnings quality, the present study shares the views of Dechow and Schrand (2004); Penman and Zhang (2002); Healy and Wahlen (1999) because their definition is built on the objectives of financial analysts, and suit the attributes of high quality earnings selected for this research. However, several earnings quality constructs have been used in accounting research consistent with the notion that earnings quality is multifaceted and its assessment is only meaningful when associated with a relevant decision (Chua et al.)
2012). Accounting researchers (Lorchir, 2015; Gaio, 2010; Francis et al, 2004) classify different constructs of earnings quality into market-based and accounting-based measures. The Market-based measures use both financial statements and market data to establish earnings quality, relying specifically on the estimated relation between financial statements’ components (earnings and book value of equity) and market price or returns. The accounting-based attributes consist of accrual quality, predictability, persistency and smoothness. The market-based measures consist of value relevance, timeliness and conservatism as attributes of earnings quality (Francis et al, 2004)

2.3 Overview of International Financial Reporting Standards (IFRS)

The emergence of IASB was in April 2001 when it replaced the IASC. It is an independent private sector body based in London operating under the oversight of the International Financial Reporting Standards Foundation. The IASB is a non-profit making organization, and is said to be better-resourced and independent than its predecessor (Ball, 2006). The IASB is responsible for developing and approving International Financial Reporting Standards (IFRS), a new label associated with the international accounting standards (IAS) under the IASB. The IASB, however, continues to recognise as legitimately applicable the IAS earlier issued by the IASC with amendments where necessary.

IFRS are the global accounting standards which consist of: (1) Standards (IFRS statements & IAS standards). (2) Interpretations (IFRS implementations) and; (3) The Framework (Mirza, Holt & Knorr, 2015). The goal of IFRS is to provide a global framework on how public companies prepare and disclose their financial statements. The standards provide general guidance for the preparation of financial statements, rather than setting rules for industry-
specific reporting. Presently, IFRS is adapted by more than 12,000 companies in more than 120 countries and jurisdiction (Mirza, et al, 2015).

In a survey conducted recently by the International Federation of Accountants (IFAC) in late 2007, a large majority of accounting leaders from around the world agreed that a single set of international standards is important for economic growth. Of the 143 leaders from 91 countries who responded, 90% reported that a single set of international financial reporting standards was “very important” or “important” for economic growth in their countries. IFRS will affect almost every aspect of a company’s operations, everything from its information technology systems, to its tax reporting requirements, to the way it tracks stock-based compensation. Many of the standards forming part of IFRS are known by the older name of IAS.

According to lorchir (2015), the objective of IASB under the conceptual framework is to produce an investor focused set of high quality accounting standards, which forecloses as much as possible allowances that would serve as conduit provisions for earnings manipulation. The standards are also aimed at enhancing comparability of financial reports around the world (IASB, 2010). Consequently, the IFRS and IAS (as amended) have reduced allowable options and information asymmetry that hitherto widened the information gap between various types of investors and other users of accounting information.

2.4 Nigeria and IFRS Adoption

On 28 July 2010, the Nigerian Federal Executive Council approved January 1, 2012 as the effective date for the convergence of Nigerian Statement of Accounting Standards (SAS) or Nigerian GAAP (NGAAP) with International Financial Reporting Standards (IFRS). The adoption was organized such that all stakeholders use IFRS by January 2014. According to the
IFRS adoption Roadmap Committee (2010), Public Listed Entities and Significant Public Interest Entities are expected to adopt the IFRS by January 2012. All Other Public Interest Entities are expected to mandatorily adopt the IFRS for statutory purposes by January 2013, and Small and Medium-sized Entities (SMEs) shall mandatorily adopt IFRS by January 2014. Nigerian listed entities were required to prepare their closing balances as at December 31, 2010 according to IFRS. The closing figures of December 31, 2010 will become the opening balances as at January 1, 2011 for IFRS based financial statements as at December 31, 2011. The opening balances for January 1, 2012 will be the first IFRS full financial statements prepared in accordance with the provision of IFRS as at December 31, 2012. The report sought the amendment of relevant laws and regulations that had one provision or the other impacting on financial reporting in Nigeria to ensure uniformity and removal of conflicts and ambiguity. Specifically, Companies and Allied Matters Act (CAMA) 1990, Banks and Other Financial Institution Act (BOFIA) 1991, Investment and Security Act (ISA) 2007, etc. Furthermore, the report recommends for an early countrywide intensive capacity building programs to facilitate the process of adoption and the establishment of IFRS Academy an institutional platform for capacity building.

In order to allow for effective implementation of IFRS adoption in Nigeria, the former regulatory body in charge of monitoring the reporting system was in 2011 restructured from Nigerian Accounting Standards Board (NASB) to Financial Reporting Council of Nigeria (FRC). FRC is now the body corporate solely responsible for the issuance, monitoring and review of Accounting and Auditing Standards in Nigeria. The council is empowered under section 52(1) of the Act to adopt and keep up-to-date accounting and auditing standards, and ensure consistency between Standards issued under International Financial Reporting Standards as provided under
Part VII of FRC Act 2011 which dealt with review and monitoring of standards. This is one of the major developments brought by FRCN Act in 2010, where Federal Executive Council approved the adoption of IFRS as the reporting framework for publicly quoted entities by 2012 in Nigeria.

Henceforth, FRC will only be reviewing, monitoring and issuing Standards to ensure consistency with the requirements of IFRS-Framework. Thus, all the standards to be issued or reviewed by the council should be in consistent with IASB guidelines for global reporting, given due consideration to our peculiar customs, business environment, laws and level of economic development.

In view of the above discussions on FRCN activities, it is clear that most of the issues rose in favor of IFRS are just attempts to show how Nigeria is serious in the light of the compulsory implementation of IFRSs. Although regulatory framework of Financial Reporting Council of Nigeria (FRC) is potentially strong to support the ongoing mandatory adoption of IFRS, Oduware (2012) argued that some still consider IFRS for accounting and its implementation lies with the finance function of companies. However, IFRS is more than accounting; rather it is all about the way and manner in which an entity conducts its business after giving consideration to its accounting and financial reporting implications. This agreed with the view of Obazee (2012) who opined that adoption of IFRS is more than an accounting exercise and will have an effect outside the finance function in areas such as information technology, human resources; and investor relations. It also has a regulatory implication which is not limited to capital adequacy for banks, and solvency margins for insurance, but it also affects capital management for all entities.
2.5 Measurement of Earnings Quality

Literature has put forward several earnings quality approaches and models. Here, we discuss the models that are most related to this study specifically, studies that have empirically assessed earnings persistence, earnings predictability (association of current earnings and future cash-flow) and the prevalence of earnings management towards small profits targets.

2.5.1 Earnings persistence

Investors are interested in knowing future value generation prospects of earnings because shareholders’ investment grows through growth in residual income, which is dependent largely on the return on common equity (ROCE). Thus, from a valuation perspective, earnings information is deemed decision-useful by analysts if future prospects of the firm can be deduced from current earnings effectively (Penman, 2001). Persistence is measured by the association between current and future earnings in a regression of future earnings on current earnings (Sloan, 1996; Hanlon, 2005). A high correlation between future and current earnings (coefficient value closer to 1), is deemed to indicate higher quality earnings.

To measure earnings persistence, studies apply some approaches. One method is to regress future (current) earnings on current (past) earnings and observe the sign of the coefficient against the independent earnings variable (Dechow et al. 2010). A strong correlation between current (past) and future (current) earnings is usually desirable for positive earnings (Ewert & Wagenhofer, 2009; Dechow et al, 2010). Another method decomposes earnings into its profit and loss components (Atwood et al. 2011). This approach assumes that persistence may differ for gains and losses, because there is likelihood that earnings informativeness differs between profit and losses. Hayn (1995) hypothesize and find consistent results that the informativeness of earnings, about earnings persistence differs between losses and profits. The study demonstrates
that stock price movements are more strongly correlated with current period earnings, when profits only are built into a returns-earnings model. Hayne (1995) also find that inclusion of only losses in the model does not show any significant correlation between the earnings variable and contemporaneous price movements.

From the literature arguments, it follows logically that the inclusion of earnings without separation into its loss and profit components in a returns-earnings model weakens the returns-earnings relationship. However, Collins et al. (1999) describe the negative correlation between losses and stock returns as ‘anomalous’ and argue that it arises as a result of misspecification of the original model, due to omission of a correlated variable, the book value of equity. Collins et al. (1999) maintain that book value of equity is an econometrically value relevant variable in its rights. They argue consistent with the theoretical prediction, that book value of equity is a proxy for expected future normal earnings (Ohlson, 1995); and adaptation or abandonment value (Burgstahler and Dichev, 1997). Abandonment value is related to a value obtained from liquidating the entity; while adaptation value relates to the firm’s net resources when applied in their “next best alternative use” (Lorchir, 2015). They further submit that omitting book value of equity in the earnings-price or returns model will induce a negative bias in the coefficient on earnings for loss firms, and positive bias for-profit firms.

Atwood (2011) extends this argument regarding the dissimilar in informativeness about future prospects of earnings between losses and profits to their earnings persistence model. Consequently, they include both negative and profit earnings to observe any divergent association between these earnings components and future earnings under different accounting standards. In this study, however, lack of sufficient data for both negative and positive earnings
does not permit a separation of earnings into its loss and profit components. This study will therefore adopt the (Dechow et al. 2010; Lorchir, 2015).

2.5.2 Earnings Predictability

Atwood et al. (2011) define earnings predictability as the ability of past earnings to forecast future cashflow, that is, the more useful current earnings are in predicting future cashflow, the higher the quality. The association of current earnings with future cash flows has been used in the literature as an indicator of earnings predictability and quality (Lorchir, 2015 & Atwood et al. 2011). The role of earnings to reflect cash flow forecasts is assumed to induce a strong association between current earnings and future cash flows (Dechow et al. 1998). Consistent with this expectation, users analyse earnings information to enable them assess the cash generating ability of firms and future prospects, and standard setters are aware of this information demand (Atwood et al. 2011). The IASB acknowledges this expectation and states in the conceptual framework for the IFRS:

“Information about cash flows of an entity is useful in providing users of financial statements with a basis to assess the ability of the entity to generate cash and cash equivalents….The decisions that are taken by users require an evaluation of the ability of an entity to generate cash and cash equivalents and the timing and certainty of their generation” (IASB, 2009).

Thus, to the extent that earnings incorporate information about future cash flows as noted in literature, where accruals function to adjust transitory changes in operating cash flows (Ball & Shivakumar, 2006), a strong association between current earnings and future cash flows is expected to indicate that earnings are of high quality. This method of assessing earnings quality is closely related to the persistence model with the only noticeable difference being that the dependent variable is cash flows from operating activities. Lorchir (2015) use this earnings
quality test to examine the difference in earning quality measured under the IFRS and DAS. This current study will also use this earnings quality measure in addition to others to test earnings quality differences between IFRS and NGAAP. As in the earnings persistence model, the study builds on the assumption that earnings association with future operating cash flows is higher under IFRS. To establish the predictability of cash flows from past period earnings empirically, the study uses a version of the model in Atwood et al. (2011). Earnings quality is established in the stronger association between lagged earnings and current operating cash flows as measured.

2.5.3 Earnings Management towards Small Profits Targets

Lang et al. (2003) document that managers engage in earnings management to avoid small losses and achieve small positive profits. Kahneman and Tversky (1979) explain the human choice process and preference for small gains rather than losses with the prospect theory. The prospects theory posits that the rate at which investor utility decreases for small losses is greater than the rate at which it increases for small gains. In other words, losing a resource already owned creates a larger utility loss (convex curve) than the utility one may gain (concave curve) by acquiring a resource of similar value, suggesting loss aversion (Scott, 2009). In general, people dislike bad news, and may react more harshly to the realisation of an adverse market result than they would to good news, even when the loss is small (Lorchir, 2015).

Consistent with the predictions of prospect theory which suggests that investors are likely to react negatively to small losses. Thus, managers act to avoid the negative reaction from investors, by manipulating earnings upwards to avoid small losses and win or maintain investor confidence (Scott, 2009). Also, to prevent negative reaction from investors, managers may target to meet or beat external earnings forecast by analysts. For example, managers could reclassify
items in the income statement; repurchase stock and sell fixed assets or marketable securities (Herrmann et al, 2003).

Besides the predictions of prospect theory, debt-contracting covenants may prescribe sanctions for losses and managers in an attempt to avoid violation would be motivated to manage earnings upwards and avoid losses (Burgstahler & Dichev, 1997). Managers aim to avoid these consequences when possible and may opt for managing earnings to achieve the small profits target, avoid small losses, and evade these implications (Scott, 2009). While managers have incentives to avoid losses and manage earnings towards positive gains, their reporting discretion latitude is limited to manipulating towards avoiding small losses and achieving small profits. In presenting this notion, Scott, (2009) argue that as losses increase, it becomes harder to manage earnings hugely and avoid large losses By the underlying objectives of financial reporting however, manipulating earnings aggressively to achieve the targeted results reduces the quality of earnings information, irrespective of the reasons for managers’ abhorrence for small losses and targeting of small gains. Based on the arguments these are some of the measurement approaches. Most predominantly, the model in Healy (1985) and Burgstahler and Dichev (1997) where they identify a “kink” in the shape of earnings distribution at the adjacent intervals around zero, revealing an unusually high (low) number of observations immediately to the right (left) of zero. They interpret the shape of the distribution as an indication of earnings management towards achieving small profits and avoiding small losses (Lorchir, 2015).

Secondly, Burgstahler and Dichev (1997) use a non-parametric test in their study in the U.S. They employ a broad cross-section of U.S. firm-year observations (64,466) from 1976 to 1994 to provide empirical evidence that earnings decreases are frequently managed. They
document an unusually low frequency of reported small decreases in earnings and small losses but the relatively high frequency of small increases in earnings and small positive earnings.

Durtschi and Easton (2005) however contend the research conclusion, which attributes the kink around zero wholly to earnings management and introduce the scaling factor. Similarly, Beaver et al. (2007) note that the perception of small profit target or small loss avoidance as a proxy for earnings management may not be necessarily correct. They argue that the earnings ‘kink’ around zero could be explained by differences in taxes and not necessarily managerial opportunism. These conclusions are consistent with Dechow et al. (2012) who show that discretionary accruals of small profit firms and small loss firms are not significantly different, suggesting that the kink is not exclusively indicative of earnings management.

Lorchir (2015) studies present an alternative perspective on the irregularity of earnings distribution around the zero regions, but does not exclude the possibility of accruals manipulation to achieve small profits and avoid small losses. Despite the contrary research opinion regarding the explanation of earnings distribution kink however, studies continue to apply the measure (Barth et al, 2008). This study corroborates the findings in Burgstahler and Dichev (1997), by explaining the discontinuities around the zero regions on earnings management; in addition to the preceding approaches to establishing earnings management towards small targets. For the purpose of this study, the model by Healy (1985) and Burgstahler and Dichev (1997) as adopted by lorchir (2015) will be used in estimating earnings management. The basic linear probability model (LPM) for assessing earnings management towards small profits (Lorchir, 2015; Lang et al. 2003; Barth et al. 2008; Chen et al. 2010) is presented below:

\[ \text{SPEAR}_{it} = \delta_0 + \delta_1 \text{EVAR}_{it} + \Sigma \delta_k \text{CONTROLS}_{it} + \varepsilon_{it} \]

2.6 Review of Empirical Studies
This section provides a critical review of related studies conducted on the relationship and effect of IFRS adoption on earnings quality.

2.6.1 IFRS Adoption and Earnings Persistence

Van der Meulen et al. (2007) in their study, compare the quality of US-GAAP and IFRS using a sample consisting of German new market firms for the period between 1997 through 1999. They find that the quality of US-GAAP prepared financial statements and IFRS information is overall very comparable, based on several earning quality attributes such as accrual quality, value relevance, persistency and timeliness. They found US-GAAP to be significantly more persistent than IFRS. Their results had a serious influence on research in this area most especially for United States that is yet to adopt IFRS, but conclusion from the study may not apply to Nigeria because of differences in institutional structure and legal system.

Likewise, Beijerink (2008) made a comparison between the quality of reported earnings under IFRS and US-GAAP in order to determine differences in earning quality between IFRS and US-GAAP reported earnings, based on four of the earning attributes summarized in their article: value relevance, timeliness, persistency and predictability. The results indicated that IFRS is significantly more value relevant and timelier than US-GAAP with respect to the reported earnings. Concerning the persistency and predictability of the reported earnings, no significant differences were found. Although the study uses a more current sample, findings from the study can only be applied to the European equity market and the results are for a short period (i.e. 2004-2006) which may differ significantly when doing the same research on a different sample period with also different market trends.
In a similar study, Sun et al. (2011) examine the impact of IFRS implementation on earnings’ quality of firms cross-listed in the United States that are domiciled in countries that have adopted IFRS on a mandatory basis. They find no difference in the change in earnings’ quality from the pre- to post-IFRS period for the cross-listed firms and the matched United State firms in terms of discretionary accruals and timely loss recognition. Furthermore, they get evidence of improved earnings’ quality for the cross-listed firms based on small positive earnings and earnings persistence. Their study further the study of Beijerink (2008) but suffers similar limitation.

In a similar multi-country study, Atwood et al (2011) use data from 33 countries covering 2002 through 2007 to test whether earnings under IFRS are more persistent and have higher association with future cash flows above other national GAAP earnings. They provide evidence that persistence of positive earnings is not significantly different between IFRS and US-GAAP, but IFRS losses are less persistent than US-GAAP losses. Also, they find that future cash flows association with current earnings is stronger under US-GAAP relative to IFRS, and that IFRS earnings exhibit no significant differences from other national GAAP across the relevant measures. The major strength of this study is the larger sample size and period but conclusion from the study may not apply to Nigeria.

In the same vein, Jaweher and Mounira (2014) examined the impact and consequences of mandatory IFRS adoption on earnings quality, focusing on value relevance, predictability, persistence, timeliness, timely loss recognition, smoothing, earnings toward target and accruals quality for listed companies in 17 countries from Australia and Europe. Covering 1,901 firms from 2001 to 2010, it found a mixed evidence of an increase in earnings quality; it got evidence supporting that ‘ceteris paribus’, the mandatory IAS/IFRS adoption improves the predictability
of cash flows and future earnings, the persistence and the timeliness. As well, the results suggested that net income is less manipulated toward target and less smoothing under IAS/IFRS regulation. Nevertheless, it also found that net income is better associated with the market value of equity under local GAAP regulation and evidence from the pre-IFRS and post-IFRS periods suggest that IFRS earnings are not more conservative than earnings based on local GAAP regulation.

In Africa, study by Lorchir (2015) investigates whether mandatory adoption of IFRS in Africa has a significant impact on earnings’ quality, despite the prevalence of weak country governance, using data from (eight countries in Africa) a general sample of 680 firms covering the period 2000 to 2012. It finds that relative to DAS, IFRS based earnings are: more persistent and closely associated with future period cash flows; less managed towards small profits and less smoothed. Also, it finds more timely loss recognition and increasing frequency of large losses recognition during periods of mandatory IFRS reporting; providing evidence that mandatory adoption of IFRS is likely to improve earnings quality in countries with weak governance. As pointed out earlier, the study period is adequate for most of the sample countries with the exception of Nigeria which adopt IFRS in 2012. Here pre and post IFRS comparison may be inadequate.

2.6.2 IFRS Adoption and Earnings Predictability

Van der Meulen et al. (2006) in their study using data from 128 different companies sample consisting of 321 firm year observations and covering the period 2000-2003, the study documents that US GAAP and IFRS earnings perform equally well on value relevance, timeliness and accruals quality but with regard to predictive ability the results revealed US
GAAP superiority i.e. US GAAP earnings are typically better indicators of future firm performance. Just as the previous U.S studies the findings are mixed for different earnings attributes and its conclusion may not be applicable to developing countries especially for Nigerian firms.

Beijerink, (2008) based on four of the earning attributes summarized in their article; value relevance, timeliness, persistency and predictability. Documented that IFRS is significantly more value relevant and timelier than US-GAAP with respect to the reported earnings. Concerning the persistency and predictability of the reported earnings, no significant differences were found. The major limitation of the study is the short period (i.e. 2004-2006) used and generalizing the results to other financial markets and time periods could be misleading.

Atwood et al (2011) use data from 33 countries covering 2002 through 2007 to test whether earnings under IFRS are more persistent and have higher association with future cash flows above other national GAAP earnings. They provide evidence that persistence of positive earnings is not significantly different between IFRS and US-GAAP, but IFRS losses are less persistent than US-GAAP losses. Also, they find that future cash flows association with current earnings is stronger under US-GAAP relative to IFRS; and that IFRS earnings exhibit no significant differences from other national GAAP across the relevant measures.

Akindele (2012) in his study, focused on the implementation of IFRS by reporting entities in Nigeria, examining the impact of adoption on the quality of financial reports, operational costs, and operational efficiencies of management. Data from 520 respondents analysed using logistic regression reveal an improvement in the quality of financial reporting and managerial efficiency and that the cost and benefit of implementing IFRS had no significant relationship with managerial efficiency. Just like other perception studies, findings from the
study cannot be free from bias and the total of 46 questionnaires on which the study generalised was too small another major setback of the study was that it adopted a documentary review of financial statements.

In the same vein, Jaweher and Mounira (2014) examined the impact and consequences of mandatory IFRS adoption on earnings quality, focusing on value relevance, predictability, persistence, timeliness, timely loss recognition, smoothing, earnings toward target and accruals quality for listed companies in 17 countries from Australia and Europe. Covering 1,901 firms from 2001 to 2010, it found a mixed evidence of an increase in earnings quality; it got evidence supporting that ‘ceteris paribus’, the mandatory IAS/IFRS adoption improves the predictability of cash flows and future earnings, the persistence and the timeliness. As well, the results suggested that net income is less manipulated toward target and less smoothing under IAS/IFRS regulation. Nevertheless, it also found that net income is better associated with the market value of equity under local GAAP regulation and evidence from the pre-IFRS and post-IFRS periods suggest that IFRS earnings are not more conservative than earnings based on local GAAP regulation. The major strength of the study is the large sample comprising many countries in Europe and Australia and as such the results could applied to developing nations in Africa.

Similarly, Mousa (2014) examined whether the adoption of IFRS leads to improvement in the value relevance and predictability of accounting information for BHB and MSM companies. Using 280 year-firm observations from 40 different companies listed in BHB (Bahrain); and a total 203 year-firm observations from 29 companies listed in MSM covering the period 2005-2011. He found that for BHB and MSM companies, the adoption of IFRS leads to improvement in the value relevance of financial reporting, while for predictability it was clear that the IFRS adoption by companies in MSM enhances the predictability of accounting
information more than in BHB. The studies may have serious influence on research in that area given that the two countries (Oman & Bahrain) are similar countries which share matching accounting characteristics. But, generalizing the results to other financial markets and time periods could be misleading.

In Africa, Lorchir (2015) using data from (eight countries in Africa) a general sample of 680 firms covering the period 2000 to 2012 documents that relative to DAS, IFRS based earnings are more persistent and closely associated with future period cash flows, less managed towards small profits and less smoothed. Also, it finds more timely loss recognition and an increasing frequency of large losses recognition during periods of mandatory IFRS reporting; providing evidence that mandatory adoption of IFRS is likely to improve earnings quality in countries with weak governance. As pointed out earlier, the study period is adequate for most of the sample countries with the exception of Nigeria which adopt IFRS in 2012. Here pre and post IFRS comparison may be inadequate.

Yahaya, Yusuf and Dania (2015) examined the effect of IFRS adoption on the financial statements of listed banks in Nigeria. The study analysed data from 15 sample banks for the period 2004 to 2013 using regression tools. The results show that IFRS adoption has positively impacted some variables in the financial statement of banks like, profitability and growth potential. The study reveals that given the fair value perspective of IFRS, the transition to IFRS brings instability in income statement figures. They recommend that future research should identify the specific provisions of IFRS that are responsible for the positive impact on financial performance measures, that such detailed knowledge is useful for standard setters that may wish to improve existing accounting standards. The major limitation of this study was the use of 2008-2013 as post IFRS period, its known that in Nigeria all listed banks were only required to
translate their 2011 financials and only three entities in Nigeria voluntarily adopted IFRS in 2009. Later two more banks joined to make them five. Therefore, their data source might be faulty making the result unreliable.

Hassan (2015) investigates the relationship between firm attributes and the quality of earnings of listed deposit money banks in the pre and post IFRS adoption in Nigeria. The study adopted correlational research design with 14 banks as sample of the study using multiple regression as a tool of analysis. The result reveals that firm attributes (leverage, profitability, liquidity, bank size and bank growth) has significant influence on earnings quality of listed deposit money banks in Nigeria after the adoption of IFRS. The result shows that the selected firm attributes have no significant impact on earnings quality.

Adereti and Sanni (2016) examined the impact of the adoption on the earnings quality of First Bank Nigeria Plc, for a period of six years (2009-2011). The results of fractional regression analysis conducted with revealed that earning yield increased significantly by 48.9% while changes in earning yield also increased significantly by 57.7%, indicating an improvement in the earning quality of the bank after the adoption of IFRS; but they assert that though other factors; economic, political and global can also affect earning quality.

Furthermore, Uwuigbe et al. (2017) in their study examined the impact of IFRS adoption on earnings predictability of listed banks in Nigeria. The study analysed data from eleven sample banks for the period 2010-2014 (pre & post IFRS) using regression analysis. The major finding of the study indicates that IFRS adoption has a negative impact on earnings predictability, because they found a decrease in the ability of current earnings to predict future earnings after adoption. The major flaw of the study is the collection of data for only 5 years for pre and post
adoption periods; also the justification for removing 2012 was not tenable as 2011 was actually the transition year.

2.6.3 IFRS Adoption and Earnings Management towards Small Profits Targets

Hope et al (2006) build their argument on the bonding theory of Coffee (2002) which predicts that countries more likely to receive benefits from a high-quality set of accounting standards are more likely to adopt IFRS. Their argument is that both countries and firms benefit from bonding to IFRS, but the costs of compliance with IFRS lie with the firm. This argument is similar to Tarca (2004) who used Spencer’s (1973) signalling theory, to explain why firms are likely to improve financial reporting quality with adoption of high-quality accounting standards. Houqe et al. (2012) submit evidence that earnings quality increases only for countries that mandate IFRS reporting under strong investor protection. Contrarily, Houqe et al. (2014) using data from 2003 to 2011 conclude that the impact of IFRS on information quality is rather higher in countries with low investor protection. Several studies argued that manager incentives and investor’s protection strength dominate the determination of earnings quality and not accounting standards. Landsman et al. (2012) similarly find an increase in information quality in 16 countries during mandatory IFRS adoption, but with a stronger effect in countries with strong legal enforcement. Ahmed et al. (2013) instead submit that earnings quality does not increase after mandatory IFRS adoption even in countries with strong investor protection, using data from 20 countries.

Christensen et al. (2009) noted that the IFRS adoption may not improve the earnings quality. The authors concluded that the mandatory IFRS adoption does not benefit all firms in a uniform way but results in relative winners and losers. IFRS which has been regarded as a
principle-based reporting standard are not sufficient condition to reduce the level of earnings manipulation. The adoption of IFRS gives manager more and less opportunity to manipulate earnings and this is evidenced through the application of fair value principle that is based on the estimation made by managers who can use their discretion to opportunistically manipulate earnings to suit their desires.

Likewise, Kabir et al. (2010) also fail to find evidence of improvement in earnings quality after mandatory IFRS adoption in New Zealand. However, for a for a broad cross-section of Malaysian firms, Ismail et al. (2013) find, that earnings management reduced and value relevance increased significantly in the post IFRS adoption.

Conversely, Chen et al. (2010) employ data from 15 EU member states covering 2000 to 2007 in a study of earnings quality between IFRS adopting years and the pre-adoption years. They find among other measures that earnings management largely reduced during the IFRS reporting years, while timely loss recognition also reduced and earnings smoothing increased. In contrast, Zeghal et al. (2011) employed data on French companies from 2003 to 2006 and found among other measures, that earnings management reduced following mandatory IFRS adoption. Similarly, Devalle (2010) find increased price-earnings relationship after the mandatory adoption of IFRS in France, Germany, and United Kingdom. The increased value relevance of earnings under mandatory IFRS adoption is a reflection of earnings informativeness significantly induced by the IFRS.

Study in Africa by Outa (2011) investigates the adoption of IFRS in Kenya, applying accounting quality measures of earnings management, timely loss recognition and value relevance to find out whether the adoption of IFRS has led to improvements in accounting quality in companies listed in Kenya. Using multiple regression analysis, he finds that three out
of the eight metrics indicated that quality had marginally improved while five indicated that it had marginally declined. Specifically, on SPOS, he finds a negative but insignificant result, indicating a lower occurrence of small positive earnings in the post adoption period; i.e. firms manage earnings toward small positive amounts more frequently in the pre adoption period than they do in the post adoption period. The major strength of the study is that it uses data from all listed firms on Nairobi Stock Exchange, Kenya and as such it findings can be generalize for the domain.

In a related study, Chua et al. (2012) study earnings quality in Australia using data from 2001 to 2008 during the pre and post mandatory IFRS adoption in Australia. They find evidence that in the post-IFRS adoption period, earnings management reduced, timely loss recognition improved along with value relevance of earnings, but target beating increased. Similarly, Barth et al. (2008) employed data from 21 countries covering 1994 to 2003 and compared earnings quality between voluntary adopting IAS firms and non-IAS firms. They find reduced earnings smoothing, and target beating along with increased timely loss recognition and value relevance in the IAS relative to the non-IAS sample. The findings from this study can hardly be generalized to other domain most especially developing nations, because of difference in governance mechanism and regulatory framework.

Using Nigerian Data, Tanko (2012) investigated the effect of IFRS adoption on the performance of some selected Nigerian banks that are quoted on the Nigerian stock market. He defines the change in performance based on two parameters. First, change in Accounting Quality of the firms, for which he used such variables as; earnings management, and timely loss recognition. Secondly it measure the performance of the firms based on changes on identified financial ratios of the firms. Using logit regression and t-test, he finds that there was low
variability in earnings in the post adoption period; also, it finds LNEG to be positive which signifies that IFRS firms recognize losses more frequently in the post adoption period than they do in the pre adoption period, and therefore recommends that comprehensive implementation of the standard to its totality by firms should be encouraged and regulatory authorities such as the Securities and Exchange Commission, and external auditors should monitor strict compliance with the adoption and provisions of the standards. The major limitation of the study was in the sample period (2007-2010), the study ends in 2010. Thus, it was difficult to conclude on the result obtained by this study.

In the same vein, Jaweher and Mounira (2014) using data from for listed companies in 17 countries from Australia and Europe covering 1,901 firms from 2001 to 2010, documented that net income is less manipulated toward target and less smoothing under IAS/IFRS regulation. Nevertheless, it also found that net income is better associated with the market value of equity under local GAAP regulation and evidence from the pre-IFRS and post-IFRS periods suggest that IFRS earnings are not more conservative than earnings based on local GAAP regulation.

Yeboah and Yeboah (2015) investigated the effect of IFRS adoption on earnings management (accounting quality) of South Africa listed firms covering the period 1998 to 2012. The dimensions of earnings management that were analyzed are a change in net income, variability of change in net income over change in cash flow from operations, correlation between accruals and cash flow, change in net income over small positive target (SPOS), and absolute discretionary accruals. The OLS estimators revealed that the adoption of IFRS has resulted in better accounting quality than it was previously under South African GAAP. However, with regards to SPOS, the result suggests a higher occurrence of small positive earnings in the post -adoption period. The study documented an improvement in post-IFRS
accounting quality with the exception of SPOS. Also, the study period was adequate, unlike the short period used by most previous studies on IFRS adoption in Africa.

Similarly, Lorchir (2015) using data from (eight countries in Africa) a general sample of 680 firms covering the period 2000 to 2012 documents that relative to DAS, IFRS managed earnings towards small profits less and less smoothed. Also, it finds more timely loss recognition and an increasing frequency of large losses recognition during periods of mandatory IFRS reporting; providing evidence that mandatory adoption of IFRS is likely to improve earnings quality in countries with weak governance. As pointed out earlier, the study period is adequate for most of the sample countries with the exception of Nigeria which adopt IFRS in 2012. Here pre and post IFRS comparison may be inadequate.

In a similar empirical study in Nigeria Umobong and Akani, (2015) investigate the differences in the quality of accounting information in the Pre and post IFRS adoption by manufacturing firms in Nigeria over a five year period using multiple regression analysis and t-test. Their results indicated a decline in accounting quality using earnings management, value relevance, and timely loss recognition. Earnings and book value of equity are less value relevant and timely loss recognition is less in post-IFRS compared to pre-IFRS period. This is the first studies that look at the manufacturing sector in Nigeria.

Bello, Abubakar and Adeyemi (2016) also investigate the effects of IFRS adoption on earnings management of 75 non-financial quoted companies in Nigeria between 2010 and 2014. Using multiple regression, they finds that IFRS adoption in Nigeria does not significantly affects the tendency of Nigerian companies to manipulate earnings and that higher audit quality and large firm size does not create a situation where IFRS adoption affects earnings management. The study recommends that regulatory authorities should device means of encouraging quoted
companies in Nigeria to employ the service of Big4 audit firm so as to enhance high audit quality. The only shortcoming of the study was the scope in term of period i.e. 2010-2014, this only represents two years after IFRS adoption, the time duration might not be sufficient enough to conclude and make inferences. It strength was that it’s the first published empirical studies in Nigeria that sampled data from non-financial firms to test earnings management and IFRS adoption.

Overall, it is glaring from the review of empirical literature that contradictory findings characterize research in this area. This is mainly as a result methodological differences, datasets and institutional variances across research domain as supported by Chen et al. (2010) who argue that IFRS adoption would not generate accounting information with same quality across countries as other factors would affect accounting quality. Moreso, most of the studies from developed countries in Europe found a positive impact of IFRS adoption on earnings quality, this might be attributed to the fact that European Union (except U.K & Ireland) have a civil law (legal origin), which is a co-determinant of earnings quality. Whereas, Nigeria is a common law country whose domestic standards is a replica of the international standards. Lastly, this conflicting evidence create a gap in the literature that need empirical evidence most especially in developing nation like Nigeria, it also buttress our claim that in Nigeria no empirical study examined the effect of IFRS and earnings management using SPEAR/SPOS. This current study tend to differ from the limitations of the above Nigerian studies, by using a panel data set with modified tools of analysis, longer period and numerous robustness tests.
2.7 Theoretical Framework

This section discusses three theories related to the study and how it underpins the present study. These are signaling, stewardship and prospect theories each of which is discussed hereunder:

2.7.1. Signalling Theory

Signaling theory posits that firms with good performance tend to make voluntary disclosures more readily, as doing so is regarded as an easy means of distinguishing themselves from others in the market place. Hence, its conjecture that voluntary disclosure is positively related to firm performance (earnings) and quality. Lang and Lundholm (1993) provide empirical support for this supposition. It was developed by Micheal Spence in 1973. The theory is fundamentally concerned with minimising information asymmetry between parties with an interest and may occur at different levels. Spence (2002) explains the notion behind signalling theory with the analogy of the job market illustrating how high-quality potential employees provide a signal to employers. Such employees reportedly acquire higher education and communicate full information about themselves to target employers.

From the perspective of accounting information, countries that are enthusiastic to communicate their commitment to improving accounting quality, may mandatorily adopt the IFRS. The primary reason identified is that such countries hope to attract favourable attention from cross border investors; thus, adopting the IFRS which are considered globally to be higher quality accounting standards. Subsequently, countries mandatorily adopting the IFRS may set up special regulatory institutions whose responsibilities would include monitoring strictly and ensuring compliance with the IFRS by companies required to comply. For example, ahead of the mandatory IFRS adoption in Nigeria, the Financial Reporting Council (FRC) was established by
the Financial Reporting Council of Nigeria Act, No. 6, 2011. The primary responsibility of the Council was to promote and ensure high-quality financial reporting for fostering investment among other reasons. Thus, countries that are motivated to attract and protect investments particularly foreign direct investments (FDI), may adopt IFRS mandatorily, and make effort through asymmetric regulation to ensure compliance with the IFRS as a signal of higher quality accounting to investors.

2.7.2 Stewardship Theory

The stewardship theory of Donaldson and Davis (1991) was found significant by many studies in explaining the ability of managers and auditors to improve the decision-usefulness of earnings upon adoption of international standards. This is because the theory is mainly concerned with identification of situations in which the interests of the principal and the steward are aligned. Unlike the agency theory and PAT, stewardship theory holds that managers are not opportunistic, and conflict of interest between managers and owners is absent (Donaldson, 1990). The theory views managers as team players who are willing to act in the best interest of the organisation, given the appropriate environment to act effectively. Hence, in the absence of opportunism towards utility maximisation, variation in the performance of managers will depend only on the operating environment (Donaldson & Davis, 1991). The underpinnings of stewardship theory thus imply that managers may act transparently if the enabling environment, which includes the appropriate accounting standards, is available to promote information quality.

Overall, the two theories compliments each other as they both lay emphasises on voluntary inclination towards transparency. This study views however that firms intending to signal higher quality accounting are likely to be constrained when the governing accounting
standards lack the capacity to ensure generation of higher quality information. In contrasts, such firms’ and even auditors’ capacity is enhanced towards promoting higher quality earnings information under more credible and effective set of accounting standards. Therefore, adopting high quality IFRS in Nigeria conglomerate firms, is likely to enhance the ability of managers and auditors to improve the decision-usefulness of earnings.

2.7.3. Prospect Theory

The prospect theory by Kahneman and Tversky (1979) explains that individuals (investors) are loss averse because the rate at which their utility decreases for small losses is greater than the rate at which the investor’s utility increases for small gains. Studies use the underpinnings of the prospect theory to explain the behaviour of investors in the market. Investors respond “harshly” towards a firm’s stock price when there is negative earnings shock at variance with analyst forecasts (Matsumoto, 2002; Burgstahler & Dichev, 1997). This assumptions imply that a firm reporting an earnings decrease (or reporting a loss) bears sharply higher costs in transactions with stakeholders than if the firm had reported an earnings increase (or profit). Thus, managers have incentives to avoid earnings decreases and losses.

Furthermore, prospect theory postulates that decision-makers derive value from gains and losses with respect to a reference point, rather than from absolute levels of wealth. The theory suggests that individuals’ value functions are concave in gains and convex in losses (S-shaped). In other words, value functions are steepest around wealth reference points. Thus, for a given increase in wealth, the corresponding increase in value is greatest when the increase in wealth moves the individual from a loss to a gain relative to a reference point. The concepts and predictions of prospect theory have natural counterparts in this study. Different decision-makers likely have different reference points. Zero change in earnings is a natural reference point for
decision-makers who estimate wealth as a multiple of earnings. Zero level of earnings is a natural reference point if wealth is measured by (or is a multiple of) net accounting assets. Assuming that the cost of earnings management to achieve a given amount of earnings increase is approximately constant, and that managers manipulate wealth measures (earnings and changes in earnings) to affect the value perceived by stockholders and other stakeholders, we expect to observe earnings-increasing management around wealth reference points - in this case, in the vicinity of zero changes of earnings and zero levels of earnings.

Therefore, the three theories identified above form the theoretical framework on which this study is anchored.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology of this study. Specifically, the chapter presents the research design of the study, population, methods of data collection. It also presents the techniques of data analysis employed. It provides a description of the study variables and their measurements and specifies the model used in the study.

3.2 Research Design

The study employs correlational and ex-post facto research design in examining IFRS adoption and quality of financial information of listed conglomerates in Nigeria. The choice of this design is predicated upon the fact that it is the most suitable for this type of research and it’s structured to help us understand our research problem and solved them. A correlational design is used to examine the statistical relationship between or amongst two or more variables and making prediction regarding the expected relationship. While the Ex-post factor Design help to investigate possible cause and effect relationship by first identifying some existing consequence and searching back by analyzing causal factors. The design was informed by the positivist research paradigm, which uses quantitative and deductive frameworks to test hypotheses. Given that this study aims to examine the effects of IFRS adoption on earnings quality of listed conglomerate firms in Nigeria, correlational design was deemed appropriate.

3.3 Population and Sample of the Study

The population of the study consists of all the 6 (six) conglomerate firms listed on the Nigerian Stock Exchange as at 31st December, 2006. The data covered a period of ten years
2006-2015. The study adopts census approach that is using the entire elements of the population.

The conglomerate firms that form the study population and sample are presented below:

<table>
<thead>
<tr>
<th>S/NO</th>
<th>FIRM NAME</th>
<th>Year of Listing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A.G Leventis Nig. Plc</td>
<td>1978</td>
</tr>
<tr>
<td>2</td>
<td>Chellarams Plc</td>
<td>1977</td>
</tr>
<tr>
<td>3</td>
<td>John Holt Plc</td>
<td>1974</td>
</tr>
<tr>
<td>4</td>
<td>UAC of Nigeria Plc</td>
<td>1974</td>
</tr>
<tr>
<td>5</td>
<td>SCOA Nig. Plc</td>
<td>1977</td>
</tr>
<tr>
<td>6</td>
<td>Transnational Corporation of Nig. Plc</td>
<td>2006</td>
</tr>
</tbody>
</table>

Source: Compiled by Author, 2017.

3.4 Source and Method of Data Collection

The study used secondary source of data collection. The use of secondary data is considered appropriate because it makes available all the data needed for this type of research and are most suitable for empirical finding on IFRS and earnings quality. Historical data of earnings were collected from published annual report and accounts of the firms for the period of the study.

3.5 Techniques of Data Analysis

The techniques of analysis used include the descriptive statistic and the correlation matrix. The descriptive statistics include the mean, standard deviation, maximum and minimum. The Pearson correlation was also used to show the relationship among all the study variables, which is between IFRS Adoption and earnings quality and among its components.

Other technique of data analysis employed by the study is panel regression analysis. Ordinary least square technique was employed to analyse the data based on fixed effect model and random effect model. Various robustness tests were conducted ranging from multicollinearity test, normality test, heteroscedasticity test, Hausman test, this helps to determine the choice between fixed and random effect regressions. The justification for using panel regression
is based on the fact that the study involves the use of both time series and cross sectional data and it is adjudged to be more informative. For the model (SPEAR) with a binary variable as the dependent variable, the linear probability model (LPM) is applied. LPM specifies the conditional expectation of the dependent variable given that a particular condition exists (Gujarati, 2012).

3.6 Model Specification and Variable Measurement

This section present the measures in which the study variables were measured as well as the justification for the measurement.

3.6.1 Earnings Persistence under IFRS and NGAAP.

Following Barth et al (2008); Dechow et al (2010); Atwood et al (2011); and Lorchir (2015), earnings persistence is define as the ability of earnings to predict future earnings i.e. to regress future (current) earnings on current (past) earnings and observe the sign of the coefficient against the independent earnings variable. Mathematically expressed as follows:

\[ EARN_{it+1} = \beta_0 + \beta_1 EARN_{it} + \epsilon_{it} \quad (i) \]

Where, \( EARN \) is net income before extraordinary items consistent with prior studies (Atwood et al, 2011), scaled by total assets, consistent with Barth et al (2008); \( IFRS \) is an indicator variable assigned the value of 1 for all firms-year observations reported under IFRS and zero otherwise; the subscripts \( i, t \) and \( t+1 \) represent firm, current year and subsequent year respectively.

Incorporating the effect of IFRS adoption and control variable, the model is restated as:

\[ EARN_{it+1} = \beta_0 + \beta_1 EARN_{it} + \beta_2 IFRS_{it} + \beta_3 IFRS_{it} \times EARN_{it} + \beta_4 SIZE_{it} + \epsilon_{it} \quad (ii) \]
In line with prior studies (Atwood et al, 2011; and Lorchir, 2015), earnings persistence was measured as beta coefficient of the regression equation from model I, which is obtained by taking the coefficient of c.

The model for testing the research hypothesis (H1) is as follows:

\[ \text{EPers}_{it} = \beta_0 + \beta_1 \text{EARN}_{it} + \beta_2 \text{IFRS}_{it} + \beta_3 \text{IFRS}_{it} \times \text{EARN}_{it} + \beta_4 \text{SIZE}_{it} + \varepsilon_{it} \] (iii)

The coefficient of interest which generates evidence to test H1 in the equation is \( \beta_3 \) which shows the differential persistence of current earnings into next period earnings under IFRS. Thus, a \( \beta_1 \) that is significantly different from zero, and \( \beta_3 \) that is also significantly different from zero, confirm the alternative hypothesis that earnings quality may differs between NGAAP (\( \beta_1 \)) and IFRS (\( \beta_3 \)) reporting years. Also, \( \text{SIZE} \) is the control variable represented by Firm size and is calculated as the natural logarithm Scaled by total asset at year end.

### 3.6.2 Earnings Predictability under IFRS and NGAAP.

Following Sloan (1999); Barth et al (2008); Atwood et al (2011); Chua et al. (2012); and Lorchir (2015), the association of current earnings with future cash flows has also been used in the literature as an indicator of earnings predictability and quality. Here, ability of earnings to predict future operating cash flows is seen as a strong association between current earnings and future cash flows which is expected to indicate that earnings are of high quality. Statistically:

\[ \text{CFO}_{it+1} = \gamma_0 + \gamma_1 \text{EARN}_{it} + \varepsilon_{it} \] (iv)

Where \( \text{CFO} \) is cash flows from operating activities scaled by total assets, consistent with prior studies (Barth et al., 2008; Chua et al., 2012). Other variables are as defined in equation above.

Incorporating the effect of IFRS adoption and control variable, the model is restated as:
\[ CFO_{it+1} = \gamma_0 + \gamma_1 EARN_{it} + \gamma_2 IFRS_{it} + \gamma_3 IFRS_{it} \times EARN_{it} + \gamma_4 SIZE_{it} + \varepsilon_{it} \quad (v) \]

In line with prior studies (Atwood et al, 2011 and Lorchir, 2015), earnings predictability was measured as beta coefficient of the regression equation from model iv, which is obtained by taking the coefficient of the portion of current earnings that persist into the future cash flows.

To test hypothesis number two (H2) the model is expressed as follows:

\[ EPred_{it} = \beta_0 + \beta_1 EARN_{it} + \beta_2 IFRS_{it} + \beta_3 IFRS_{it} \times EARN_{it} + \beta_4 SIZE_{it} + \varepsilon_{it} \quad (vi) \]

The coefficient of interest which generates evidence to test H2 is the incremental association under IFRS reporting ($\gamma_3$). Thus, an $\gamma_1$ that is significantly different from zero, and $\gamma_3$ that is also significantly different from zero, confirm the alternative hypothesis that earnings quality under this measure may differs between NGAAP ($\gamma_1$) and IFRS ($\gamma_3$) reporting years.

### 3.6.3 Earnings Management under IFRS and NGAAP.

Following Burgstahler and Dichev (1997); Lang et al (2003) and Lorchir (2015), earnings management is observed through earnings management with accruals to avoid losses and earnings decreases, that is the possibility of earnings manipulation to achieve small profits and avoid small losses. Mathematically expressed as follows:

\[ SPEAR_{it} = \delta_0 + \delta_1 EVAR_{it} + \delta_2 CONTROLS_{it} + \varepsilon_{it} \quad (vii) \]

Where $SPEAR$ is a dummy variable assigned the value of 1 if the value of net income before extraordinary items scaled by end of year total assets lies between 0 and 0.01 and zero otherwise. (Lang et al. 2003 and Lorchir, 2015).

Incorporating the effect of IFRS adoption and control variable, the model is restated as:

\[ SPEAR_{it} = \delta_0 + \delta_1 IFRS_{t} + \delta_2 DISSUE_{it} + \delta_3 SIZE_{it} + \delta_4 GROWTH_{it} + \delta_5 CFO_{it} + \varepsilon_{it} \quad (viii) \]
Where, \( DISSUE_t \) represents debt issue calculated as percentage change in total liabilities; 
\( GROWTH_t \) represents growth in revenue and is calculated as percentage change in revenues from time \( t-1 \) to time \( t \). Other variables as defined above. In line with prior studies (Lang et al. 2003 and Lorchir, 2015), earnings management measured the possibility of earnings manipulation to achieve small profits and avoid small losses i.e. the prevalence of earnings management towards small positive profits during IFRS and NGAAP reporting periods.

The model for testing the research hypothesis (H3) is as follows:

\[
EMSPEAR_{it} = \delta_0 + \delta_1 IFRS_t + \delta_2 DISSUE_{it} + \delta_3 SIZE_{it} + \delta_4 GROWTH_{it} + \delta_5 CFO_{it} + \epsilon_{it} \quad (ix)
\]

The coefficient of interest, which generates evidence to test \( H3 \) is \( \delta l \), which indicates the decrease (increase) in the probability of managing earnings towards small profits when firms report under IFRS relative to NGAAP. Thus, a \( \delta l \) that is statistically significantly different from zero confirms the alternative hypothesis that earnings management towards small profits may differ between the two reporting regimes.

Where:

\( EPers = \) Earnings Persistence

\( EPred = \) Earnings Predictability

\( EMSPEAR = \) Earnings Management (\( SPEAR = \) Small Positive Earnings)

\( \beta_0, \gamma_0, \delta_0, \alpha_0 = \) Intercepts or constant

\( \beta_1- \beta_4, \gamma_1- \gamma_4, \delta_1- \delta_5 = \) Coefficients of the independent variables

\( \epsilon_{it} = \) Standard error.
3.7 Variables Measurement

This study investigates the effect of IFRS adoption on earnings quality in the listed Conglomerates in Nigerian. The independent variable for the study is IFRS Adoption representing Accounting standards (1 if company adopt IFRS, 0 otherwise), while the dependent variables are Earnings Quality represented by Earnings Persistence, Earnings predictability and Earnings Management toward small profits. Firm Size, DISSUE and GROWTH were introduced as control variables. The measurement of these variables areas presented in table 3.2 below:

Table 3.2 Variables and their Measurement

<table>
<thead>
<tr>
<th>Variable</th>
<th>Nature of variable</th>
<th>Proxy(ies)</th>
<th>Measurement</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earnings Persistency</td>
<td>Dependent variables</td>
<td>EPers</td>
<td>Measured as beta coefficient of the regression equation from model II, which is the portion of the current earnings that persist into the future earnings</td>
<td>Dechow et al, 2010</td>
</tr>
<tr>
<td>Earnings Predictability</td>
<td></td>
<td>EPred</td>
<td>Measured as beta coefficient of the regression equation from the model V, which is the portion of the current earnings that persist into the future cash-flow</td>
<td>Atwood et al, 2011</td>
</tr>
<tr>
<td>Earnings Management towards small profits</td>
<td></td>
<td>EM-SPEAR</td>
<td>An indicator variable, assigned 1 for values of assets-scaled net profit before extraordinary items that lie between 0.00 to 0.01, and 0 otherwise. i.e. the possibility of earnings manipulation to achieve small profits and avoid small losses</td>
<td>Lorchir, 2015.</td>
</tr>
<tr>
<td>IFRS Adoption</td>
<td>Independent variable</td>
<td>IFRS</td>
<td>Measured as dummy variable which is equal “1” if a firm uses IFRS between 2006 to 2016, and “0” otherwise.</td>
<td>Lorchir, 2015.</td>
</tr>
<tr>
<td>Firm Size</td>
<td>Control variables</td>
<td>SIZE</td>
<td>Natural Logarithms of total assets at year end.</td>
<td>Lorchir, 2015.</td>
</tr>
<tr>
<td>Debt Issue</td>
<td></td>
<td>DISSUE</td>
<td>Previous year’s total liabilities minus current year’s divide by previous years.</td>
<td>Lorchir, 2015.</td>
</tr>
<tr>
<td>Growth in Revenue</td>
<td></td>
<td>GROWTH</td>
<td>Previous year’s sales Revenue minus current year’s divide by previous years.</td>
<td>Lorchir, 2015.</td>
</tr>
<tr>
<td>Cash Flow</td>
<td></td>
<td>CFO</td>
<td>Measured as Net Cash flow from Operating Activities scaled by total Assets</td>
<td>Atwood et al, 2011</td>
</tr>
<tr>
<td>Interaction Effect</td>
<td></td>
<td>IFRS*EARN</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Compiled by Author, 2017.
CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter deals with presentation, analysis and interpretation of the data used in this study. The descriptive statistics are presented using tables, showing number of observations, mean, standard deviation, minimum, maximum, skewness and kurtosis of the variables of the study. Correlation matrix as well as the robustness tests and regression results are also presented and discussed. The results of the study were interpreted and inferences were drawn. The study analysed data with the aid of Stata 13.

4.2 Descriptive Statistics

The descriptive statistics is presented in Table 4.1 which shows the mean, standard deviation, minimum, maximum, skewness and kurtosis of the data for the variables used in the study are described. This is done in order to have good understanding of the data and suggest the possible consequences of the nature of the data.

Table 4.1 Descriptive Statistics of the Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std.Dev</th>
<th>Min</th>
<th>Max</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>EARN&lt;sub&gt;t&lt;/sub&gt;</td>
<td>60</td>
<td>0.038</td>
<td>0.072</td>
<td>-0.180</td>
<td>0.234</td>
<td>-0.379</td>
<td>4.642</td>
</tr>
<tr>
<td>EPerst</td>
<td>60</td>
<td>0.005</td>
<td>0.015</td>
<td>-0.031</td>
<td>0.027</td>
<td>-1.269</td>
<td>5.042</td>
</tr>
<tr>
<td>EPred</td>
<td>60</td>
<td>0.062</td>
<td>0.107</td>
<td>-0.165</td>
<td>0.527</td>
<td>1.803</td>
<td>9.103</td>
</tr>
<tr>
<td>EM-spear</td>
<td>60</td>
<td>0.850</td>
<td>0.360</td>
<td>0</td>
<td>1</td>
<td>-1.960</td>
<td>4.843</td>
</tr>
<tr>
<td>IFRS</td>
<td>60</td>
<td>0.550</td>
<td>0.502</td>
<td>0</td>
<td>1</td>
<td>-0.201</td>
<td>1.040</td>
</tr>
<tr>
<td>IFRS*EARN</td>
<td>60</td>
<td>0.006</td>
<td>0.048</td>
<td>-0.160</td>
<td>0.110</td>
<td>1.384</td>
<td>7.185</td>
</tr>
<tr>
<td>CFO&lt;sub&gt;t&lt;/sub&gt;</td>
<td>60</td>
<td>0.176</td>
<td>0.326</td>
<td>-0.597</td>
<td>1.408</td>
<td>0.899</td>
<td>6.931</td>
</tr>
<tr>
<td>SIZE</td>
<td>60</td>
<td>7.372</td>
<td>0.626</td>
<td>6.134</td>
<td>9.052</td>
<td>0.410</td>
<td>2.691</td>
</tr>
<tr>
<td>DISSUE</td>
<td>60</td>
<td>0.295</td>
<td>0.798</td>
<td>-0.844</td>
<td>4.745</td>
<td>3.945</td>
<td>20.863</td>
</tr>
<tr>
<td>GROWTH</td>
<td>60</td>
<td>0.209</td>
<td>0.833</td>
<td>-0.534</td>
<td>6.213</td>
<td>6.369</td>
<td>46.469</td>
</tr>
</tbody>
</table>

Source: STATA Output, 2017
Table 4.1 reveal the descriptive statistics for the variables of the study. The result shows that profit before tax and exceptional item (earnings) has an average value of 0.038 which indicates that the listed conglomerates firms in Nigeria have attained, on average, a profit of 4% over the period of the study. The minimum and maximum earnings of listed conglomerates firms in Nigeria are -0.18 and 0.23 respectively. This implies that the least profitable conglomerates firm incurred a loss of 18% for each single (₦ 1) naira invested in the asset of the firms. On the other hand, the most profitable conglomerate firm earned 23% profit before tax and exceptional item (earnings) for each naira invested in its asset.

Earnings Persistence (Epers) has a mean of 0.5% with minimum and maximum value of -3.1% and 2.7% respectively. This implies that conglomerates with earnings persistence below 0.5% will be seen as lowly persistent. The maximum value of 0.027 indicates that the most profitable conglomerates firms in Nigeria earned 2.7% in the subsequent year, which shows that the earnings is sustainable. The standard deviation of 0.015 implies that the deviation from the average earnings within the activities of listed conglomerates firms in Nigeria was 1.5%.

Earnings Predictability (Epred) on the other hand averages 6.2% with a standard deviation of 10.7% indicating that there is wide dispersion on how current earnings predicts future cashflow of the firms. The maximum value of 53% within the firms attest to the fact that and also indicates that some of the firms are financially healthy given that they have consistently generated a positive cash-flow from operations year upon year which indicates that the firm’s liquid assets are increasing, enabling it to settle debts, reinvest, pay dividend, pay expenses and save for the future and a sign that there is a strong association between future cash-flow and current earnings.

Earnings management (EMspear) has a mean of 0.85 with a standard deviation of 0.360. This implies that most of the conglomerates firms practice earnings management to achieve
small positive earnings because most of the firms earnings are below the mean and it signifies understatement of their earnings. Also, about 55% of the conglomerates firms complied with IFRS regulation during the period under review. While IFRS earnings interaction (IFRS*EARN) show a mean of 0.006 with a standard deviation of 0.05. This variable has a minimum of 0 because its dichotomous variable effect on data and the mean difference of the interaction variable and its standard deviation suggests that the data are positively skewed.

For the control variables, the statistics further shows that cash flow from operation (CFOt) is 0.18 and the standard deviation is 0.33. The minimum and maximum values are -0.597 and 1.408 respectively. Corroborating our earlier assertion that some of the listed firms are financially healthier than others, this is confirmed by the wide dispersion between the minimum of -60% against 141% for the maximum. The table also shows that DISSUE representing debt issue, that is, change in total liabilities of listed conglomerates firms in Nigeria has a mean of 0.295. This implies that, on average, total liabilities of listed conglomerates firms in Nigeria increases by 30% with standard deviation of 0.798. This implies that the data is widely dispersed from the mean. The minimum and maximum value of -0.844 and 4.745 respectively also indicates that the minimum debt financing within the listed conglomerates in Nigeria is 84.4% with maximum of 342%. The relatively higher range between the minimum and maximum value thus confirm that some firms are doing far better than the others.

Growth in revenue of listed conglomerates firms in Nigeria has a minimum and maximum value of -0.534 and 6.213 respectively. This implies that the minimum negative growth in revenue within the listed conglomerates in Nigeria is 53.4% with a maximum of 621% positive. The relatively higher range between the minimum and maximum value implies that the most efficient conglomerates have a quite substantial revenue growth advantage compared to the
least efficient conglomerates firms. On the average, listed conglomerate firms in Nigeria witnessed growth rate of 21% with standard deviation of 83%. This implies that the data is widely dispersed from the mean. Overall, the skewness and kurtosis results indicate that the dataset is averagely normally distributed. Because, with the exception of DISUSE &GROWTH, all other variables for skewness and are close to zero which signifies that the dataset is well distributed also all the variables for kurtosis are moderately platykurtic.

4.3 Correlation Analysis

Pearson correlation computed shows the degree of relationship between the dependent variable and the independent variables of the study.

Table 4.2: Correlation Matrix of Dependent and Independent Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Earn</th>
<th>Epers</th>
<th>Emspear</th>
<th>IFRS</th>
<th>IFRS*Earn</th>
<th>CFO</th>
<th>Size</th>
<th>Disuse</th>
<th>Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Earn</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epers</td>
<td>0.4011</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Epred</td>
<td>0.6250</td>
<td>0.1986</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emspear</td>
<td>0.6042</td>
<td>0.2411</td>
<td>0.1655</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFRS</td>
<td>-0.1724</td>
<td>-0.2499</td>
<td>-0.2475</td>
<td>0.0748</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IFRS*Earn</td>
<td>0.3033</td>
<td>0.6649</td>
<td>0.1684</td>
<td>0.1655</td>
<td>0.1195</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFO</td>
<td>0.1628</td>
<td>0.2257</td>
<td>0.2460</td>
<td>0.2026</td>
<td>-0.1491</td>
<td>0.0316</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>-0.0261</td>
<td>0.1407</td>
<td>-0.1104</td>
<td>-0.1646</td>
<td>0.2626</td>
<td>0.3385</td>
<td>0.1030</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td>Disuse</td>
<td>-0.0924</td>
<td>-0.1037</td>
<td>0.0349</td>
<td>-0.1828</td>
<td>0.1111</td>
<td>-0.0119</td>
<td>0.0730</td>
<td>0.0428</td>
<td>1.000</td>
</tr>
<tr>
<td>Growth</td>
<td>-0.0758</td>
<td>-0.1245</td>
<td>0.1397</td>
<td>-0.2607</td>
<td>-0.1585</td>
<td>-0.0267</td>
<td>0.2840</td>
<td>0.1420</td>
<td>0.7320</td>
</tr>
</tbody>
</table>

Table 4.2 shows the result of the correlation matrix where the relationship between future earnings (EPERS) and current year earnings (EARNt) are significantly and positively correlated at 1%. This shows that current earnings recur in future for listed conglomerates in Nigeria. In the same vein, there is positive association between IFRS*EARN and EPERS with a correlation coefficient of 0.6649. This demonstrates an interesting relationship between IFRS adoption and Earning Persistence that is for listed conglomerates in Nigeria current earnings recur in the future. Similarly, the relationship between EPERS and SIZE are significantly and positively correlated at 1%. This postulates that if Firm Size increases, earnings of listed conglomerates in Nigeria increases and recur. On the contrary, IFRS have an inverse relationship with earnings persistence showing that an increase in the variable, holding other factor constant, will lead to a fall in earnings persistence for the firms. The result also shows the correlation among the explanatory variable of the study reveals that there is significant and positive correlation between IFRS*EARN and EARNt, IFRS*EARN and SIZE, IFRS*EARN and IFRS, EARNt and SIZE, and also IFRSand SIZE. This means those large firms have more resources and earn higher profit. Also, it signifies positive, stable and sustainable earnings for large firms that adopt IFRS.

It can be seen from table 4.2 that none of the variables among the independent variables of the study that has correlation above 0.35. This implies that from the result that there was absence of high correlation among the independent variables of the study. The rule of thumb states that a correlation of 0.8 and above indicates a multicollinearity problem among variables under investigation (Pallant, 2001).

Furthermore, the table shows that there is positive relationship between EPRED and EARNt from the correlation coefficient of 0.6250. The result suggests that sustainable earnings in the future will lead to an increase in future net cash-flow from operation of the firms. The
Table also shows that EPRED is inversely correlated with IFRS and SIZE but positively correlated with IFRS*EARN. This contradicts the belief that large firms have more earn higher profit, but suggest that current earnings of conglomerates firms in Nigeria has the ability to forecast future cash-flow for firms that adopt IFRS. The correlation coefficients among the independent variables do not exceed 0.35 which suggests the absence of multi-collinearity. It is however not safe to conclude that there is no multi-collinearity issue unless the variance inflation factor (VIF) and tolerance values confirm it.

Moreso, the table shows that there is positive relationship between EM-SPEAR, IFRS and CFOt from the correlation coefficient of 0.075, 0.203 respectively. The table also shows that EM-SPEAR is negatively correlated with DISSUE, GROWTH, and SIZE from the correlation coefficients of -0.1828, -0.1646 and -0.2607 respectively. Moreover, the correlation coefficients of the independent variables are mild as they do not exceed the threshold of 0.80 that suggests the existence of harmful multicollinearity among the independent variables.

4.4 Robustness tests

In order to improve the validity of all statistical inferences for this study, necessary tests were conducted which include; multicollinearity test, heterokedasticity test and Hausman test, Specification Error Test and Goodness of fit test.

4.4.1 Multicollinearity Test

This test was conducted to check whether there was a high correlation among the independent variables which may mislead the result of the study. In an attempt to prove and substantiate the absence of multicollinearity among the independent variables, the study conducted test using Variance Inflation Factor and Tolerance Value. Table 4.3 below presents the results of the tests.
Table 4.3: Variance Inflation Factor and Tolerance value

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>VIF/VIF</th>
<th>1/VIF</th>
<th>1/VIF1/VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFRS</td>
<td>1.281</td>
<td>0.780</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>IFRS*EARN</td>
<td>1.21</td>
<td>0.820</td>
<td>0.43</td>
<td></td>
</tr>
<tr>
<td>EARN</td>
<td>1.17</td>
<td>0.870</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>1.12</td>
<td>0.920</td>
<td>0.38</td>
<td></td>
</tr>
<tr>
<td>GROWTH</td>
<td>2.06</td>
<td>0.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>DISSUE</td>
<td>2.57</td>
<td>0.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFOt</td>
<td>1.50</td>
<td>0.67</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean VIF</td>
<td>1.19</td>
<td>1.19</td>
<td>2.41</td>
<td></td>
</tr>
</tbody>
</table>

Source: STATA Output, 2017

As observed from Table 4.3, the result reveals that the variables of the study do not pose any problem. This is evident from the values of VIF for all the models (1,2 and 3) being less than 10 and tolerance values being greater than 0.10 as a rule of thumb (Gujarati & Porter, 2009). This is in agreement with the assumption of classical regression model which states that there should not be multicollinearity problem among the independent variables included in the model.

4.4.2 Heteroskedasticity Test

Heteroskedasticity occurs in a situation where the error terms of the model have no constant variances. This problem needs to be addressed so that wrong estimations for the coefficients and sometimes making significant variables appear to be statistically insignificant will be avoided (Gujarati, 1988). In this study, Breusch-pagan/ cook-wersberg test for Heteroskedasticity was conducted for model 1&2 only and the result (see appendix) reveals that for model 1 the chi-square value of 2.13 (0.1447) which is not significant, and thus indicates the absence of heteroscedasticity. Whereas for model 2 the chi-square value of 5.11 (0.023) which is significant at 5%, indicating the violation of homoscedasticity assumption. Consequently, generalized Least Square method of estimation was employed using Fixed Effect and Random Effect method of estimations. This was done in order to take care of the individual differences within the units.
4.4.3 Hausman Specification Test

Hausman specification test was then conducted to decide between the two models, so as to select the preferred one. The result obtained from the test returned a $\chi^2$ value of 31.72 that is statistically significant at 0.000. This shows that the dataset meet the asymptotic assumption of the Hausman specification test. As a result, the fixed effect model was preferred for model 1. As for model 2, the result obtained from the test returned a $\chi^2$ value of 0.20 that is statistically insignificant at 0.99 and thus the Lagrangian Multiplier test was conducted. For model 3, the result returned a chi value of 5.71 that is not significant (p-value of 0.3353). Therefore, the study interpreted a robust logit regression result.

4.4.4 Lagrangian Multiplier Test (Model 2)

The Lagrangian Multiplier test helps in deciding between random effects regression and pooled OLS regression. The test is conducted after running the random effects model to see if there is presence or absence of cross sectional effect in the panel dataset. The rule is that if it is significant, random effect is the preferred model otherwise seemingly unrelated OLS regression suffices. Based on the result of the langrangian multiplier test, the null hypothesis was rejected and it was concluded that a random effect model is appropriate. This is evidenced by prob>chi2=0.1954. Therefore, the study interpreted a robust OLS regression result for model 2.

4.4.5 Specification Error Test (Model 3)

In a logistic regression model, the outcome binary variable is assumed to be linear combination of the independent variables. To test for this, two things are involved. The first is to confirm if the logistic function is the correct function used. The second is to test whether all the
relevant variables have been included in the model in order to avoid misspecification (Baura, 2013). Since the dependent variable of the study is a binary outcome, the task left is to test for misspecification. Accordingly, specification error test was conducted using “linktest” command for model 3. The “linktest” uses linear predicted value (_hat) and linear predicted value squared (_hatsq). The rule is “_hat” (p-value 0.003) variable should be statistically significant since it is the predicted value from the model while”_hatsq” (p-value 0.114) should not be significant unless the model is misspecified by omitting relevant variables. From the result of the linktest it can be seen that the model is well specified and no relevant variables was omitted.

4.4.6 Goodness of Fit Test (Model 3)

The log likelihood chi square and pseudo R^2 give a general gauge on how logistic model fits the data. However, scholars have suggested that a separate test for goodness of fit is desirable for logistic regression output. In this study, Hosmer-lemeshow test was used for goodness of fit. The idea in the test is that the predicted frequency and observed frequency should be closely match, the closer they are the better the fit. In Hosmer-lemeshow test, a p-value that is statistically insignificant shows model fitness and vice versa. The model appears to fit well because there is no significant difference between the model and the observed data and the p-value is (0.08) insignificant at 5% (i.e. p-value is above 0.05).
4.5.1 Presentation and Interpretation of Regression Result

The summary of the regression results obtained from the fixed effects model is presented below.

Table 4.4: Fixed Effects Regression Results (Model 1)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Z Statistics</th>
<th>Z Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>0.011</td>
<td>0.71</td>
<td>0.478</td>
</tr>
<tr>
<td>EARN</td>
<td>0.011</td>
<td>0.71</td>
<td>0.482</td>
</tr>
<tr>
<td>IFRS</td>
<td>-0.007</td>
<td>-3.43</td>
<td>0.001</td>
</tr>
<tr>
<td>IFRS*EARN</td>
<td>0.160</td>
<td>6.62</td>
<td>0.000</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.005</td>
<td>-0.24</td>
<td>0.809</td>
</tr>
<tr>
<td>R²</td>
<td>0.551</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wald Chi2</td>
<td>15.33</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;Chi2</td>
<td>0.000***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: STATA Output. (***, **, * indicate 1%, 5% & 10% level of significance respectively).

The regression equation is restated as follow:

\[
\text{EPERS}_{it} = \alpha_{it} + \beta_1 \text{EARN}_{it} + \beta_2 \text{IFRS}_{it} + \beta_3 \text{IFRS*EARN}_{it} + \beta_4 \text{SIZE}_{it} + \epsilon_{it}
\]

Substituting the computed beta values of the variables of the study in the equation, we have:

\[
\text{EPERS}_{it} = 0.011 + 0.011 \cdot \text{EARN}_{it} - 0.007 + \text{IFRS} + \text{IFRS*EARN}_{it} - 0.005 \cdot \text{SIZE}_{it} + \epsilon_{it}
\]

From the above regression equation it was revealed that holding current year earnings, IFRS, IFRS and earnings interaction, and size constant, earnings persistence of listed conglomerate firms in Nigeria would be at 0.011. The result revealed that there was a positive relationship between EPERS and EARN_{it}, IFRS*EARN; EPERS and SIZE of conglomerates in Nigeria but a negative relationship between EPERS and IFRS of listed conglomerates in Nigeria.

The Regression results indicate that the independent variables of the study (IFRS*EARN, EARN_{it} and SIZE) explained around 55% of the variations in the persistence of earnings of listed conglomerates in Nigeria, from the coefficient of determination of $R^2$ values of 0.551. The remaining 45% were explained by other factors that affect the sustainability of earnings of listed conglomerates in Nigeria which were not captured in the model of this study. The table also shows that the model is fitted as evident by the F-value of 15.33 which is at 99% confidence.
level as shown by the p-value of 0.0000. This means, the independent variables collectively, are good explanatory variables of earnings persistence. The researcher concluded that the sustainability of earnings of conglomerates in Nigeria can be explained by current earnings, IFRS, IFRS earnings interaction and size for the firms’ activities.

Table 4.5: Robust OLSRegression Results (Model 2)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Z Statistics</th>
<th>Z Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>0.130</td>
<td>1.01</td>
<td>0.318</td>
</tr>
<tr>
<td>EARNt</td>
<td>0.861</td>
<td>3.32</td>
<td>0.002</td>
</tr>
<tr>
<td>IFRS</td>
<td>-0.027</td>
<td>-1.21</td>
<td>0.231</td>
</tr>
<tr>
<td>IFRS*EARN</td>
<td>0.062</td>
<td>0.39</td>
<td>0.697</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.012</td>
<td>-0.72</td>
<td>0.473</td>
</tr>
<tr>
<td>R²</td>
<td>0.415</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>27.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;Chi²</td>
<td>0.000***</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: STATA Output. (***, **, * indicate 1%, 5% & 10% level of significance respectively).

The regression equation for model 2 is restated as follows:

\[ EPRED = \alpha_{it} + \gamma_1EARN_{it} + \gamma_2IFRS_{it} + \gamma_3IFRS*EARN_{it} + \gamma_4SIZE_{it} + \epsilon_{it} \]

Substituting the computed values of the variables of the study in the equation, we have:

\[ EPRED = -0.130 + 0.861EARN - 0.027IFRS + 0.062IFRS*EARN - 0.012SIZE + \epsilon_{it} \]

The above regression equation shows that holding EARN, IFRS, IFRS*EARN and SIZE constant, earnings association with future cash flows of listed conglomerates in Nigeria would be at 0.130. Regression results based on the Robust OLS method of estimation in Table 4.5 indicate that the independent variables of the study (EARN, IFRS, IFRS*EARN and SIZE) explained around 42% of the variations in the ability of current year earnings to predict future cash flows of listed conglomerates in Nigeria, from the overall coefficient of determination of R² values of 0.415. The remaining 58% were explained by other factors that affect the earnings predictability of listed conglomerates in Nigeria which were not captured in the model of this study. Table 4.5 also shows that the model is fitted as evidenced by the F-value of 27.13 at 99% confidence and-
value of 0.0000. This means the independent variables collectively, are good explanatory variables of the impact of earnings association on future cash flows of listed conglomerate firms in Nigeria. Therefore, earnings predictability of listed conglomerates in Nigeria can be explained by EARN, IFRS, IFRS*EARN and SIZE of conglomerates’ activities.

Table 4.6: LOGISTIC Regression Results (Model 3)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coefficient</th>
<th>Z Statistics</th>
<th>Z Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>7.095</td>
<td>1.44</td>
<td>0.150</td>
</tr>
<tr>
<td>IFRS</td>
<td>1.350</td>
<td>1.40</td>
<td>0.161</td>
</tr>
<tr>
<td>DISSUE</td>
<td>0.875</td>
<td>0.59</td>
<td>0.553</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.880</td>
<td>-1.28</td>
<td>0.200</td>
</tr>
<tr>
<td>GROWTH</td>
<td>-22.395</td>
<td>-2.61</td>
<td>0.009</td>
</tr>
<tr>
<td>CFOt</td>
<td>22.934</td>
<td>2.64</td>
<td>0.008</td>
</tr>
<tr>
<td>R²</td>
<td>0.394</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wald Chi²</td>
<td>14.59</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;Chi²</td>
<td>0.012</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: STATA Output. (***, **, * indicate 1%, 5% & 10% level of significance respectively).

The regression equation for model 3 is restated as follow:

\[
EM_{SPEARit} = \alpha_{it} + \delta_1 \text{IFRS}_{it} + \delta_2 \text{DISSUE}_{it} + \delta_3 \text{SIZE}_{it} + \delta_4 \text{GROWTH}_{it} + \delta_5 \text{CFO}_{it} + \varepsilon_{it}
\]

Substituting the computed values of the variables of the study in the equation, we have:

\[
EM_{SPEARit} = 7.095 + 1.350 \text{ifrs} + 0.875 \text{dissue} - 0.880 \text{size} - 22.395 \text{growth} + 22.934 \text{cfo} + \varepsilon_{it}
\]

Table 4.6 show that by holding DISSUE, SIZE, GROWTH, IFRS and CFOt to a constant, earnings managements to avoid small losses and achieve small positive earnings in Nigeria conglomerates firms would be at 7.095. Regression results based on robust logistic regression method of estimation in table 4.8 indicated that the independent variables of the study (DISSUE, SIZE, GROWTH, IFRS and CFOt) explained around 39% of the variations in the ability of managers of conglomerates firms to engage in earnings managements to avoid small losses and achieve small positive earnings in Nigeria. The remaining 61% were explained by factors that affect the earnings managements to achieve small positive earnings for listed conglomerates in Nigeria but not captured in the model of this study. Table 4.6 shows that the model is fitted as
evident by the F-value of 14.59 at 99% confidence level and p-value of 0.012. This shows that the model is fit and the explanatory variables were carefully selected. Therefore, earnings management to achieve small positive earnings of listed conglomerates in Nigeria can be explained by EARN, IFRS, IFRS*EARN and SIZE.

4.5.1 Hypotheses Testing and Discussion of Findings

In chapter one, three null hypotheses were formulated in order to test the effect of IFRS adoption on earnings quality of listed conglomerates firms in Nigeria, against which this study is anchored. These propositions were subjected to empirical testing drawing from the results of our descriptive and inferential statistics. The study tested the formulated hypotheses for the study in view of the robustness of the results, which can be considered as best unbiased estimator. The decision rule is based on the significances of the t-statistics which are represented by the p-values against each variable of the study. The study will use 10% level of significance as yardstick for either rejecting or failing to reject the hypotheses of the study. The hypotheses are presented as follows:

Hypothesis 1: IFRS adoption has no significant effect on earnings persistence of listed conglomerates firms in Nigeria.

Table 4.4 shows that earnings persistence parameter under NGAAP reporting is positive but insignificant ($\beta_1 = 0.011$, p-value 0.482), but earnings persistence parameter under IFRS reporting ($\beta_3 = 0.160$, p-value 0.000) indicating a positive and significant difference between earnings persistence under NGAAP and IFRS years. Thus, there is significant difference in persistency between IFRS and NGAAP earnings and earnings reported under IFRS are incrementally significantly persistent.
For the control variable, Firm size (SIZE) appear to be statistically insignificant and negatively associated with earnings persistency of quoted conglomerate firms in Nigeria. This means that the effects of IFRS adoption on earnings persistency are not different between large companies and small companies.

These outcomes is consistent with higher earnings persistence under IFRS relative to NGAAP reporting and provide evidence to reject the stated null hypothesis H01 that IFRS adoption has no significant effect on earnings persistence of listed conglomerates firms in Nigeria. The result disagree with Beijerink (2008); Atwood et al (2011) who find no significant difference in earnings persistence between non-US GAAP and IFRS reporting firms and agree with the study of jaweher & Mounira (2014); Lorchir (2015) who find that IFRS based earnings are more persistent. Moreso, the findings suggest that signaling and stewardship theory explain earnings quality effect of adopting a new accounting standard.

Hypothesis 2: IFRS adoption has no significant effect on earnings predictability of listed conglomerates firms in Nigeria.

Table 4.5 presents the results for this model, which tests the association of current earnings, with future cash flows for NGAAP and IFRS reporting periods. This result shows that current earnings are significantly and positively associated with future cash flows during NGAAP ($\gamma_1 = 0.867; \text{p-value} 0.000$) but IFRS (ifrs*earn) is positively insignificant($\gamma_3 =-0.067; \text{p-value} 0.481$). Showing significantly lower coefficient depicting lower association of current earnings with future cash during IFRS adoption period.

Firm size (SIZE) appears to be negatively associated and statistically insignificant with earnings association with future cash flows of quoted conglomerate firms in Nigeria. This
implies that the cash generating ability of the firms and future prospect increases, do not depend solely on their size.

These outcomes is not consistent with higher association of current earnings with future cash during IFRS adoption period relative to NGAAP reporting and provide evidence for the failure to reject the stated null hypothesis $H_0^2$ that IFRS adoption has no significant effect on earnings association with future cash flows of listed conglomerates firms in Nigeria.. The result agree with Atwood et al (2011) who find that future cash flow association with current earnings is stronger under US GAAP relative to IFRS reporting firms and contrast with the study of Mousa (2014); jaweher & Mounira (2014); Lorçhir (2015) who find that IFRS based earnings enhances predictability of Accounting Information more than local GAAP.

**Hypothesis 3:** IFRS adoption has no significant effect on earnings managements towards small profits of listed conglomerates firms in Nigeria.

Table 4.6 reports the result on the linear probability model which establishes the disposition of conglomerate firms to managing earnings towards small profits during IFRS reporting years relative to NGAAP. The result indicates that the coefficient on the variable of interest IFRS is positively correlated with EM-SPEAR but statistically insignificant ($\delta_1=1.350$; p-value 0.161), indicating that holding other variables constant, the probability of managing earnings towards small profits targets increases during mandatory IFRS adoption relative to NGAAP reporting period. Therefore, there is strong evidence for failure to reject the null hypothesis, which state that IFRS adoption has no significant effect on earnings managements towards small profits of listed conglomerate firms in Nigeria.

In terms of the control variables, DISSUE is positively correlated with EM-SPEAR but statistically insignificant (p-value 0.553), consistent with debt issuing firms being more likely to
manage earnings towards small profits than their non-debt issuing counterparts as stipulated by theory (Watts and Zimmerman, 1990). SIZE and GROWTH are negatively correlated with EM-SPEAR but size is not statistically significant (p-value 0.200), suggesting that earnings management towards small profits is not exactly a function of firm size, as both small and large firms may have reasons to target at least small profits, while the negative but significant GROWTH (p-value 0.009) implies that reported revenues are function of earnings, that is, earnings management increases when revenues grow.

CFO is positively associated with EM-SPEAR and the relationship is statistically significant (p-value 0.008). This shows that the probability of managing earnings towards small profits being lower when revenues change upwards or cash flows increases. This result is partially consistent with the findings of Chua et al (2012), Adeyemi (2016) and Xu (2014) where they find increased earnings management after IFRS adoption but contradicts the findings of Lorchir (2015), and Chen et al (2010) who find a negative and insignificant correlation between IFRS and earnings management (small positive earnings) in their study.

By and large, IFRS adoption (IFRS) was found to be positively associated with earnings management practices among quoted conglomerates in Nigeria, it is insignificant with p-value of 0.161. This implies that IFRS adoption is not significantly influencing the tendency of Nigerian conglomerates firms to engage in earnings manipulation. This perhaps, maybe due to the fact that, IFRS being a principle based accounting standards, is not substantially different from NGAAP which is both principle and rule-based accounting standards; also, the principle base allows managers to do more judgment than rule-based.
4.6 Policy Implication of the Findings

The result of this study has theoretical, practical and regulatory implications. The findings from this study suggest that signaling and stewardship theory explain earnings quality effect of adopting a new accounting standard. It implies that quoted conglomerates firms in Nigeria act transparently with enabling environment (i.e appropriate accounting standards). Hence, enhancing the ability of their managers and auditors to improve the decision usefulness of earnings. Regarding earnings persistence, we document evidence that earnings reported under IFRS are more persistent. This result corroborates the signaling and stewardship theory and consistent with the alternate hypothesis showing that earnings reported under IFRS are of higher quality. Research has shown evidence that firms adopting IFRS attract foreign investment when adoption is followed by appropriate implementation. The findings on earning predictability, however, partly violates the signaling and stewardship theory because the result indicates that new accounting standards lack the capacity to enhanced higher quality information.

Although, this is not the first literature evidence on the relationship between accounting standards and earnings quality in Nigeria, it provides unique theoretical and practical contributions. First, it empirically demonstrates that firms intending to signal higher quality accounting are likely to be constrained when the governing accounting standards lack the capacity to ensure generation of higher quality information. In contrasts, such firms’ capacity is enhanced towards promoting higher quality earnings information under more credible and effective set of accounting standards.

Secondly, it offers a practical insight on the argument that IFRS adoption may not exhibit high quality gains because Nigerian SAS was previously modeled alongside IAS. This situation could therefore, have led to the narrowing of the quality of Accounting in the pre and post
adoption period. This scenario is completely different from that of the EU where according to Outa (2011), Europe historically had legal systems and combined with other political and economic differences created a vast diversity of accounting systems. Also, the poor economic situation and political instability in the country may be a factor. This revelations point to the needs for future studies to consider countries regulatory quality, financial reporting incentives and governance efficient structure in order to understand the capability of IFRS adoption in enhancing earnings quality.

Furthermore, on earnings management, findings reveal that the probability of managing earnings towards small profits increases during IFRS reporting periods relative to NGAAP reporting periods. The findings from the study imply that Nigerian firms did not significantly reduce the practice of earnings management after their adoption of IFRS. This insignificant IFRS adoption effect on earnings management in a country like Nigeria may be attributed to the less pressure faced by managers of firms in Nigeria and allowance for more judgment provided by principled based IFRS reporting.\)

This study is apt as it will enhance a better understanding of the effect of IFRS adoption on earnings quality of quoted conglomerate firms in Nigeria. It is critical for standard-setters, investors, academia, regulatory authority, and analyst to gain insight on the effects of adoption of IFRS on earnings quality. The study also expands literature contribution by giving additional perspectives to the international accounting standards regarding the financial statement and the impact of adoption of these standards. This essentially leaves the role of IFRS to be that of a common reporting language around the world and not necessarily one of quality.

Thus, collectively, the findings indicate significant inconsistency with the initial predictions that, earnings quality differs during periods of reporting under NGAAP and IFRS. With
exception of earning persistence, the results contradicts the suggestions that relative to NGAAP accounting regimes, IFRS-based earnings indicate higher predictability in accruals and cash flows and that firms are less likely to manage earnings towards small profits to avoid loses.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The growing complexity of IFRS standards has shifted the focus of accounting researchers as to whether convergence to IFRS will lead to high quality accounting information. This study investigated the effect of IFRS adoption on earnings quality of listed conglomerate firms in Nigeria. Literature related to this research was reviewed particularly, the concept of earnings quality, IFRS, relevant empirical studies and the theories (Signalling, Prospect and Stewardship) which underpin this study. The theory connects the relationship between earnings quality and IFRS adoption.

Proxies of earnings quality used in this study were earnings persistence, earnings predictability and the prevalence of managing earnings towards small profits. Data from all the six listed conglomerates firms on the Nigerian Stock Exchange as at 31st December, 2006 over the period of 2006 to 2015 were obtained from the Nigerian Stock Exchange fact-book and annual financial reports of the firms over the periods of the study.

In order to achieve the research objectives of the study, three null hypotheses were formulated, each covering one of the independent variable of the study which states that IFRS adoption has no significant effect on earnings persistence, earnings predictability, and earnings managements towards small profits. The results of the analysis of the study revealed that all the independent variables are significant in explaining earnings quality of listed conglomerates in Nigeria.

It was reported that earnings persistence under IFRS reporting is positively significant while the parameter under NGAAP reporting is positively insignificant. Whereas, earnings predictability under IFRS reporting years shows a positively but statistically insignificant
association between current earnings with future cash flow. Also, IFRS was found to be positively correlated with SPEAR but statistically insignificant indicating that the probability of managing earnings towards small profits targets increase during IFRS adoption relative to NGAAP reporting period. Lastly, Firm size (SIZE) was statistically insignificant and negatively associated with earnings persistency, but for earnings association with future cash flow (predictability) SIZE show a negative and insignificant relation. Overall, no strong evidence that the adoption of IFRS has improved the quality of accounting information.

5.2 Conclusion

The study tested the effect of IFRS adoption on earnings quality of listed conglomerate firms in Nigeria. Based on the findings, the study concludes as follows. There is significant difference in persistency between IFRS and NGAAP earnings and earnings reported under IFRS are incrementally significantly persistent for Nigerian firms. However, earnings predictability for IFRS reporting period is significantly lower compare to NGAAP for firms in Nigeria. Also, we conclude that, the tendency to manage earnings towards small profits targets does not decrease as a result of adopting IFRS. Moreso, the study further conclude that as firm grows in size, the cash generating ability of the firm and future prospect increases and that earnings recurrence (persistence) is not a function of firm size. Overall, the study concludes that both NGAAP and IFRS have the required characteristics to achieve the desired level of reporting and improve financial reporting (earnings) quality of Nigerian firms and that accounting quality has remained almost the same.
5.3 Recommendations

Based on the findings and conclusions of this study, the following recommendations are made:

i. To enhance maximum benefits of IFRS adoption in Nigeria, regulators, standard-setters, top management, external auditors and other policy makers being the key players in standards, need to re-evaluate and work together to tighten compliance and enforce consistency in Nigerian firms so that the impact of IFRS could be felt more, also ensure that the actors in the capital market comply fully with all standards and rules that have been set.

ii. There is need for the all stakeholders while implementing IFRS in Nigeria, to consider other factors such as the institutional framework, national legal system, and good corporate governance practices, which should be strengthened to ensure an improvement in transparency and comparability of financial statement.

iii. Moreso, for Nigerian firms to further enjoy global investment environment, regulators in Nigeria need to reveal the quality of earnings in African firms reported under IFRS among other objectives, which may in turn attract investors’ attention to the possible advantage and prospects of those firms.
5.4 Limitations of the Study

The study was limited to determining the impact of IFRS adoption on earnings quality of listed conglomerate firms in Nigeria. For this reason, other industries like financial institution were not captured in the study. Therefore, the findings and recommendations are only applicable to listed conglomerates in Nigeria. Also, the study was limited to secondary data only.

5.5 Suggestion for Further Research

Further studies should consider addressing the shortcoming of this study. The researcher suggests that further studies in this area should make use of other proxies of earnings quality attributes such as smoothness, value relevance, timeliness and conservatism. The researcher also suggests that similar studies should be conducted expanding the sample size to include all listed firms in Nigeria and by extension, some countries in Africa.
REFERENCES


Doukakis, L. C. (2010). The persistence of earnings and earnings components after the adoption of IFRS. Managerial Finance, 36(11), 969-980.


Reporting Standards. Sweet & Maxwell


Penman, S. H., & Zhang, X. J. (2002). Accounting conservatism, the quality of earnings, and


APPENDICES

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| earnt1 | Coef. | Std. Err. | t    | P>|t| [95% Conf. Interval] |
|--------|-------|-----------|------|------------------------|
| earn   | .1397443 | .0886835  | 1.58 | 0.121 | -.0379814 | .3174699 |
| ifrs   | -.0404901 | .0124708  | -3.25 | 0.002 | -.0654821 | -.015498 |
| ifrsearn | .9228382 | .1408378  | 6.55 | 0.000 | .6405929 | 1.205083 |
| size   | .0002757  | .0104197  | 0.03 | 0.979 | -.0206058 | .0211572 |
| _cons  | .0379616  | .0760597  | 0.50 | 0.620 | -.1144654 | .1903886 |

. gen Epers = earnt1*.1397443

. reg cfo1 earn ifrs ifrsearn size

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| cfo1    | Coef. | Std. Err. | t    | P>|t| [95% Conf. Interval] |
|---------|-------|-----------|------|------------------------|
| earn    | .9280771  | .1747325  | 5.31 | 0.000 | .5779054 | 1.278249 |
| ifrs    | -.029354  | .0245711  | -1.19 | 0.237 | -.0785957 | .0198877 |
| ifrsearn | .0668812 | .2774918  | 0.24 | 0.810 | -.4892247 | .6229871 |
| size    | -.012728  | .0205298  | -0.62 | 0.538 | -.0538707 | .0284146 |
| _cons   | .1402118  | .1498599  | 0.94 | 0.354 | -.1601141 | .4405377 |

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DESCRIPTIVE STATISTICS

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CORRELATION MATRIX

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<td>0.000088329</td>
<td>( \text{R-squared} = 0.5716 )</td>
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\[ \text{Adj R-squared} = 0.5404 \]

\[ \text{Root MSE} = 0.00637 \]

| Epers       | Coef.   | Std. Err. | t     | \( P>|t| \) | [95% Conf. Interval] |
|-------------|---------|-----------|-------|----------|---------------------|
| earn        | 0.0195285 | 0.012393 | 1.58  | 0.121    | -0.0053077  0.0443646 |
| ifrs        | -0.0056583 | 0.0017427 | -3.25 | 0.002    | -0.0091508 -0.0021658 |
| ifrsearn    | 0.1289614 | 0.0196813 | 6.55  | 0.000    | 0.0895192  0.1684035 |
| size        | 0.0000385 | 0.0014561 | 0.03  | 0.979    | -0.0028795  0.0029566 |
| _cons       | 0.0053049 | 0.0106289 | 0.50  | 0.620    | -0.0159959  0.0266057 |

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Mean VIF | 1.19

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of Epers

\[ \text{chi2}(1) = 2.13 \]

\[ \text{Prob > chi2} = 0.1447 \]
. xtreg pers earn ifrs ifrsearn size, fe

Fixed-effects (within) regression
Group variable: unit
Number of obs = 60
Number of groups = 6

R-sq: within = 0.5508
Obs per group: min = 10
between = 0.6584
avg = 10.0
overall = 0.5659
max = 10

F(4,50) = 15.33
Prob > F = 0.0000
corr(u_i, Xb) = 0.0963

| pers  | Coef.   | Std. Err. | t     | P>|t| | [95% Conf. Interval] |
|-------|---------|-----------|-------|------|----------------------|
| earn  | 0.0114248 | 0.0161333 | 0.71  | 0.482 | -.0209798 - .0438295 |
| ifrs  | -0.007244  | 0.0021131 | -3.43 | 0.001 | -.0114883 - .0029996 |
| ifrsearn | 0.1604282 | 0.02424  | 6.62  | 0.000 | .1117408 - .2091565 |
| size  | -0.000528  | 0.0021684 | -0.24 | 0.809 | -.0048833 .0038274 |
| _cons | 0.0113467  | 0.0158847 | 0.71  | 0.478 | -.0205586 .0432519 |

| sigma_u | 0.00313956 |
| sigma_e  | 0.00759594 |
| rho      | 0.14590827 | (fraction of variance due to u_i) |

F test that all u_i=0: F(5, 50) = 1.54
Prob > F = 0.1949

est store re

. xtreg Epers earn ifrs ifrsearn size, re

Random-effects GLS regression
Group variable: unit
Number of obs = 60
Number of groups = 6

R-sq: within = 0.5499
Obs per group: min = 10
between = 0.6792
avg = 10.0
overall = 0.5697
max = 10

Wald chi2(4) = 69.29
Prob > chi2 = 0.0000
corr(u_i, X) = 0 (assumed)

| Epers  | Coef.   | Std. Err. | z     | P>|z| | [95% Conf. Interval] |
|--------|---------|-----------|-------|------|----------------------|
| earn   | 0.0134019 | 0.0125032 | 1.07  | 0.284 | -.011104 0.0379078  |
| ifrs   | -0.0058513 | 0.0016835 | -3.48 | 0.001 | -.009151 -.0025517  |
| ifrsearn | 0.1307851 | 0.0191789 | 6.82  | 0.000 | .093195 0.1683751  |
| size   | -0.0001745 | 0.0019767 | -0.11 | 0.912 | -.0032648 .0029157  |
| _cons  | 0.007199  | 0.0115835 | 0.62  | 0.534 | -.0155043 .0299023  |

| sigma_u | 0.00271399 |
| sigma_e  | 0.00622078 |
| rho      | 0.15990272 | (fraction of variance due to u_i) |
. hausman fe re

<table>
<thead>
<tr>
<th>________________</th>
<th>__________________</th>
<th>__________________</th>
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<td>(b-B)</td>
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b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

\[ \text{chi2}(4) = (b-B)'[(V_b-V_B)^{-1}](b-B) \]

= 31.72

Prob>chi2 = 0.0000

**MODEL 2**

. correlate Epred earn ifrs ifrsearn size
(obs=60)

<table>
<thead>
<tr>
<th></th>
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<th>earn</th>
<th>ifrs</th>
<th>ifrsearn</th>
<th>size</th>
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<tr>
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. reg Epred earn ifrs ifrsearn size

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<th>df</th>
<th>MS</th>
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<tr>
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<td>.271036502</td>
<td>4</td>
<td>.067759126</td>
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<td>55</td>
<td>.00695029</td>
<td>R-squared 0.4149</td>
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<tr>
<td>Total</td>
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<td>59</td>
<td>.011072923</td>
<td>Adj R-squared 0.3723</td>
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</table>

| Epred | Coef. | Std. Err. | t     | P>|t| | [95% Conf. Interval] |
|-------|-------|-----------|-------|------|---------------------|
| earn  | .8613271 | .1621652 | 5.31  | 0.000 | .5363407 to 1.186313 |
| ifrs  | -.0272428 | .0228039 | -1.19 | 0.237 | -.0729428 to .0184573 |
| ifrsearn | .0620709 | .2575338 | 0.24  | 0.810 | -.4540383 to .5781801 |
| size  | -.0118126 | .0190533 | -0.62 | 0.538 | -.0499962 to .026371 |
| _cons | .1301274 | .1390815 | 0.94  | 0.354 | -.1485982 to .4088529 |
. vif

<table>
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<td>size</td>
<td>1.21</td>
<td>0.827645</td>
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<tr>
<td>earn</td>
<td>1.17</td>
<td>0.855808</td>
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<tr>
<td>ifrs</td>
<td>1.12</td>
<td>0.895009</td>
</tr>
</tbody>
</table>

Mean VIF 1.19

. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of Epred

\[
\begin{align*}
\text{chi2(1)} & = 5.11 \\
\text{Prob > chi2} & = 0.0237 \\
F(4,50) & = 8.72 \\
\text{Prob > F} & = 0.0000
\end{align*}
\]

dps-

evt

. xtreg Epred earn ifrsearn ifrs size, fe

Fixed-effects (within) regression
Group variable: unit

\[
\begin{align*}
\text{R-sq:} & \quad \text{within} = 0.4108 \\
& \quad \text{between} = 0.5102 \\
& \quad \text{overall} = 0.4147 \\
F(4,50) & = 8.72 \\
\text{Prob > F} & = 0.0000
\end{align*}
\]

corr(u_i, Xb) = -0.0933

| Epred   | Coef.   | Std. Err. | t     | P>|t|  | [95% Conf. Interval] |
|---------|---------|-----------|-------|------|----------------------|
| earn    | 0.882031 | 0.1806561 | 4.88  | 0.000 | 0.5191647 – 1.244882 |
| ifrsearn| -0.0261403 | 0.0236623 | -1.10 | 0.275 | -0.0736673 – 0.0213868 |
| ifrs    | 0.0762724 | 0.2714324 | 0.28  | 0.780 | -0.4689157 – 0.6214605 |
| size    | -0.0146366 | 0.0242812 | -0.60 | 0.549 | -0.0634068 – 0.0341336 |
| _cons   | 0.149491 | 0.1778722 | 0.84  | 0.405 | -0.2077758 – 0.5067578 |

\[
\begin{align*}
\text{sigma_u} & = 0.02041843 \\
\text{sigma_e} & = 0.08505727 \\
\rho & = 0.05448658 \quad \text{(fraction of variance due to u_i)}
\end{align*}
\]

F test that all u_i=0: \[\text{F(5, 50) = 0.57 \quad \text{Prob > F = 0.7244}}\]
. xtreg Epred earn ifrs ifrsearn size, re

Random-effects GLS regression                     Number of obs      =        60
Group variable: unit                              Number of groups   =        6

R-sq: within = 0.4107                              Obs per group: min =     10
between = 0.5163                                  avg =    10.0
overall = 0.4149                                  max =     10

Wald chi2(4) = 38.79                              Prob > chi2       = 0.0000

corr(u_i, X) = 0 (assumed)

|        | Coef.    | Std. Err. | z     | P>|z|    | [95% Conf. Interval] |
|--------|----------|-----------|-------|--------|----------------------|
| earn   | 0.867417 | 0.1646734 | 5.27  | 0.000  | 0.5446629 - 1.190171 |
| ifrs   | -0.0269447 | 0.0227067 | -1.19 | 0.235  | -0.0714491 - 0.0175596 |
| ifrsearn | 0.0671307 | 0.2573813 | 0.26  | 0.794  | -0.4373274 - 0.5715888 |
| size   | -0.0125804 | 0.0198927 | -0.63 | 0.527  | -0.0515694 - 0.0264085 |
| _cons  | 0.1353684 | 0.1455105 | 0.93  | 0.352  | -0.149827 - 0.4205637 |

|        | sigma_u  | 0.01812729 |
|        | sigma_e  | 0.08505727 |
|        | rho      | 0.04344624 | (fraction of variance due to u_i) |

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<table>
<thead>
<tr>
<th></th>
<th>Coefficients</th>
</tr>
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<tbody>
<tr>
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</tr>
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<td></td>
<td>fe</td>
</tr>
<tr>
<td>earn</td>
<td>0.8820231</td>
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<tr>
<td>ifrs</td>
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<tr>
<td>ifrsearn</td>
<td>0.0762724</td>
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<tr>
<td>size</td>
<td>-0.0146366</td>
</tr>
</tbody>
</table>

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

\[
\text{chi2}(4) = (\text{b-B})'[(\text{V_b-V_B})^{(-1)}](\text{b-B})
\]
\[
= 0.20
\]
\[
\text{Prob} > \text{chi2} = 0.9952
\]
. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

\[ \text{Epred[unit,t]} = Xb + u[unit] + e[unit,t] \]

Estimated results:

<table>
<thead>
<tr>
<th></th>
<th>Var</th>
<th>sd = sqrt(Var)</th>
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<tbody>
<tr>
<td>Epred</td>
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<td>0.105228</td>
</tr>
<tr>
<td>e</td>
<td>0.0072347</td>
<td>0.0850573</td>
</tr>
<tr>
<td>u</td>
<td>0.0003286</td>
<td>0.0181273</td>
</tr>
</tbody>
</table>

Test: \[ \text{Var(u)} = 0 \]

\[ \text{chibar2(01)} = 0.74 \]

\[ \text{Prob > chibar2} = 0.1952 \]

. xtreg Epred earn ifrs ifrsearn size, re re

Random-effects GLS regression

| Number of obs = 60 |
| Number of groups = 6 |

R-sq: within = 0.4107
    between = 0.5163
    overall = 0.4149

Obs per group: min = 10
               avg = 10.0
               max = 10

Wald chi2(4) = 34.58

\[ \text{corr(u_i, X)} = 0 \text{ (assumed)} \]

\[ \text{Prob > chi2} = 0.0000 \]

(Std. Err. adjusted for 6 clusters in unit)

| Epred   | Robust Coef. | Std. Err. | z   | P>|z| | [95% Conf. Interval] |
|---------|--------------|-----------|-----|-----|----------------------|
| earn    | 0.867417     | 0.2459702 | 3.53| 0.000| 0.3853241 - 1.34951 |
| ifrs    | -0.0269447   | 0.0202734 | -1.33| 0.184| -0.0666799 - 0.0127904 |
| ifrsearn| 0.0671307    | 0.0953346 | 0.70| 0.481| -0.1197217 - 0.2539831 |
| size    | -0.0125804   | 0.0159877 | -0.79| 0.431| -0.0439157 - 0.0187549 |
| _cons   | 0.1353684    | 0.1224966 | 1.11| 0.269| -0.1047206 - 0.3754573 |

| sigma_u | 0.01812729 |
| sigma_e | 0.08505727 |
| rho     | 0.04344624 | (fraction of variance due to u_i) |
. regress Epred earn ifrs ifrsearn size, ro

Linear regression

| Coef. | Std. Err. | t  | P>|t| |  [95% Conf. Interval] |
|-------|-----------|----|-----|-----------------------------|
| earn  | .8613271  | .2594001 | 3.32 | .002 | .3414776 | 1.381177 |
| ifrs  | -.0272428 | .0224991 | -1.21 | .231 | -.072332 | .0178465 |
| ifrsearn | .0620709 | .1587691 | .39 | .697 | -.2561095 | .3802513 |
| size  | -.0118126 | .0163534 | -0.72 | .473 | -.0445855 | .0209603 |
| _cons | .1301274  | .1290745 | 1.01 | .318 | -.1285437 | .3887984 |

MODEL 3

. logit emspear ifrs disuse size growth cfot

Iteration 0:  log likelihood = -25.362545
Iteration 1:  log likelihood = -20.21748
Iteration 2:  log likelihood = -16.055639
Iteration 3:  log likelihood = -15.426845
Iteration 4:  log likelihood = -15.369954
Iteration 5:  log likelihood = -15.369774
Iteration 6:  log likelihood = -15.369774

Logistic regression

| Coef. | Std. Err. | z   | P>|z| | [95% Conf. Interval] |
|-------|-----------|-----|-----|-----------------------------|
| ifrs  | 1.349314  | 1.106256 | 1.22 | .223 | -.8189083 | 3.517536 |
| disuse | .8754396 | 1.382096 | 0.63 | .526 | -1.833419 | 3.584298 |
| size  | -.8797205 | .7200224 | -1.22 | .222 | -2.290938 | .5314974 |
| growth | -22.39567 | 7.843407 | -2.86 | .004 | -37.76847 | -7.022875 |
| cfot  | 22.93367  | 7.779533 | 2.95 | .003 | 7.686067 | 38.18127 |
| _cons | 7.095384  | 5.201185 | 1.36 | .173 | -3.098751 | 17.28952 |

Note: 1 failure and 1 success completely determined.
. vif, uncentered

<table>
<thead>
<tr>
<th>Variable</th>
<th>VIF</th>
<th>1/VIF</th>
</tr>
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<tr>
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<tr>
<td>cfot</td>
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<td>0.668318</td>
</tr>
</tbody>
</table>

Mean VIF 2.41

. xtlogit emspear ifrs disssue size growth cfot, fe

note: multiple positive outcomes within groups encountered.
note: 4 groups (24 obs) dropped because of all positive or
all negative outcomes.

Iteration 0:  log likelihood = -7.1543604
Iteration 1:  log likelihood = -6.0411668
Iteration 2:  log likelihood = -5.4975707
Iteration 3:  log likelihood = -5.4671615
Iteration 4:  log likelihood = -5.4621776
Iteration 5:  log likelihood = -5.460992
Iteration 6:  log likelihood = -5.4607109
Iteration 7:  log likelihood = -5.460654
Iteration 8:  log likelihood = -5.4606447
Iteration 9:  log likelihood = -5.4606425
Iteration 10: log likelihood = -5.460642

Conditional fixed-effects logistic regression  Number of obs = 36
Group variable: year  Number of groups = 6

Obs per group: min = 6
     avg = 6.0
     max = 6

LR chi2(5) = 14.82
Log likelihood = -5.460642
Prob > chi2 = 0.0112

| emspear | Coef.  | Std. Err. | z     | P>|z|  | [95% Conf. Interval] |
|---------|--------|-----------|-------|------|----------------------|
| ifrs    | 18.8313 | 3163.452  | 0.01  | 0.995 | -6181.422 - 6219.084 |
| disssue | 0.0498606 | .9407521 | 0.05  | 0.958 | -1.79398 - 1.893701  |
| size    | -1.966995 | 1.258697 | -1.56 | 0.118 | -4.433997 - .5000062 |
| growth  | -17.9599 | 10.14393 | -1.77 | 0.077 | -37.84163 - 1.921837 |
| cfot    | 20.0719 | 10.02709 | 2.00  | 0.045 | .4191711 - 39.72463  |

. xtlogit emspear ifrs disssue size growth cfot, re

Fitting comparison model:
Random-effects logistic regression
Number of obs = 60
Group variable: year
Number of groups = 10
Random effects u_i ~ Gaussian
Obs per group: min = 6
avg = 6.0
max = 6
Integration method: mvaghermite
Integration points = 12
Wald ch2(5) = 8.67
Log likelihood = -15.369316
Prob > chi2 = 0.1229

|       | Coef. | Std. Err. | z     | P>|z|  | [95% Conf. Interval] |
|-------|-------|-----------|-------|------|---------------------|
| ifrs  | 1.387481 | 1.686011  | 0.82  | 0.411 | -1.91704 to 4.692001 |
| issue | 0.871368  | 1.377687  | 0.63  | 0.527 | -1.828848 to 3.571584 |
| size  | -.8957654 | .8987321   | -1.00 | 0.319 | -2.657248 to .8657171 |
| growth| -22.43807  | 8.024223   | -2.80 | 0.005 | -38.16526 to -6.710884 |
| cfot  | 22.9781  | 7.96011    | 2.89  | 0.004 | 7.376568 to 38.57962 |
| _cons | 7.207223  | 6.411964   | 1.12  | 0.261 | -5.359996 to 19.77444 |
| /lnsig2u | -3.107488 | 33.40385 | -68.57783 to 62.36285 |

sigma_u  | .2114548 | .3531702 | 1.28e-15 | 3.48e+13 |
| rho     | .0134089 | .4419034 | 5.01e-31 | 1         |

Likelihood-ratio test of rho=0: chi2(01) = 9.1e-04 Prob >= chi2 = 0.488

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. hausman fe re

<table>
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<th></th>
<th>Coefficients</th>
<th>Coefficients</th>
<th>Coefficients</th>
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<td>-2.906196</td>
</tr>
</tbody>
</table>

b = consistent under Ho and Ha; obtained from xtlogit
B = inconsistent under Ha, efficient under Ho; obtained from xtlogit

Test: Ho: difference in coefficients not systematic

\[ \text{chi2}(5) = (b-B)'[(V_b-V_B)^{-1}](b-B) \]
\[ = 5.71 \]
\[ \text{Prob}>\text{chi2} = 0.3353 \]

(V_b-V_B is not positive definite)
. logit emspear ifrs disuse size growth cfot, vce (robust)

Iteration 0:  log pseudolikelihood = -25.362545
Iteration 1:  log pseudolikelihood = -20.217418
Iteration 2:  log pseudolikelihood = -16.055639
Iteration 3:  log pseudolikelihood = -15.426845
Iteration 4:  log pseudolikelihood = -15.369954
Iteration 5:  log pseudolikelihood = -15.369774
Iteration 6:  log pseudolikelihood = -15.369774

Logistic regression

Number of obs  =       60
Wald chi2(5)   =      14.59
Prob > chi2    =      0.0122
Log pseudolikelihood = -15.369774
Pseudo R2      =      0.3940

<table>
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<tr>
<th></th>
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<th>Std. Err.</th>
<th>z</th>
<th>P&gt;z</th>
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<td>0.59</td>
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<tr>
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<tr>
<td>growth</td>
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<td>0.009</td>
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<td>1.44</td>
<td>0.150</td>
<td>-2.565718</td>
</tr>
</tbody>
</table>

Note: 1 failure and 1 success completely determined.

. linktest

Iteration 0:  log likelihood = -25.362545
Iteration 1:  log likelihood = -16.898895
Iteration 2:  log likelihood = -16.187949
Iteration 3:  log likelihood = -15.214895
Iteration 4:  log likelihood = -15.17671
Iteration 5:  log likelihood = -15.17612
Iteration 6:  log likelihood = -15.176117
Iteration 7:  log likelihood = -15.176117

Logistic regression

Number of obs  =       60
LR chi2(2)     =      20.37
Prob > chi2    =      0.0000
Log likelihood = -15.176117
Pseudo R2      =      0.4016

<table>
<thead>
<tr>
<th></th>
<th>Coeff.</th>
<th>Std. Err.</th>
<th>z</th>
<th>P&gt;z</th>
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<td>0.973</td>
<td>-1.316767</td>
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Note: 1 failure and 0 successes completely determined.
. estat gof, group (10) table

**Logistic model for emspear, goodness-of-fit test**

(Table collapsed on quantiles of estimated probabilities)

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<tr>
<th>Group</th>
<th>Prob</th>
<th>Obs_1</th>
<th>Exp_1</th>
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<th>Exp_0</th>
<th>Total</th>
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number of observations = 60
number of groups = 10
Hosmer-Lemeshow chi2(8) = 14.04
Prob > chi2 = 0.0807